

# ARISTOTLE

## THE METAPHYSICS

BOOKS I—IX

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# INTRODUCTION

## I LIFE OF ARISTOTLE

ARISTOTLE was born in 384 B C at Stagira in Chalcidice. His father Nicomachus, who belonged to a clan—the Asclepiadae—in which the medical profession was hereditary, held the post of physician to Amyntas II of Macedonia. It is reasonable to refer Aristotle's deep interest in biology (which can be seen even in the *Metaphysics*) to his ancestry and early environment. At the age of eighteen he went to Athens to complete his education, and became a member of the Academy, where he spent the next twenty years studying under Plato and prosecuting his own researches. It is probable that he also did some lecturing. Plato regarded him as his most promising pupil, and called him "the mind of the school."

As time went on, however, Aristotle developed more independent views, and it was probably only Plato's personal influence that kept him attached to the Academy. At any rate when Plato died in 347 and was succeeded by Speusippus (who represented the ultra-mathematical side of Platonism), Aristotle left Athens and went to stay with a former fellow-student, Hermias, who had made himself ruler of Atarneus and Assos in Mysia. Here Aris-

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totle lived for some time, and married his friend's niece Pythias; but after three years the assassination of Hermias caused him to migrate to Mitylene in Lesbos. In 343 he was appointed by Philip of Macedon to supervise the education of the young Alexander, and for the next few years he lived at the Macedonian court—apparently on friendly but not intimate terms with the future world-conqueror.

In 336 Alexander succeeded to the throne, and soon afterwards Aristotle decided to return to Athens. At about the same time the headship of the Academy fell vacant by the death of Speusippus, and possibly Aristotle expected to be appointed in his place. Whether or not he felt any resentment at being passed over in favour of Xenocrates, he never again definitely associated himself with the Academy. Instead he hired some buildings in the grove of Apollo Lyceus, which lay to the north-east of Athens, and there set up an independent school, known to us as the Lyceum. Here he spent his time either in discussion with his friends and more advanced pupils, as they walked up and down in the shaded colonnades (this is the origin of the name "Peripatetics"), or lecturing to more general audiences. To this period almost certainly belongs the composition (in one sense) of Aristotle's treatises, for these are all <sup>a</sup> compilations of lecture notes or drafts for courses of study, written by him for the benefit of his pupils. It was during this time also, as it appears, that he lost his first wife and married a second, Herpyllis, who was like himself a native of Stagira. She bore

<sup>a</sup> Except the *Constitution of Athens*.

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him a son, Nicomachus, who afterwards edited the version of the *Ethics* which bears his name.

The death of Alexander in 323 B C was followed by a violent outburst of anti-Macedonian feeling, especially at Athens; and Aristotle's association with the Macedonian court brought him into unpopularity. He was accused of impiety—the usual cloak for political hostility—and anticipated condemnation by committing the charge of the Lyceum to Theophrastus, while he himself retired to Chalcis. He died in the following year at the age of sixty-two.

In character Aristotle appears to have been affectionate and good-natured; his writings suggest that he was rather impatient, at least intellectually. He is credited with a marked sense of humour and a ready wit. He was handsome, but with small eyes, and had a distinctive taste in dress. There is a tradition that he was bald; if this is so there is a certain dry whimsicality in the last words of Book V. chap. xxvii.

## II. ARISTOTLE AND EARLIER SCHOOLS OF THOUGHT

### *The "Physicists"*

Every creative artist or thinker, however great his originality may be, must start work with the materials which he has inherited from those who have gone before him. For this reason alone it is necessary, if we are to estimate Aristotle's contribution to human thought, that we should examine briefly the development of Greek philosophy before his time; and the necessity is made still greater by the fact that a large part of the *Metaphysics* is devoted to

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the criticism of earlier theories. It is impossible, in a short space, to give a detailed account of individual systems, except in the case of the most important; for sources of fuller information the reader is referred to the Bibliography.

The birthplace of European philosophy was the city of Miletus, which had been a flourishing centre of trade and culture for hundreds of years before, in the sixth century B C, it produced a group of men who were moved by the spirit of inquiry to seek a rational explanation of the processes of nature. THALES, the first of this "school," was a man of wide experience and varied accomplishments, but we know little of his speculations (which he did not commit to writing) beyond the fact that he asserted that water is the permanent underlying principle of all things. He was succeeded by ANAXIMANDER, who was the first cartographer and perhaps the first prose writer. He made the great advance of realizing that none of the four "elements"—earth, air, fire and water—could be reasonably regarded as the ultimate material principle; this he described as τὸ ἀπειρον—the Infinite, or Indeterminate; something without bound, form or quality. This was the best conception of "prime matter" that was achieved for two hundred years or more. But it was necessary to explain how things can be derived from this indeterminate substance, and he could only assert vaguely that "hot and cold, wet and dry" (these "contraries" were of course not mere qualities but material in nature) were "separated off." ANAXIMENES, the third and most influential member of the school, returned to the view that the material principle could be identified with one of the elements—in this



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case "air," a term which for the Greeks of his time also covered "mist" or "vapour." All other things were produced from air by condensation and rarefaction. This theory of the process of change was Anaximenes' great achievement, it marked the culminating point of the Milesian school of thought, which was continued but not carried forward by a line of lesser thinkers.

The next impulse (if we pass over Pythagoras and his disciples, who will be considered later) came from HERACLITUS of Ephesus, who "flourished" at the beginning of the fifth century. The Milesians had already noted the constant process of change between "hot" and "cold," "dry" and "wet," and described it as a kind of struggle between conflicting principles. Heraclitus laid still greater stress upon the transience of sensible things, but poured scorn upon the view that it was due to anything erratic or discordant in the natural system. He saw that the contraries were necessary to each other's existence; that they were correlative, and that the organic unity of the universe depended upon the tension between opposite forces, which (although now one and now another might gain a temporary supremacy) were ultimately in equilibrium. This was his *λόγος* or explanation to account systematically for the variation in the perceptible world. The underlying material principle was Fire, into which and out of which everything must pass in its due turn.

This doctrine of mutability was violently opposed by the Eleatic school, which was "founded" by PARMENIDES of Elea. He appears to have been at first a Pythagorean, but his extremely logical mind revolted against the inconsistencies of that system,

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as also against the Heracitean theory of change. He asserted that what is, is and as such is one—nothing else can exist or even be conceived, and argued that the universe must be eternal, immobile, finite and spherical. This teaching was developed and expressed in "The Way of Truth"—the first part of his didactic poem "On Nature." The second part, "The Way of Opinion," consisted of a tentative explanation of the phenomena of change, etc., which were inconsistent with his fundamental postulates. The exact relation of the two parts of the poem is very difficult to determine, and the difficulty is heightened by the figurative nature of the language; but it seems quite clear that Parmenides was not a dualist, and it may be true that he is merely contrasting his own view of reality with that of others—perhaps the Pythagoreans, as Burnet maintained.

Aristotle suggests that the Eleatic doctrine was originated by XENOPHANES of Colophon, who was Parmenides' senior by about fifty years. But Xenophanes was in no sense a constructive thinker; his purpose was simply to attack and ridicule the polytheism of his day, and it was in this connexion that he said that the universe is One, and is God<sup>a</sup>.

What Parmenides was actually trying to prove is too large a question to be discussed here; but his arguments had the important result of discouraging any fresh monistic theory. About half-way through the fifth century EMPEDOCLES of Acragas propounded the view that the universe is composed of four material principles—earth, air, fire and water; and to account for the phenomena of change which Parmenides had denounced as illogical he further

<sup>a</sup> I v. 12.

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introduced the kinetic principles of Love and Strife. These were not pure forces, such a conception had not yet been reached. They were material (as Aristotle points out in XII. x 7), but had the property of producing cyclic change in the following manner. The universe was originally a sphere, but not homogeneous like that of Parmenides; it was a unification or mixture of the four elements. This was broken up by the entrance of Strife, whose function it was to separate; and although the unifying influence of Love always had sufficient power to prevent a complete dispersion of the elements, Strife steadily gained ground until the mixture was resolved into four separate and distinct aggregates of earth, air, fire and water respectively. When this stage was reached, Love began to reassert itself, and under its influence Strife was gradually eliminated until the original mixture was restored, whereupon the whole process began again. It is easy to see Empedocles' debt to the Heraclitean doctrine of an ultimate equilibrium of contrary forces. The apparent inconsistency which Aristotle notes (I. iv. 6 *al*) in respect of the functions of Love and Strife is due to the fact that Love, in combining the unlike, separates the like, and Strife, in separating the unlike, combines the like.

The theory of cycles was a natural concomitant of the belief in metempsychosis, which Empedocles derived from Orphic and Pythagorean sources. His connexion with the latter system is further shown by the importance which he attached to numerical ratios as determining the characteristics of natural objects (*cf* XIV. v 8 n).

ANAXAGORAS of Clazomenae (*circa* 500-428 B C.)

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was slightly senior to Empedocles, but his doctrine must be considered as a later stage in the development of Greek thought. He also believed in an original mixture of corporeal particles, but these particles were "homoeomerous"—each one contained portions of all the contraries. From this it followed that nothing has any absolute quality. "even snow contains some blackness"; and Aristotle attacks this doctrine of relativity as implying a denial of the law of contradiction. Instead of Love and Strife Anaxagoras assumed a single "moving cause." *Noûs* or Mind. It was an important advance to recognize an intelligent (although corporeal) principle, but Plato agrees with Aristotle in criticizing the way in which this principle was employed, and it seems clear that Anaxagoras failed to work out a satisfactory system.

The rest of the "Physicists," as Aristotle describes those thinkers who concerned themselves with the explanation of the natural world, will be most conveniently considered in relation to the great religious-scientific society which had a unique influence upon all subsequent Greek thought.

### *The Pythagoreans*

PYTHAGORAS of Samos is one of the most interesting figures of antiquity, but the facts of his life are so obscured by legend that not much can be stated about him with certainty. He left Samos in about 530 B. C. and settled at Croton, where he founded a religious brotherhood which practised some form of Orphism and held a system of prohibitions. Pythagoras was something of a mystic, and was credited with working

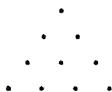
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miracles ; but he also took a very practical interest in science, especially mathematics, and both Heraclitus (fr 17) and Herodotus (iv. 95) pay tribute to his ability in this connexion. In point of fact he appears to have been the first to treat mathematics as an abstract science, and the importance which he attached to numbers was upheld, although in different ways, by all his followers

The main features of the Pythagorean theory in its original form may be summarized as follows. (1) There was the doctrine of transmigration. Each individual soul came in the first place from the Divine nature, which it resembles, and into which it will, when purified from sin in the course of many reincarnations, at last return. (2) This community of nature between God and the human soul implied an analogy between macrocosm and microcosm, the same principle of order constitutes the essential nature of the universe (considered as a living organism) and of the particular creature. (3) It followed that the all-embracing Unity must be finite or limited ; otherwise it could not be reproduced analogously in the individual. This is why the Pythagorean principle of order and goodness was identified with Limit, as contrasted with the Unlimited or principle of disorder (4) The analogy between whole and part consisted in the identical proportion or ratio of their ingredients This proportion was described as a "harmony" or perfect adjustment, and the conception is clearly traceable to Pythagoras's discovery of the numerical ratios of the octave (2 : 1), fifth (3 : 2) and fourth (4 : 3). Just as the musical scale, which extends indefinitely in either direction, is marked out and defined by these

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fixed ratios, so in all other cases every definite unity is produced by the action of Limit upon the Unlimited, producing a "harmony" which is essentially numerical. It was in this sense that the original Pythagorean school held that numbers are the primary reality. This supremacy of number was mystically expressed by the veneration which they paid to the "Tetractys," a figure consisting of ten pebbles or dots arranged in an equilateral triangle.



The properties of this figure are sufficiently obvious. It is symmetrical, complete (on the decimal system of number) and directly illustrative of the ratios answering to the three principal concords. Further, it symbolizes the position of unity as the starting-point of number, which was the natural view at a time when calculation was effected by means of visible units.

But Unity was the starting-point not only of number, but of all things. From it were derived the principles of Odd and Even, which were identified with Limit and the Unlimited. Two reasons for this identification have been offered. The first is given by Aristotle himself (*Physics* 203 a 13, where see Cornford's note), and may be briefly summarized as follows. The sum of successive odd numbers starting from 1 is always the same definite figure, a square—thus  $1 + 3 = 4$  or  $\begin{array}{c} \cdot \\ \cdot \cdot \end{array}$ ,  $1 + 3 + 5 = 9$  or  $\begin{array}{c} \cdot \\ \cdot \cdot \\ \cdot \cdot \cdot \end{array}$ , and so on; but the sum of successive even numbers

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is an oblong of varying shape— $2 + 4 = 6$  or  $\begin{array}{ccc} \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \end{array}$ ;  
 $2 + 4 + 6 = 12$  or  $\begin{array}{ccc} \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \end{array}$  The second reason is suggested by Heidel (*Archiv fur Gesch. Phil.* xiv. 390 ff.). Even number can be represented by two parallel lines of dots, and the process of division by an arrow passing between these lines thus  $\left( \begin{array}{ccc} \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \end{array} \rightarrow \right)$  So long as the whole number is even, the process can continue indefinitely, but it is immediately arrested and limited by the introduction of an odd unit  $\left( \begin{array}{ccc} \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \end{array} \rightarrow \cdot \right)$ .

The difficulty of the Pythagorean system lay in the derivation of two opposite principles from the primary unity, and the arguments of Parmenides seem to have brought about a complete revision of the theory. At any rate, as Cornford has pointed out (*Classical Quarterly*, xvi. 137-150, xvii 1-12), the criticisms of the Eleatic ZENO, Parmenides' disciple, which were directed against the view that reality is composed of discrete units, presuppose a new development of Pythagoreanism. It seems that the more scientific "wing" of the society abandoned the idea of a unique primary unity, and substituted the theory that not only number but all corporeal reality consists of a plurality of "ones" or units which have spatial magnitude—in other words, a kind of atoms. This is the view to which Aristotle refers when he speaks of things as being *composed* of numbers, and it is clearly quite incompatible with the conception of numbers as causes in the sense of defining ratios. It is hard to believe that any of the Pythagoreans themselves were so foolish as to

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attempt to combine these views ; the inconsistencies noted by Aristotle are surely due to an outsider's failure to distinguish two distinct phases of Pythagorean thought

But even the later scientific system was vitiated by the obtrusion of mathematical, especially geometrical, considerations The units were not regarded as eternal ; their generation had to be explained, and this could not be satisfactorily done. It was left for other thinkers to evolve a thoroughgoing atomic theory

How far LEUCIPPUS of Miletus (*flor.* 435 <sup>?</sup>) and his disciple DEMOCRITUS of Abdera (*flor.* 420) were indebted to this Pythagorean doctrine, it is impossible to say ; but at least it is clear that both systems were the outcome of a controversy between the Pythagorean and Eleatic schools Leucippus seems to have settled at Elea, and to have studied under Parmenides <sup>a</sup> and Zeno <sup>b</sup> ; if so he must have known something of the Pythagorean number-atomism which Zeno criticized But his theory was based upon Eleatic premisses MELISSUS of Samos (admiral in 441 B.C.) had done much to systematize the teaching of this school Among other things he showed that reality could not be regarded as a finite sphere (Parmenides' view), since then it must be bounded by void, or " what is not "—a conclusion irreconcilable with the Eleatic creed What was still more important, he argued that if reality were a plurality, each unit would have to be like the Eleatic One <sup>c</sup>

<sup>a</sup> Theophrastus *ap* Simplicium, *Phys* xxviii. 4 (Ritter and Preller 185).

<sup>b</sup> Diogenes Laertius ix. 30

<sup>c</sup> Fr. 8 Diels, Ritter and Preller 147



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Leucippus, prompted perhaps by the suggestions of Pythagoreanism, accepted the challenge of these two arguments. He admitted the existence of void, and so escaped from the conception of a spatially infinite unity; he admitted plurality, and so was enabled to account for change. Yet his atoms retained the essential characteristics which Parmenides had proved to belong to the ultimate reality. Although spatially extended, they were indivisible, since they contained no void, they were eternal and themselves immutable, although their rearrangement in fresh combinations accounted for change in the objects which they composed. Variety was rendered possible by the three "differences" of shape, order and position (explained by Aristotle in Book I iv 11). The atoms contained in themselves their own motive force, which was natural to them and eternal; but it is difficult to say what form their motion took, for the evidence is scanty and inconsistent, and perhaps this part of the theory was not clearly stated. Aristotle is rather disdainful in his references to it.

Such in brief outline was the atomic theory of Leucippus and Democritus; and the theory in its essentials holds good to-day. There was no further development of primary importance in Greek physical speculation; this was its crowning achievement. We have seen that some at least of the credit was due to the "scientific" Pythagoreans. But it was the original semi-mystical element in the society that influenced Plato, and through Plato the whole of later thought.

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### *Socrates and Platonism*

Hitherto philosophic speculation had been almost entirely scientific and materialistic; but with the growth of interest in rhetoric and dialectic, men began to think in more abstract terms, and the way was prepared for the study of Ethics. It was to this sphere, according to Aristotle, that SOCRATES confined his activity. The exact relation of Socrates to the Platonic Ideal theory is still disputed, and this is no place to dogmatize upon or even to discuss the question. Nevertheless it is perhaps legitimate to say that in the light of Aristotle's explicit testimony the Burnet-Taylor theory appears to be too violent a reaction against the traditional view. In his statements about earlier thinkers Aristotle is generally accurate—it is only when he begins to interpret the views which he attributes to them that he is misled by his own preconceptions—and he cannot have lived for twenty years in close touch with Plato without gaining accurate information about Plato's revered master.

We may take it, then, that it is substantially true that although Socrates prepared the way for the Ideal theory by his method of establishing a general principle or definition from the analogical relation of particular cases, he did not hold the theory in the form in which it was held by Plato and his followers. It is quite clear that in Aristotle's view Socrates was only one of three influences which contributed to the formation of Plato's own theory—the other two being Pythagoreanism and the Heraclitean doctrine of Cratylus.

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From the mystical Pythagorean school Plato derived the conception of a mimetic relationship between the individual and the universe of which he is a part. That relationship consisted in the sharing of a common formula or ratio of adjustment. Socrates showed that the same principle applied in a more abstract form to the particular examples of a given characteristic and to the general definition of that characteristic. The Heraclitean doctrine of "flux," or continuous change, in the sensible world suggested that the permanent realities which are the objects of knowledge are distinct from sensible things. It was partly from each of these three sources that Plato derived the theory that to each class of objects which have a common nature or definition there corresponds a permanent entity, independent of the members of the class, which is that absolute characteristic which is imperfectly "imitated" or "shared in" by the several members.

It is quite impossible to form an accurate estimate of the development of the Ideal theory, or even of its exact nature at any given stage, from the Platonic dialogues. They are semi-popular, not technical treatises; and any inferences that we may draw from them must be tested in the light of more direct evidence. On the other hand it cannot be supposed that Plato's thought was static. Such a mind must have been continually revising, modifying, developing earlier opinions; and those who deny any change in the Ideal theory as held by Plato are simply flying in the face of common sense. But we are only concerned with the Ideal theory as described and criticized by Aristotle, and it is obvious that what he has in mind must be the theory in its latest form.

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—as held by the Platonists of his own day, but not necessarily by Plato himself

There is another consideration which makes it still harder to assess the fairness of Aristotle's criticisms. A doctrine which is held by a whole body of contemporary thinkers must always be variously expressed, even if it is not variously understood; and it may even be misrepresented by its professing supporters. We have only to consider the analogy of modern religious bodies to realize how difficult it may be for the acutest observer to grasp accurately the central teaching of a given sect. There may have been Platonists who spoke of the Ideas or Forms as though they were merely "eternal sensibles"; but in view of the identification of the Ideas with numbers (which must have been a late development) this looks like a misapprehension.

The connexion of the Ideas with numbers will be more apparent if we consider the principles from which they were derived. These are variously described as (on the one hand) the One or Unity or the Equal, and (on the other) the Great-and-Small or the Indeterminate Dyad or the Unequal or Plurality. The last term seems to have been peculiar to Speusippus; but the others are clearly only names for different aspects of the Pythagorean Limit and Unlimited. The material principle is simply indeterminate quantity, which extends indefinitely in either direction, is infinitely great and infinitely small. It is determined by the formal principle of Unity, which marks off the scale, as it were, into definite sections. (Unfortunately Aristotle—with what justification it is hard to say—fastens upon the term "dyad" and interprets it as a

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literal duality; either as a kind of 2 or as a "pair of contraries"—the Great *and the* Small. Many of his objections depend entirely upon this misapprehension, *e.g.*, the account of the generation of number in XIII. viii. 15, if this is meant to represent the Platonic method)

This is a satisfactory account of the derivation of Ideal numbers, but in what sense are the Ideas numbers? If we remember the Pythagorean view, that the essential nature of each thing is determined by the numerical ratio of its parts, we shall easily perceive how it was that the Ideas were conceived of as formulae. Just as the defining principle of unity acts upon the Dyad to produce the Ideas, so they in turn act upon the Dyad to produce sensible things. In both cases the formal principle is a numerical limit, and no doubt this is what led Plato to describe the Ideas as numbers; although Aristotle is right in pointing out that they are not mere numbers but ratios of number. There was some reason for connecting the formulae of lines, planes and solids with the numbers 2, 3 and 4; but the identification of other Ideas with numbers was a fanciful survival of the Pythagorean mysticism.

As regards the more scientifically mathematical side of the theory, Plato was quite justified in positing Ideal numbers, even if he was not justified in identifying these numbers with the Ideas of other things. There is a sense in which the natural numbers (twoness, threeness, etc) exist independently of the groups of objects which are called after them. But the mathematical numbers which he assumed to exist intermediately between Ideas and sensible things are mere abstractions, as Aristotle sees; although he

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admits their existence, in a sense, while denying that of the Ideas. There is, as Ross points out,<sup>a</sup> more reason for assigning a separate existence to the objects of geometry, which do not exist in their perfect form in sensible objects; and perhaps Plato felt that analogy required that the objects of arithmetic should also exist separately. On the other hand he treats Ideal "spatial magnitudes" as posterior to Ideal numbers. They could not very well be identified, like the numbers, with the Ideas of other things; and besides they were obviously more complex products.

The subsequent heads of the Academy, Speusippus and Xenocrates, introduced certain modifications. SPEUSIPPUS was more mathematician than metaphysician, and apparently he abandoned the Ideas altogether and assumed mathematical number as the primary reality.<sup>b</sup> Such a view would naturally involve the restatement of the first principles as unity and *plurality*, and the principles of spatial magnitudes as the point and "something similar to plurality" (XIII ix 6). XENOCRATES was industrious rather than clear-sighted, and in his attempt to reorganize the Platonic system he laid himself open to grave objections. He identified the Ideas with the objects of mathematics—thus destroying mathematical number, as Aristotle puts it (XIII. viii. 8, ix. 15). He was also the chief exponent of the theory of "indivisible lines," although Aristotle tells us that Plato also held it.

<sup>a</sup> Pp. liii-lvi of the Introduction to his edition of the *Metaphysics*

<sup>b</sup> For the arguments in favour of ascribing this view to Speusippus see Ross's Introduction pp. lxxii-lxxiv.

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### III ARISTOTLE'S METAPHYSICAL THEORY

As a thinker Aristotle is essentially logical and analytical; and these qualities are almost inevitably accompanied by the limitations of literal-mindedness and lack of imagination. Both merits and defects can be clearly seen in his criticisms of earlier systems, whose inconsistencies he can ruthlessly unmask, but whose abstruser points he frequently misunderstands; and they are no less apparent in his constructive teaching. We must be careful, however, in framing our judgement of his doctrines. It is true that the Aristotelian treatises are a much more reliable source of evidence than the popular Platonic dialogues, but we must remember that they are for the most part compilations of earlier notes or smaller treatises, written perhaps at different times, and edited in some cases, if not in all, by other hands. It follows that Aristotle is not necessarily responsible for them in the form in which they have come down to us; and we must not lightly assume that he is to blame for the inconsistencies and obscurities which they undoubtedly contain.

The theory of a universal science, as sketched by Plato in the *Republic*, was unsatisfactory to Aristotle's analytical mind. He felt that there must be a regular system of sciences, each concerned with a different aspect of reality. At the same time it was only reasonable to suppose that there is a supreme science which is more ultimate, more exact, more truly Wisdom than any of the others. The discussion of this science—Wisdom, Primary Philosophy or Theology, as it is variously called—and of its scope forms the subject of the *Metaphysics*.

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Clearly this science must be concerned with that which *is* in the strictest sense. Earlier thinkers had failed to distinguish the various senses which the word "is" can have, and this failure had led to grave fallacies in argument. Aristotle quickly disposes of two of these senses. When we say "A is B," we may mean that the predicate B applies to A not essentially but incidentally. This is *accidental* being, and there is no science of the accidental. Or we may be expressing a judgement to the effect that A is B; in which case "is" means "is in truth." This is "being as *truth*," and its study belongs either to logic or to psychology.

But even where "is" represents the copula in a predication denoting the essential nature of a thing, its senses can be further analysed. Aristotle has worked out a list of the widest predicates to which all others can be referred, and these he describes as the "types of predication," or "categories." The full list contains ten types: (1) Substance, *e.g.* "man"; (2) Quality, *e.g.* "white"; (3) Quantity, *e.g.* "six-foot"; (4) Relation, *e.g.* "double"; (5) Time, *e.g.* "to-day"; (6) Place, *e.g.* "indoors"; (7) Activity, *e.g.* "ruling"; (8) Passivity, *e.g.* "ruled"; (9) State, *e.g.* "healthy"; (10) Position, *e.g.* "seated." (9) and (10) are generally, and any of the last seven may be occasionally, omitted from the list. But since of all these predicates substance is the only one which has a separate existence, it is evidently "being" in the sense of substance that is the subject of Wisdom or metaphysics.

The next question is: What constitutes the substantiality of individual things? Aristotle's answer is that it is the essence—the formal or de-



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fining principle of each thing. The other obvious alternatives—substrate, universal, genus—all lack the necessary individuality; moreover the universal has no separate existence apart from its particulars (this is a point upon which Aristotle repeatedly insists in his revolt against the Ideal theory), while to make the substrate or genus substance will involve attributing substantiality to matter, which is indeterminate.

The opposition of matter and form is fundamental to Aristotle's thought, and calls for special notice. It is not an original doctrine; it is merely a more systematic treatment of the same contrasted principles which Plato described as Unity and the Dyad, and the Pythagoreans as Limit and the Unlimited. Matter in the Aristotelian sense is not confined to sensible things. There is matter which is only intelligible; *e g.*, the genus may be regarded as the matter of the species. And there are different grades of sensible matter: (*a*) that which admits only of spatial motion; (*b*) that which admits also of alteration; (*c*) that which admits also of increase or decrease; (*d*) that which admits of generation and destruction. Sensible matter implies intelligible matter, and each grade of sensible matter implies all the previous grades.

Moreover, matter and form are always correlative, and (if we except the celestial movers, which belong to the least typically Aristotelian part of the system) never exist apart. For Aristotle matter does not exist as entirely undifferentiated; it passes through successive stages of differentiation, to each of which there is a corresponding form, until it emerges as the proximate matter of the individual substance.

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All this may be regarded as a mere development of the Pythagorean and Platonic view of two contrasted principles, but Aristotle is not content with two principles only. To explain the existence of any natural or artificial product it is necessary to state not only the material of which it consists and the form which defines it, but also the motive power which initiates the process of growth or construction, and the end or purpose of the process. This gives us the Four Causes - material, formal, efficient and final. Analogy plays an important part in the theory. Whether it was originally conceived in relation to natural or artificial products (the efficient and final causes are certainly more obvious in the latter connexion), Aristotle evidently intended it to apply to all cases; but he appears to have modified the theory at a later date in view of the difficulties which it involved. At any rate there is a tendency for the formal, final and efficient causes to be merged into a single principle opposed to the material. If we are right in supposing that this represents the ultimate development of Aristotle's thought, the attempt to depart from the Platonic view resulted (as happened in more than one instance) in a return to the original standpoint.

The analysis of the individual substance into the single antithesis of form and matter was confirmed by the parallel analysis into potentiality and actuality. This was a new conception, arrived at from the consideration of the processes of change and generation. If a thing comes to be X, clearly it was not X before. But change or generation cannot proceed from that which *absolutely* does not exist; there must always have been something which was capable

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of being determined as X. This something, then although it was not actually X, was potentially X. The antithesis of potentiality and actuality is simply the antithesis of matter and form considered dynamically instead of statically. Unfortunately Aristotle is inconsistent in his use of the term *ἐνέργεια*; he applies it sometimes to the form itself, sometimes to the process of actualization or realization of the form in the matter, and sometimes to the result of the process, which is more strictly described as *ἐντελέχεια* or "complete reality."

The doctrine of "contraries," which can be found in nearly all the earlier accounts of change, is present in Aristotle's theory also, but in a modified form. He appears to recognize certain natural contraries, such as Being and Not-being, Unity and Pluality, Substance and Not-substance; but he is careful to distinguish between contrary qualities and matter determined in accordance with those qualities. Change is between contraries in the sense that the material substrate is a potentiality for contrary determinations, of which now one and now the other may be realized in it. But the contrary qualities themselves do not change.

It is from the consideration of change and motion that Aristotle proceeds to develop his theology. The continuity of the processes in the universe presupposes a moving cause by which they are eternally maintained. This cause, or Prime Mover, must itself be eternal and immutable, and must therefore be entirely immaterial. It is pure form, and actuality; and this is Mind or God.

On this view God is in no sense the creator of the universe. His only effect upon it is to excite a con-

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tinuous motion in the outermost celestial sphere or "first heaven" (which in turn imparts motion to the other spheres and ultimately produces the various combinations of form and matter) by arousing in it a desire to imitate the unvarying Divine activity, which is self-contemplation. But the "first heaven," although Aristotle clearly conceives of it as animate, can only imitate this activity by revolving eternally upon its axis. And since the single regular revolution of the "first heaven" will not explain the irregular motions of the heavenly bodies, Aristotle is compelled to assume the existence of a number of other immaterial "movers," or "intelligences," which—themselves moved, presumably, by the prime mover—impart motion to the spheres which make up the rest of the astronomical system.

This part of Aristotle's theory is full of difficulties and inconsistencies; his attempt to give a logical and mechanical explanation of the universe cannot be said to succeed. Indeed he is ultimately driven back to the very standpoint which he denides in Platonism. He is emphatic that form cannot exist in separation from matter; and yet the supreme reality turns out to be a pure form. He blames the Platonists and Pythagoreans for using metaphorical language, and yet when he comes to explain the ultimate method of causation he has to describe it in terms of love or desire. The truth is that Aristotle's thought is always struggling against Platonic influences, which nevertheless generally emerge triumphant in his ultimate conclusions. His great contribution to philosophy was on the side of method; but it was Plato, acknowledged or unacknowledged, who inspired all that was best in the thought of his great disciple.

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### IV. THE COMPOSITION AND TEXT OF THE *METAPHYSICS*

We have already noted the fact that Aristotle's extant works (with the exception of the *Constitution of Athens*, which is on a different footing) are really compilations of lecture notes or minor treatises. There is good reason to suppose that the *Metaphysics* was not edited by Aristotle himself; and both Alexander (515. 20) and Asclepius (4 9) imply that the person responsible was Eudemus. However this may be, the work as it stands does not form a continuous sequence. The evidence bearing upon the interrelation of the several books has been discussed by Jaeger (*Studien zur Entstehungsgeschichte der Metaphysik des Aristoteles*, and *Aristoteles*) and by Ross in the introduction to his edition.

If we consider the books in their present order, the following facts are fairly obvious. Book I (A) stands in its proper place; it is introductory to the study of *Metaphysics*. Book II. (α) has no connexion with what precedes and follows, it is introductory to the study of philosophy in general, and its Greek title implies that it was added when the corpus was already completed. A scholium records that the book was generally attributed to Pasicles, a nephew of Eudemus; and Jaeger is probably right in regarding it as consisting of notes taken by Pasicles on a lecture or course of lectures by Aristotle. Books III (B) and IV (Γ) should follow immediately after Book I. Book V. (Δ) interrupts the discussion, and some of the terms which it defines have no connexion with *Metaphysics*. It is evidently a separate and earlier treatise. Book VI. (E) should follow

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Book IV, as is clearly shown by the order in which the same subjects are treated in Book XI Books VII-IX (ZH $\theta$ ) form a unity and follow on naturally after Book VI Book X (I) seems to belong to the main treatise, but it should come at the end after Book XIV. Book XI (K) down to chap viii. 9 is a briefer and earlier treatment of the subject matter of III., IV and VI.; from chap viii. 10 to the end it consists of extracts from the *Physics* Book XII ( $\Lambda$ ) is an independent treatise, probably of earlier date; but the astronomical passage in chap viii is inconsistent with its context and must belong to the last stage of Aristotle's thought (*cf* Jaeger, *Aristoteles* 366-379). This book contains expressions (iii 1, 2; v. 1) which clearly indicate that it consists of Aristotle's own notes for a course of lectures Books XIII and XIV (M, N) present several problems The real division comes at XIII ix 18, and the latter section represents an earlier criticism than that which is set out in the former Even apart from this the subject matter of the two books is not very well arranged. Moreover, in Book XIII. chaps. iv. and v. there is an almost exact duplication of Book I. chap ix 1-15 The only important difference between the two passages is that in Book I. Aristotle speaks as a Platonist and in Book XIII. as an external critic of the Academy. Evidently the version in Book I is the earlier; Jaeger suggests that it belongs to the period when Aristotle was living at Assos In any case it seems clear that after Aristotle had severed himself from the Academy he made use of the same criticism, making only the few slight changes in the language which were dictated by his altered sympathies.

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The general conclusions upon which Ross and Jaeger agree are as follows. The earliest form of Aristotle's metaphysical course is represented by Books I, XI 1-viii. 9, XIII ix. 18-XIV *fin.* Later XI. was replaced by III, IV and VI, and XIII. ix. 18-XIV. *fin.* by XIII 1-ix. 17; probably Book IX was added at the same time. The "editor" worked up all this material into a single treatise, adding Books II, IV, XII and the latter part of XI.

### *Manuscripts and other sources*

Only four of Bekker's mss have any independent value, and I have followed the example of other recent editors in ignoring the rest. The only other ms which I have cited is Vindobonensis phil. gr. C, to which Ross has attached the symbol J. These mss may be classed, in order of individual importance, as follows:

E Parisinus 1853	10th century
A Laurentianus 87 12	12th "
J Vindobonensis phil gr. C	10th "
S Laurentianus 81 1	13th "
T Vaticanus 256	1321

Of these J, S and T generally agree with E; A represents a different and probably older archetype.

Other evidence concerning the text is furnished by two Latin translations; one by William of Moerbeke ( $\Gamma$ ; late 13th century), and one by Cardinal Bessarion (about 1450). The former is so literal that it almost has the authority of a ms. Besides these there are the commentaries of Alexander (c. A D 200)

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on I-V. and of the pseudo-Alexander on VI-XIV, and those of Asclepius (6th century), Syrianus (5th century), and Themistius (4th century) Finally there is the Aldine *editio princeps* of 1498, which in some cases helps to determine the true reading

The text of this edition is based upon that of Bekker (Berlin 1831, Oxford 1837), and I have added critical notes only where I have rejected his readings or consider them to be doubtful. Among more recent scholars to whom I am indebted for various improvements and emendations, Schwegler, Bonitz, Christ and Jaeger call for special mention; and above all Professor W. D. Ross, whose monumental edition has helped me very greatly in the preparation both of my text and of my translation. A complete critical apparatus would have been far too unwieldy for a volume in this series, but I hope that I have noted all the most important variations.

As regards the translation, my chief object has naturally been to make Aristotle's meaning as clear as possible without too great a sacrifice of brevity or literalness; and in pursuing this object I have not scrupled to vary the rendering of the same Greek words in different contexts, even where it was not absolutely necessary to do so. Where the sense of the Greek is really doubtful I have thought it best to be non-committal. In rendering the more difficult passages I have often referred to Professor Ross's translation, which has afforded invaluable guidance.

Finally I wish to express my very real gratitude to my friend and colleague Professor E. S. Forster, who has given me the benefit of his criticism and suggestions throughout nearly the whole of my task.



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The following list is very far from complete, but it includes the principal editions and translations of the *Metaphysics*, together with certain books of reference and explanatory articles which throw light upon the subject matter.

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ed, Berlin 1912; H Ritter and L Preller, *Historia Philosophiae Graecae*, 8th ed (by Wellmann), Gotha 1898; J Burnet, *Greek Philosophy Thales to Plato*, London 1914, and *Early Greek Philosophy*, 3rd ed, London 1920; F M Cornford. "Mysticism and Science in the Pythagorean Tradition" (*Classical Quarterly*, xvi, xvii), G Milhaud, *Les Philosophes Géomètres de la Grèce*, Paris 1900, J Cook Wilson, "On the Platonist Doctrine of the ἀσίμβλητοι ἀριθμοί" (*Classical Review*, xviii 247), L Robin, *La Théorie platonicienne des Idées et des Nombres d'après Aristote* Paris 1908; J A Stewart, *Plato's Doctrine of Ideas* Oxford 1909; and the translation of *Physics* I-IV by P. Wicksteed and F M. Cornford in this same series

### ABBREVIATIONS

Ritter and Preller's *Historia Philosophiae Graecae* and Burnet's *Early Greek Philosophy* (see Bibliography) are commonly quoted under the initials R P and E G P respectively. The symbols etc used in the critical notes have been already explained in the section on Manuscripts.

ARISTOTLE  
THE METAPHYSICS

# ΑΡΙΣΤΟΤΕΛΟΥΣ ΤΩΝ ΜΕΤΑ ΤΑ ΦΥΣΙΚΑ Α

- a** 22 I. Πάντες ἄνθρωποι τοῦ εἰδέναί ὀρέγονται φύσει. σημεῖον δ' ἢ τῶν αἰσθήσεων ἀγάπησις καὶ γὰρ χωρὶς τῆς χρείας ἀγαπῶνται δι' αὐτάς, καὶ μάλιστα τῶν ἄλλων ἢ διὰ τῶν ὀμμάτων οὐ γὰρ μόνον ἵνα
- 20** πράττωμεν ἀλλὰ καὶ μὴθὲν μέλλοντες πράττειν τὸ ὄραν αἰρούμεθα ἀντὶ πάντων ὡς εἰπεῖν τῶν ἄλλων αἴτιον δ' ὅτι μάλιστα ποιεῖ γνωρίζειν τι ἡμᾶς αὕτη τῶν αἰσθήσεων, καὶ πολλὰς δηλοῖ διαφορὰς Φύσει μὲν οὖν αἴσθησιν ἔχοντα γίγνεται τὰ ζῶα, ἐκ δὲ ταύτης<sup>1</sup> τοῖς μὲν αὐτῶν οὐκ ἐγγίγνεται μνήμη
- b** 22 τοῖς δ' ἐγγίγνεται. καὶ διὰ τοῦτο ταῦτα φρονιμώτερα καὶ μαθητικώτερα τῶν μὴ δυναμένων μνημονεύειν ἐστὶ, φρόνιμα μὲν ἄνευ τοῦ μαθάνειν ὅσα μὴ δύναται τῶν ψόφων ἀκούειν, οἷον μέλιττα, καὶ εἴ τι τοιοῦτον ἄλλο γένος ζῶων ἐστὶ· μαθάνει
- 25** δ' ὅσα πρὸς τῇ μνήμῃ καὶ ταύτην ἔχει τὴν αἴσθησιν. Τὰ μὲν οὖν ἄλλα ταῖς φαντασίαις ζῆ καὶ ταῖς μνήμαις, ἐμπειρίας δὲ μετέχει μικρόν· τὸ δὲ τῶν ἀνθρώπων γένος καὶ τέχνη καὶ λογισμοῖς. γί-

<sup>1</sup> ταύτης : τῆς αἰσθήσεως ΕΓ Asclepius.

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### BOOK I

I All men naturally desire knowledge. An indication of this is our esteem for the senses, for apart from their use we esteem them for their own sake, and most of all the sense of sight. Not only with a view to action, but even when no action is contemplated, we prefer sight to practically all the other senses. The reason of this is that of all the senses sight best helps us to know things, and reveals many distinctions.

Now animals are by nature born with the power of sensation, and from this some acquire the faculty of memory, whereas others do not. Accordingly the former are more intelligent and capable of learning than those which cannot remember. Such as cannot hear sounds (as the bee, and any other similar type of creature) are intelligent, but cannot learn; those only are capable of learning which possess this sense in addition to the faculty of memory.

Thus the other animals live by impressions and memories, and have but a small share of experience; but the human race lives also by art and reasoning.

<sup>0</sup><sub>b</sub> γνεται δ' ἐκ τῆς μνήμης ἐμπειρία τοῖς ἀνθρώποις·  
 1<sup>a</sup> αἱ γὰρ πολλαὶ μνήμαι τοῦ αὐτοῦ πράγματος μιᾶς  
 ἐμπειρίας δύναμιν ἀποτελοῦσιν. καὶ δοκεῖ σχεδὸν  
 ἐπιστήμη καὶ τέχνη ὅμοιον εἶναι ἢ ἐμπειρία,  
 ἀποβαίνει δ' ἐπιστήμη καὶ τέχνη διὰ τῆς ἐμπειρίας  
 τοῖς ἀνθρώποις· ἢ μὲν γὰρ ἐμπειρία τέχνην ἐποί-  
 5 ησεν, ὡς φησὶ Πῶλος, ὀρθῶς λέγων, ἢ δ' ἀπειρία  
 τύχην. γίννεται δὲ τέχνη ὅταν ἐκ πολλῶν τῆς  
 ἐμπειρίας ἐννοημάτων μία καθόλου γένηται περὶ  
 τῶν ὁμοίων ὑπόληψις. τὸ μὲν γὰρ ἔχειν ὑπόληψιν  
 ὅτι Καλλία κάμνοντι τῆνδὲ τὴν νόσον τοδὶ συνήνεγκε  
 καὶ Σωκράτει καὶ καθ' ἕκαστον οὕτω πολλοῖς,  
 10 ἐμπειρίας ἐστίν· τὸ δ' ὅτι πᾶσι τοῖς τοιοῖσδε κατ'  
 εἶδος ἐν ἀφορισθεῖσι, κάμνουσι τῆνδὲ τὴν νόσον,  
 συνήνεγκεν, οἷον τοῖς φλεγματώδεσιν ἢ χολώδεσι  
 [ἢ]<sup>1</sup> πυρέττουσι καύσῳ, τέχνης. Πρὸς μὲν οὖν  
 τὸ πράττειν ἐμπειρία τέχνης οὐδὲν δοκεῖ διαφέ-  
 ρειν, ἀλλὰ καὶ μᾶλλον ἐπιτυγχάνοντας ὀρώμεν τοὺς  
 15 ἐμπείρους τῶν ἄνευ τῆς ἐμπειρίας λόγον ἐχόντων  
 αἴτιον δ' ὅτι ἢ μὲν ἐμπειρία τῶν καθ' ἕκαστόν ἐστι  
 γνώσις, ἢ δὲ τέχνη τῶν καθόλου, αἱ δὲ πράξεις καὶ  
 αἱ γενέσεις πᾶσαι περὶ τὸ καθ' ἕκαστόν εἰσιν· οὐ  
 γὰρ ἄνθρωπον ὑγιαίνει ὁ ἰατροῦων, πλὴν ἀλλ' ἢ  
 κατὰ συμβεβηκός, ἀλλὰ Καλλίαν ἢ Σωκράτην ἢ τῶν  
 20 ἄλλων τινὰ τῶν οὕτω λεγομένων ᾧ συμβέβηκε καὶ  
 ἀνθρώπῳ εἶναι. ἐὰν οὖν ἄνευ τῆς ἐμπειρίας ἔχῃ  
 τις τὸν λόγον, καὶ τὸ καθόλου μὲν γνωρίζῃ τὸ  
 δ' ἐν τούτῳ καθ' ἕκαστον ἀγνοῇ, πολλάκις δια-  
 μαρτήσεται τῆς θεραπείας· θεραπευτὸν γὰρ τὸ καθ'  
 ἕκαστον μᾶλλον. ἀλλ' ὅμως τό γε εἰδέναι καὶ τὸ  
 5 ἐπαῖειν τῇ τέχνῃ τῆς ἐμπειρίας ὑπάρχειν οἰόμεθα

<sup>1</sup> secl. Jackson.

It is from memory that men acquire experience, because the numerous memories of the same thing eventually produce the effect of a single experience. Experience seems very similar to science and art, but actually it is through experience that men acquire science and art; for as Polus rightly says, "experience produces art, but inexperience chance"<sup>a</sup> Art is produced when from many notions of experience a single universal judgement is formed with regard to like objects. To have a judgement that when Callias was suffering from this or that disease this or that benefited him, and similarly with Socrates and various other individuals, is a matter of experience; but to judge that it benefits all persons of a certain type, considered as a class, who suffer from this or that disease (*e g.* the phlegmatic or bilious when suffering from burning fever) is a matter of art

It would seem that for practical purposes experience is in no way inferior to art; indeed we see men of experience succeeding more than those who have theory without experience. The reason of this is that experience is knowledge of particulars, but art of universals; and actions and the effects produced are all concerned with the particular. For it is not man that the physician cures, except incidentally, but Callias or Socrates or some other person similarly named, who is incidentally a man as well. So if a man has theory without experience, and knows the universal, but does not know the particular contained in it, he will often fail in his treatment; for it is the particular that must be treated. Nevertheless we consider that knowledge and proficiency belong to

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<sup>1 a</sup> μᾶλλον, καὶ σοφωτέρους τοὺς τεχνίτας τῶν ἐμπείρων ὑπολαμβάνομεν, ὡς κατὰ τὸ εἰδέναι μᾶλλον ἀκολουθοῦσαν τὴν σοφίαν πᾶσι τοῦτο δ', ὅτι οἱ μὲν τὴν αἰτίαν ἴσασι, οἱ δ' οὐ οἱ μὲν γὰρ ἐμπειροὶ τὸ ὅτι μὲν ἴσασι, διότι δ' οὐκ ἴσασι οἱ δὲ  
<sup>30</sup> τὸ διότι καὶ τὴν αἰτίαν γνωρίζουσιν διὸ καὶ τοὺς ἀρχιτέκτονας περὶ ἕκαστον τιμιωτέρους καὶ μᾶλλον  
<sup>b</sup> εἰδέναι νομίζομεν τῶν χειροτεχνῶν καὶ σοφωτέρους, ὅτι τὰς αἰτίας τῶν ποιουμένων ἴσασι (τοὺς δ' ὡσπερ καὶ τῶν ἀψύχων ἔνια, ποιεῖν μὲν, οὐκ εἰδόμενα δὲ ποιεῖν ἂ ποιεῖ, οἷον καίει τὸ πῦρ· τὰ μὲν οὖν ἀψυχα φύσει τινὲ ποιεῖν τούτων ἕκαστον, τοὺς δὲ χειροτέχνας δι' ἔθος). ὡς οὐ κατὰ τὸ πρακτικὸν εἶναι σοφωτέρους ὄντας, ἀλλὰ κατὰ τὸ λόγον ἔχειν αὐτοὺς καὶ τὰς αἰτίας γνωρίζειν

Ὅπως τε σημεῖον τοῦ εἰδόμενος καὶ μὴ εἰδόμενος<sup>1</sup> τὸ δύνασθαι διδάσκειν ἐστίν, καὶ διὰ τοῦτο τὴν τέχνην τῆς ἐμπειρίας ἡγούμεθα<sup>2</sup> μᾶλλον ἐπιστήμην εἶναι  
<sup>0</sup> δύνανται γάρ, οἱ δὲ οὐ δύνανται διδάσκειν ἔτι δὲ τῶν αἰσθήσεων οὐδεμίαν ἡγούμεθα εἶναι σοφίαν καίτοι κυριώτατα γ' εἰσὶν αὐταὶ τῶν καθ' ἕκαστα γνώσεις· ἀλλ' οὐ λέγουσι τὸ διὰ τί περὶ οὐδενός, οἷον διὰ τί θερμὸν τὸ πῦρ, ἀλλὰ μόνον ὅτι θερμόν.

Τοῦ<sup>3</sup> μὲν οὖν πρῶτον εἰκὸς τὸν ὅποιαν οὖν εὐρόντα  
<sup>5</sup> τέχνην παρὰ τὰς κοινὰς αἰσθήσεις θαυμάζεσθαι ὑπὸ τῶν ἀνθρώπων, μὴ μόνον διὰ τὸ χρήσιμον εἶναι τι τῶν εὐρεθέντων, ἀλλ' ὡς σοφὸν καὶ διαφέροντα τῶν ἄλλων· πλειόνων δ' εὕρισκομένων τεχνῶν, καὶ τῶν μὲν πρὸς ἀναγκαῖα, τῶν δὲ πρὸς

<sup>1</sup> καὶ μὴ εἰδόμενος om A<sup>b</sup>Γ.

<sup>2</sup> οἰόμεθα recc.

<sup>3</sup> τὸν recc.



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art rather than to experience, and we assume that artists are wiser than men of mere experience (which implies that in all cases wisdom depends rather upon knowledge); and this is because the former know the cause, whereas the latter do not. For the experienced know the fact, but not the wherefore; but the artists know the wherefore and the cause. For the same reason we consider that the master craftsmen in every profession are more estimable and know more and are wiser than the artisans, because they know the reasons of the things which are done; but we think that the artisans, like certain inanimate objects, do things, but without knowing what they are doing (as, for instance, fire burns); only whereas inanimate objects perform all their actions in virtue of a certain natural quality, artisans perform theirs through habit. Thus the master craftsmen are superior in wisdom, not because they can do things, but because they possess a theory and know the causes.

In general the sign of knowledge or ignorance is the ability to teach, and for this reason we hold that art rather than experience is scientific knowledge; for the artists can teach, but the others cannot. Further, we do not consider any of the senses to be Wisdom. They are indeed our chief sources of knowledge about particulars, but they do not tell us the reason for anything, as for example why fire is hot, but only that it *is* hot.

It is therefore probable that at first the inventor of any art which went further than the ordinary sensations was admired by his fellow-men, not merely because some of his inventions were useful, but as being a wise and superior person. And as more and more arts were discovered, some relating to the

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1<sup>b</sup>

διαγωγὴν οὐσῶν, ἀεὶ σοφωτέρους τοὺς τοιοῦτους  
 20 ἐκείνων ὑπολαμβάνεσθαι,<sup>1</sup> διὰ τὸ μὴ πρὸς χρῆσιν  
 εἶναι τὰς ἐπιστήμας αὐτῶν. ὅθεν ἤδη πάντων τῶν  
 τοιοῦτων κατεσκευασμένων αἰ μὴ πρὸς ἡδονὴν  
 μηδὲ πρὸς τὰναγκαῖα τῶν ἐπιστημῶν εὐρέθησαν,  
 καὶ πρῶτον ἐν τούτοις τοῖς τόποις οὐπερ ἐσχόλασαν.  
 διὸ περὶ Αἴγυπτον αἰ μαθηματικαὶ πρῶτον τέχναι  
 25 συνέστησαν, ἐκεῖ γὰρ ἀφείθη σχολάζειν τὸ τῶν  
 ἱερέων ἔθνος. Εἴρηται μὲν οὖν ἐν τοῖς ἠθικοῖς  
 τίς διαφορὰ τέχνης καὶ ἐπιστήμης καὶ τῶν ἄλλων  
 τῶν ὁμογενῶν οὐδ' ἕνεκα νῦν ποιούμεθα τὸν λόγον  
 τοῦτ' ἐστίν, ὅτι τὴν ὀνομαζομένην σοφίαν περὶ τὰ  
 πρῶτα αἰτία καὶ τὰς ἀρχὰς ὑπολαμβάνουσι πάντες  
 30 ὥστε καθάπερ εἴρηται πρότερον, ὁ μὲν ἔμπειρος  
 τῶν ὁποιοῦν ἐχόντων αἴσθησιν εἶναι δοκεῖ σοφώ-  
 τερος, ὁ δὲ τεχνίτης τῶν ἐμπείρων, χειροτέχνου δὲ  
 35 ἀρχιτέκτων, αἰ δὲ θεωρητικαὶ τῶν ποιητικῶν  
 μᾶλλον ὅτι μὲν οὖν ἡ σοφία περὶ τινὰς ἀρχὰς καὶ  
 αἰτίας<sup>2</sup> ἐστὶν ἐπιστήμη, δῆλον.

II Ἐπεὶ δὲ ταύτην τὴν ἐπιστήμην ζητοῦμεν, τοῦτ'  
 40 ἂν εἴη σκεπτέον, ἢ περὶ ποίας αἰτίας καὶ περὶ ποίας  
 ἀρχὰς ἐπιστήμη σοφία ἐστίν. εἰ δὴ λάβοι τις τὰς  
 ὑπολήψεις ἃς ἔχομεν περὶ τοῦ σοφοῦ, τάχ' ἂν ἐκ  
 τούτου φανερὸν γένοιτο μᾶλλον. ὑπολαμβάνομεν  
 δὴ πρῶτον μὲν ἐπίστασθαι πάντα τὸν σοφὸν ὡς  
 ἐνδέχεται, μὴ καθ' ἕκαστον ἔχοντα ἐπιστήμην  
 45 αὐτῶν· εἶτα τὸν τὰ χαλεπὰ γινῶναι δυνάμενον καὶ  
 μὴ ράδια ἀνθρώπῳ γινώσκειν, τοῦτον σοφόν (τὸ

<sup>1</sup> ὑπολαμβάνομεν A<sup>b</sup>.<sup>2</sup> ἀρχὰς καὶ αἰτίας: αἰτίας καὶ ἀρχὰς EF.<sup>a</sup> Cf Plato, *Phaedrus* 274 c, Herodotus II 109.<sup>b</sup> *Eth. Nic.* vi. 1139 b 14-1141 b 8.<sup>c</sup> i.e. *Metaphysics*.

necessities and some to the pastimes of life, the inventions of the latter were always considered wiser than those of the former, because their branches of knowledge did not aim at utility. Hence when all the discoveries of this kind were fully developed, the sciences which relate neither to pleasure nor yet to the necessities of life were invented, and first in those places where men had leisure. Thus the mathematical sciences originated in the neighbourhood of Egypt, because there the priestly class was allowed leisure <sup>a</sup>

The difference between art and science and the other kindred mental activities has been stated in the *Ethics* <sup>b</sup>; the reason for our present discussion is that it is generally assumed that what is called Wisdom <sup>c</sup> is concerned with the primary causes and principles, so that, as has been already stated, the man of experience is held to be wiser than the mere possessors of any power of sensation, the artist than the man of experience, the master craftsman than the artisan; and the speculative sciences to be more learned than the productive. Thus it is clear that Wisdom is knowledge of certain principles and causes.

II. Since we are investigating this kind of knowledge, we must consider what these causes and principles are whose knowledge is Wisdom. Perhaps it will be clearer if we take the opinions which we hold about the wise man. We consider first, then, that the wise man knows all things, so far as it is possible, without having knowledge of every one of them individually; next, that the wise man is he who can comprehend difficult things, such as are not easy for human comprehension (for sense-perception being

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82 a γὰρ αἰσθάνεσθαι πάντων κοινόν, διὸ ῥάδιον καὶ οὐδὲν σοφόν). ἔτι τὸν ἀκριβέστερον καὶ τὸν διδασκαλικώτερον τῶν αἰτίων σοφώτερον εἶναι περὶ πᾶσαν ἐπιστήμην· καὶ τῶν ἐπιστημῶν δὲ τὴν αὐτῆς ἔνεκεν καὶ τοῦ εἰδέναι χάριν αἰρετὴν οὖσαν μᾶλλον εἶναι σοφίαν ἢ τὴν τῶν ἀποβαινόντων ἔνεκεν, καὶ τὴν ἀρχικωτέραν τῆς ὑπηρετούσης μᾶλλον<sup>1</sup> σοφίαν οὐ γὰρ δεῖν ἐπιτάττεσθαι τὸν σοφὸν ἀλλ' ἐπιτάττειν, καὶ οὐ τοῦτον ἑτέρω πείθεσθαι, ἀλλὰ 20 τούτῳ τὸν ἥττον σοφόν. Τὰς μὲν οὖν ὑπολήψεις τοιαύτας καὶ τοσαύτας ἔχομεν περὶ τῆς σοφίας καὶ τῶν σοφῶν τούτων δὲ τὸ μὲν πάντα ἐπίστασθαι τῷ μάλιστα ἔχοντι τὴν καθόλου ἐπιστήμην ἀναγκαῖον ὑπάρχειν· οὗτος γὰρ οἶδέ πως πάντα τὰ ὑποκείμενα σχεδὸν δὲ καὶ χαλεπώτατα ταῦτα 25 γνωρίζειν τοῖς ἀνθρώποις, τὰ μάλιστα καθόλου πορρωτάτω γὰρ τῶν αἰσθήσεών ἐστιν. ἀκριβέσταται δὲ τῶν ἐπιστημῶν αἱ μάλιστα τῶν πρώτων εἰσίν· αἱ γὰρ ἐξ ἐλαττόνων ἀκριβέστεραι τῶν ἐκ προσθέσεως λεγομένων,<sup>2</sup> οἷον ἀριθμητικὴ γεωμετρίας ἀλλὰ μὴν καὶ διδασκαλικὴ γε ἢ τῶν αἰτιῶν θεωρητικὴ μᾶλλον· οὗτοι γὰρ διδάσκουσιν οἱ τὰς 30 αἰτίας λέγοντες περὶ ἐκάστου.<sup>3</sup> τὸ δ' εἰδέναι καὶ τὸ ἐπίστασθαι αὐτῶν ἔνεκα μάλισθ' ὑπάρχει τῇ τοῦ μάλιστα ἐπιστητοῦ ἐπιστήμῃ ὃ γὰρ τὸ ἐπίστασθαι δι' αὐτὸ αἰρούμενος τὴν μάλιστα

<sup>1</sup> μᾶλλον εἶναι EF<sup>2</sup> λεγομένων· λαμβανομένων A<sup>b</sup>.<sup>3</sup> ἕκαστον A<sup>b</sup>.

common to all, is easy, and has nothing to do with Wisdom); and further that in every branch of knowledge a man is wiser in proportion as he is more accurately informed and better able to expound the causes. Again among the sciences we consider that that science which is desirable in itself and for the sake of knowledge is more nearly Wisdom than that which is desirable for its results, and that the superior is more nearly Wisdom than the subsidiary; for the wise man should give orders, not receive them; nor should he obey others, but the less wise should obey him

Such in kind and in number are the opinions which we hold with regard to Wisdom and the wise. Of the qualities there described the knowledge of everything must necessarily belong to him who in the highest degree possesses knowledge of the universal, because he knows in a sense all the particulars which it comprises. These things, viz. the most universal, are perhaps the hardest for man to grasp, because they are furthest removed from the senses. Again, the most exact of the sciences are those which are most concerned with the first principles; for those which are based on fewer principles are more exact than those which include additional principles; *e g*, arithmetic is more exact than geometry. Moreover, the science which investigates causes is more instructive than one which does not, for it is those who tell us the causes of any particular thing who instruct us. Moreover, knowledge and understanding which are desirable for their own sake are most attainable in the knowledge of that which is most knowable. For the man who desires knowledge for its

## ARISTOTLE

12 b ἐπιστήμην μάλιστα αἰρήσεται, τοιαύτη δ' ἐστὶν ἡ  
 τοῦ μάλιστα ἐπιστητοῦ, μάλιστα δὲ ἐπιστητὰ τὰ  
 πρῶτα καὶ τὰ αἷτια διὰ γὰρ ταῦτα καὶ ἐκ τούτων  
 5 τᾶλλα γνωρίζεται, ἀλλ' οὐ ταῦτα διὰ τῶν ὑποκειμέ-  
 νων. ἀρχικωτάτη δὲ τῶν ἐπιστημῶν, καὶ μᾶλλον  
 ἀρχικὴ τῆς ὑπηρετούσης, ἢ γνωρίζουσα τίνος ἕνεκὲν  
 ἐστὶ πρακτέον ἕκαστον· τοῦτο δ' ἐστὶ τὰγαθὸν  
 ἕκάστου, ὅλως δὲ τὸ ἄριστον ἐν τῇ φύσει πάση.

Ἐξ ἀπάντων οὖν τῶν εἰρημένων ἐπὶ τὴν αὐτὴν  
 ἐπιστήμην πίπτει τὸ ζητούμενον ὄνομα· δεῖ γὰρ  
 ταύτην τῶν πρώτων ἀρχῶν καὶ αἰτιῶν εἶναι θεωρη-  
 10 τικὴν· καὶ γὰρ τὰγαθὸν καὶ τὸ οὐ ἕνεκα ἐν τῶν  
 αἰτιῶν ἐστὶν. Ὅτι δ' οὐ ποιητικὴ, δῆλον καὶ ἐκ  
 τῶν πρώτων φιλοσοφησάντων διὰ γὰρ τὸ θαυμά-  
 ζειν οἱ ἄνθρωποι καὶ νῦν καὶ τὸ πρῶτον ἤρξαντο  
 φιλοσοφεῖν, ἐξ ἀρχῆς μὲν τὰ πρόχειρα τῶν ἀπόρων<sup>1</sup>  
 θαυμάσαντες, εἶτα κατὰ μικρὸν οὕτω προιόντες,  
 15 καὶ περὶ τῶν μειζόνων διαπορήσαντες, οἷον περὶ τε  
 τῶν τῆς σελήνης παθημάτων, καὶ τῶν περὶ τὸν  
 ἥλιον καὶ ἄστρα, καὶ περὶ τῆς τοῦ παντὸς γενέσεως.  
 ὁ δ' ἀπορῶν καὶ θαυμάζων οἴεται ἄγνοεῖν (διὸ καὶ  
 ὁ φιλόμυθος φιλόσοφος<sup>2</sup> πῶς ἐστίν· ὁ γὰρ μῦθος  
 20 σύγκειται ἐκ θαυμασίων)· ὥστ' εἶπερ διὰ τὸ φεύ-  
 γειν τὴν ἄγνοιαν ἐφιλοσόφησαν, φανερόν ὅτι διὰ  
 τὸ εἰδέναι τὸ ἐπίστασθαι ἐδίωκον, καὶ οὐ χρήσεώς  
 τινος ἕνεκεν. μαρτυρεῖ δὲ αὐτὸ τὸ συμβεβηκός·  
 σχεδὸν γὰρ πάντων ὑπαρχόντων τῶν ἀναγκαίων  
 καὶ πρὸς ῥαστώνην καὶ διαγωγὴν ἢ τοιαύτη  
 φρόνησις ἤρξατο ζητεῖσθαι δῆλον οὖν ὡς δι'

<sup>1</sup> ἀπόρων: ἀτόπων A<sup>b</sup>

<sup>2</sup> ὁ φιλόμυθος φιλόσοφος A<sup>b</sup> Alexander: φιλόμυθος ὁ φιλό-  
 σοφος E Asclepius.

and this is the knowledge of the most knowable, and the things which are most knowable are first principles and causes; for it is through these and from these that other things come to be known, and not these through the particulars which fall under them. And that science is supreme, and superior to the subsidiary, which knows for what end each action is to be done; *i e* the Good in each particular case, and in general the highest Good in the whole of nature.

Thus as a result of all the above considerations the term which we are investigating falls under the same science, which must speculate about first principles and causes; for the Good, *i e* the *end*, is one of the causes

That it is not a productive science is clear from a consideration of the first philosophers. It is through wonder that men now begin and originally began to philosophize; wondering in the first place at obvious perplexities, and then by gradual progression raising questions about the greater matters too, *e g* about the changes of the moon and of the sun, about the stars and about the origin of the universe. Now he who wonders and is perplexed feels that he is ignorant (thus the myth-lover is in a sense a philosopher, since myths are composed of wonders); therefore if it was to escape ignorance that men studied philosophy, it is obvious that they pursued science for the sake of knowledge, and not for any practical utility. The actual course of events bears witness to this; for speculation of this kind began with a view to recreation and pastime, at a time when practically all the necessities of life were already supplied. Clearly then it is for no extrinsic advantage

<sup>2 b</sup>  
 25 οὐδεμίαν αὐτὴν ζητοῦμεν χρεῖαν ἑτέραν, ἀλλ' ὥσπερ  
 ἄνθρωπος, φαμέν, ἐλεύθερος ὁ αὐτοῦ ἔνεκα καὶ μὴ  
 ἄλλου ὢν, οὕτω καὶ αὐτὴν ὡς μόνην ἐλευθέραν οὖσαν<sup>1</sup>  
 τῶν ἐπιστημῶν μόνη γὰρ αὐτῇ<sup>2</sup> αὐτῆς ἔνεκέν ἐστιν.

Διὸ καὶ δικαίως ἂν οὐκ ἀνθρωπίνη νομίζοιτο αὐτῆς  
 30 ἡ κτήσις· πολλαχῆ γὰρ ἡ φύσις δούλη τῶν ἀνθρώ-  
 πων ἐστίν, ὥστε κατὰ Σιμωνίδην θεὸς ἂν μόνος  
 τοῦτ' ἔχοι γέρας, ἄνδρα δ' οὐκ ἄξιον μὴ οὐ ζητεῖν  
 τὴν καθ' αὐτὸν ἐπιστήμην. εἰ δὲ λέγουσιν τι οἱ  
 1 a ποιηταὶ καὶ πέφυκε φθονεῖν τὸ θεῖον, ἐπὶ τούτου  
 συμβῆναι<sup>3</sup> μάλιστα εἰκὸς καὶ δυστυχεῖς εἶναι πάντας  
 τοὺς περιπτούς. ἀλλ' οὔτε τὸ θεῖον φθονερόν  
 ἐνδέχεται εἶναι, ἀλλὰ<sup>4</sup> κατὰ τὴν παροιμίαν πολλὰ  
 ψεύδονται ἄοιδοί, οὔτε τῆς τοιαύτης ἄλλην χρῆ  
 5 νομίζειν τιμιωτέραν· ἡ γὰρ θειοτάτη καὶ τιμιω-  
 τάτη. τοιαύτη δὲ διχῶς ἂν εἴη μόνον· ἦν τε γὰρ  
 μάλιστ' ἂν ὁ θεὸς ἔχοι, θεία τῶν ἐπιστημῶν ἐστί,  
 καὶ εἴ τις τῶν θείων εἴη. μόνη δ' αὐτὴ τούτων  
 ἀμφοτέρων τετύχηκεν· ὁ τε γὰρ θεὸς δοκεῖ τῶν  
 αἰτίων πᾶσιν εἶναι καὶ ἀρχὴ τις, καὶ τὴν τοιαύτην  
 0 ἡ μόνος ἡ μάλιστ' ἂν ἔχοι ὁ θεὸς ἀναγκαιότεραι  
 μὲν οὖν πᾶσαι ταύτης, ἀμείνων δ' οὐδεμία. Δεῖ

μέντοι πῶς καταστῆναι τὴν κτήσιν αὐτῆς εἰς τοῦ-  
 ναντίον ἡμῖν τῶν ἐξ ἀρχῆς ζητήσεων. ἄρχονται μὲν  
 γάρ, ὥσπερ εἶπομεν, ἀπὸ τοῦ θαυμάζειν πάντες εἰ  
 οὕτως ἔχει, καθάπερ <περὶ><sup>5</sup> τῶν θαυμάτων ταύ-  
 5 τόματα ἢ περὶ τὰς τοῦ ἡλίου τροπὰς ἢ τὴν τῆς

<sup>1</sup> αὐτὴν ὡς μόνην ἐλευθέραν οὖσαν. αὐτὴ μόνη ἐλευθέρη οὖσα E.

<sup>2</sup> αὐτὴ αὐτῇ A<sup>b</sup>.

<sup>3</sup> συμβαίνειν A<sup>b</sup>.

<sup>4</sup> ἀλλὰ καὶ A<sup>b</sup>.

<sup>5</sup> Jaeger

<sup>a</sup> Fragment 3 (Hiller).

<sup>b</sup> Cf. Solon, fragment 26 (Hiller); Leutsch and Schneide-  
 win, *Paroemiosographi* 1. 271



that we seek this knowledge ; for just as we call a man independent who exists for himself and not for another, so we call this the only independent science, since it alone exists for itself

For this reason its acquisition might justly be supposed to be beyond human power, since in many respects human nature is servile ; in which case, as Simonides <sup>a</sup> says, " God alone can have this privilege," and man should only seek the knowledge which is within his reach. Indeed if the poets are right and the Deity is by nature jealous, it is probable that in this case He would be particularly jealous, and all those who excel in knowledge unfortunate. But it is impossible for the Deity to be jealous (indeed, as the proverb <sup>b</sup> says, " poets tell many a lie "), nor must we suppose that any other form of knowledge is more precious than this ; for what is most divine is most precious. Now there are two ways only in which it can be divine. A science is divine if it is peculiarly the possession of God, or if it is concerned with divine matters. And this science alone fulfils both these conditions ; for (a) all believe that God is one of the causes and a kind of principle, and (b) God is the sole or chief possessor of this sort of knowledge. Accordingly, although all other sciences are more necessary than this, none is more excellent

The acquisition of this knowledge, however, must in a sense result in something which is the reverse of the outlook with which we first approached the inquiry. All begin, as we have said, by wondering that things should be as they are, *e g.* with regard to marionettes, or the solstices, or the incommensur-

διαμέτρου ἀσυμμετρίαν· θαυμαστόν γὰρ εἶναι δοκεῖ  
 πᾶσι τοῖς μήπω τεθεωρηκόσι τὴν αἰτίαν,<sup>1</sup> εἴ τι τῷ  
 ἐλαχίστῳ μὴ μετρεῖται. δεῖ δὲ εἰς τοῦναντίον, καὶ  
 τὸ ἀμεινον κατὰ τὴν παροιμίαν, ἀποτελευτήσαι,  
 καθάπερ καὶ ἐν τούτοις ὅταν μάθωσιν οὐθέν γὰρ  
 20 ἂν οὕτως θαυμάσειεν ἀνὴρ γεωμετρικὸς ὡς εἰ γέ-  
 νοιτο ἢ διάμετρος μετρητή. Τίς μὲν οὖν ἢ φύσις  
 τῆς ἐπιστήμης τῆς ζητουμένης εἴρηται, καὶ τίς ὁ  
 σκοπὸς οὗ δεῖ τυγχάνειν τὴν ζήτησιν καὶ τὴν ὄλην  
 μέθοδον.

III Ἐπεὶ δὲ φανερόν ὅτι τῶν ἐξ ἀρχῆς αἰτίων δεῖ  
 25 λαβεῖν ἐπιστήμην (τότε γὰρ εἰδέναι φαμὲν ἕκαστον,  
 ὅταν τὴν πρώτην αἰτίαν οἰώμεθα γνωρίζειν), τὰ δ'  
 αἰτία λέγεται τετραχῶς, ὧν μίαν μὲν αἰτίαν φαμὲν  
 εἶναι τὴν οὐσίαν καὶ τὸ τί ἦν εἶναι (ἀνάγεται γὰρ τὸ  
 διὰ τί εἰς τὸν λόγον ἔσχατον, αἴτιον δὲ καὶ ἀρχή  
 30 τὸ διὰ τί πρῶτον), ἑτέραν δὲ τὴν ὕλην καὶ τὸ ὑπο-  
 κείμενον, τρίτην δὲ ὅθεν ἢ ἀρχὴ τῆς κινήσεως,  
 τετάρτην δὲ τὴν ἀντικειμένην αἰτίαν ταύτη, τὸ  
 οὗ ἕνεκα καὶ τὰγαθόν (τέλος γὰρ γενέσεως καὶ  
 κινήσεως πάσης τοῦτ' ἐστίν), τεθεώρηται μὲν οὖν  
 35 ἱκανῶς περὶ αὐτῶν ἡμῶν ἐν τοῖς περὶ φύσεως,  
 ὁμῶς δὲ παραλάβωμεν καὶ τοὺς πρότερον ἡμῶν  
 εἰς ἐπίσκειψιν τῶν ὄντων ἐλθόντας καὶ φιλοσοφῆ-  
 σαντας περὶ τῆς ἀληθείας. δῆλον γὰρ ὅτι κακείνοι  
 λέγουσιν ἀρχὰς τινὰς καὶ αἰτίας· ἐπελθοῦσιν οὖν

<sup>1</sup> τοῖς αἰτίαν huc transp. Jaeger, ita ci Bonitz: habent  
 codd. post ταυτόματα l. 15.

<sup>a</sup> i.e. the fact that the diameter of a square cannot be  
 rationally expressed in terms of the side.

<sup>b</sup> i.e. δευτέρων ἀμεινόνων ("second thoughts are better").  
 Leutsch and Schneidewin 1 62.

ability<sup>a</sup> of the diameter of a square; because it seems wonderful to everyone who has not yet perceived the cause that a thing should not be measurable by the smallest unit. But we must end with the contrary and (according to the proverb)<sup>b</sup> the better view, as men do even in these cases when they understand them; for a geometrician would wonder at nothing so much as if the diameter were to become measurable.

Thus we have stated what is the nature of the science which we are seeking, and what is the object which our search and our whole investigation must attain.

III It is clear that we must obtain knowledge of the primary causes, because it is when we think that we understand its primary cause that we claim to know each particular thing. Now there are four recognized kinds of cause. Of these we hold that one is the essence or essential nature of the thing (since the "reason why" of a thing is ultimately reducible to its formula, and the ultimate "reason why" is a cause and principle); another is the matter or substrate; the third is the source of motion; and the fourth is the cause which is opposite to this, namely the purpose or "good"; for this is the end of every generative or motive process. We have investigated these sufficiently in the *Physics*<sup>c</sup>; however, let us avail ourselves of the evidence of those who have before us approached the investigation of reality and philosophized about Truth. For clearly they too recognize certain principles and causes, and so it will be of some assistance to our present inquiry if

<sup>c</sup> *Physics* II. iii., vii.

5 ἔσται τι προὔργου τῇ μεθόδῳ τῇ νῦν· ἢ γὰρ  
 ἕτερόν τι γένος εὐρήσομεν αἰτίας, ἢ ταῖς νῦν λεγο-  
 μέναις μᾶλλον πιστεύσομεν. Τῶν δὲ πρώτων  
 φιλοσοφησάντων οἱ πλείστοι τὰς ἐν ὑλῆς εἶδει  
 μόνας ᾤθησαν ἀρχὰς εἶναι πάντων· ἐξ οὗ γὰρ  
 10 ἔστιν ἅπαντα τὰ ὄντα, καὶ ἐξ οὗ γίνεταί πρῶτου  
 καὶ εἰς ὃ φθείρεται τελευταῖον, τῆς μὲν οὐσίας  
 ὑπομενούσης, τοῖς δὲ πάθεσι μεταβαλλούσης, τοῦτο  
 στοιχεῖον καὶ ταύτην ἀρχὴν φασιν εἶναι τῶν ὄντων,  
 καὶ διὰ τοῦτο οὔτε γινεσθαι οὐθὲν οἴονται οὔτε  
 ἀπόλλυσθαι, ὡς τῆς τοιαύτης φύσεως ἀεὶ σωζο-  
 μένης, ὥσπερ οὐδὲ τὸν Σωκράτην φασὶν οὔτε  
 15 γίνεσθαι ἀπλῶς ὅταν γίγνηται καλὸς ἢ μουσικὸς  
 οὔτε ἀπόλλυσθαι ὅταν ἀποβάλλῃ ταύτας τὰς ἕξεις,  
 διὰ τὸ ὑπομένειν τὸ ὑποκείμενον τὸν Σωκράτην  
 αὐτόν, οὕτως οὐδὲ τῶν ἄλλων οὐδέν· ἀεὶ γὰρ εἶναι  
 τινα φύσιν ἢ μίαν ἢ πλείους μιᾶς, ἐξ ὧν γίνεταί  
 τᾶλλα σωζομένης ἐκείνης. τὸ μέντοι πλῆθος καὶ  
 20 τὸ εἶδος τῆς τοιαύτης ἀρχῆς οὐ τὸ αὐτὸ πάντες  
 λέγουσιν, ἀλλὰ Θαλῆς μὲν ὁ τῆς τοιαύτης ἀρχηγὸς  
 φιλοσοφίας ὕδωρ φησὶν εἶναι (διὸ καὶ τὴν γῆν ἐφ'  
 ὕδατος ἀπεφήνατο εἶναι), λαβὼν ἴσως τὴν ὑπόληψιν  
 ταύτην<sup>2</sup> ἐκ τοῦ πάντων ὄραν τὴν τροφὴν ὑγρὰν  
 οὔσαν καὶ αὐτὸ τὸ θερμὸν ἐκ τούτου γιγνόμενον καὶ  
 25 τούτῳ ζῶν (τὸ δ' ἐξ οὗ γίνεταί, τοῦτ' ἐστὶν ἀρχὴ  
 πάντων), διὰ τε δὴ τοῦτο τὴν ὑπόληψιν λαβὼν  
 ταύτην, καὶ διὰ τὸ πάντων τὰ σπέρματα τὴν φύσιν  
 ὑγρὰν ἔχειν, τὸ δ' ὕδωρ ἀρχὴν τῆς φύσεώς εἶναι

<sup>1</sup> ἀεὶ Bywater, δέιν Wirth: δεῖ codd.

<sup>2</sup> ταύτην om. recc.

<sup>a</sup> Thales of Miletus, fl. 585 B.C.

<sup>b</sup> That of the Ionian monists, who sought a single material principle of everything.

we study their teaching; because we shall either discover some other kind of cause, or have more confidence in those which we have just described.

Most of the earliest philosophers conceived only of material principles as underlying all things. That of which all things consist, from which they first come and into which on their destruction they are ultimately resolved, of which the essence persists although modified by its affections—this, they say, is an element and principle of existing things. Hence they believe that nothing is either generated or destroyed, since this kind of primary entity always persists. Similarly we do not say that Socrates comes into being *absolutely* when he becomes handsome or cultured, nor that he is destroyed when he loses these qualities; because the substrate, Socrates himself, persists. In the same way nothing else is generated or destroyed; for there is some one entity (or more than one) which always persists and from which all other things are generated. All are not agreed, however, as to the number and character of these principles. Thales,<sup>a</sup> the founder of this school of philosophy,<sup>b</sup> says the permanent entity is water (which is why he also propounded that the earth floats on water). Presumably he derived this assumption from seeing that the nutriment of everything is moist, and that heat itself is generated from moisture and depends upon it for its existence (and that from which a thing is generated is always its first principle). He derived his assumption, then, from this; and also from the fact that the seeds of everything have a moist nature, whereas water is the first principle of the nature of moist things.

τοῖς ὑγροῖς Εἰσὶ δέ τινες οἳ καὶ τοὺς παμπάλαιους  
καὶ πολὺ πρὸ τῆς νῦν γενέσεως καὶ πρώτους  
30 θεολογήσαντας οὕτως οἴονται περὶ τῆς φύσεως  
ὑπολαβεῖν Ὠκεανόν τε γὰρ καὶ Τηθὺν ἐποίησαν  
τῆς γενέσεως πατέρας, καὶ τὸν ὄρκον τῶν θεῶν  
ὔδωρ, τὴν καλουμένην ὑπ' αὐτῶν Στύγα [τῶν  
ποιητῶν]<sup>1</sup> τιμιώτατον μὲν γὰρ τὸ πρεσβύτατον,  
34 α ὄρκος δὲ τὸ τιμιώτατόν ἐστιν. εἰ μὲν οὖν ἀρχαία  
τις αὕτη καὶ παλαιὰ τετύχηκεν οὔσα περὶ τῆς  
φύσεως ἢ δόξα, τάχ' ἂν ἄδηλον εἶη, Θαλῆς μέντοι  
λέγεται οὕτως ἀποφήνασθαι περὶ τῆς πρώτης  
αἰτίας· Ἴππωνα γὰρ οὐκ ἂν τις ἀξιώσειε θεῖναι  
5 μετὰ τούτων, διὰ τὴν εὐτέλειαν αὐτοῦ τῆς διανοίας.

Ἀναξιμένης δὲ ἀέρα καὶ Διογένης πρότερον ὕδατος  
καὶ μάλιστ' ἀρχὴν τιθέασι τῶν ἀπλῶν σωμάτων,  
Ἴππασος δὲ πῦρ ὁ Μεταποντῖνος καὶ Ἡράκλειτος  
ὁ Ἐφέσιος, Ἐμπεδοκλῆς δὲ τὰ τέτταρα, πρὸς τοῖς  
εἰρημένοις γῆν προστιθεὶς τέταρτον· ταῦτα γὰρ αἰεὶ  
10 διαμένειν καὶ οὐ γίνεσθαι ἀλλ' ἢ πλήθει καὶ ὀλι-  
γότητι, συγκρινόμενα καὶ διακρινόμενα εἰς ἓν τε  
καὶ ἐξ ἑνός. Ἀναξαγόρας δὲ ὁ Κλαζομένιος, τῇ  
μὲν ἡλικίᾳ πρότερος ὢν τούτου, τοῖς δ' ἔργοις  
ὑστερος, ἀπείρους εἶναι φησι τὰς ἀρχάς σχεδὸν  
γὰρ ἅπαντα τὰ ὁμοιομερῆ, καθάπερ ὔδωρ ἢ πῦρ,

<sup>1</sup> Christ<sup>a</sup> Cf. Plato, *Cratylus* 402 b, *Theaetetus* 152 e, 180 c, d<sup>b</sup> Cf. Homer, *Iliad*, xiv 201, 246<sup>c</sup> Cf. Homer, *Iliad*, ii. 755, xiv 271, xv. 37.<sup>d</sup> Hippo of Samos, a medical writer and eclectic philosopher who lived in the latter half of the fifth century b.c. Cf. *De Anima* 405 b 2.

There are some <sup>a</sup> who think that the men of very ancient times, long before the present era, who first speculated about the gods, also held this same opinion about the primary entity. For they <sup>b</sup> represented Oceanus and Tethys to be the parents of creation, and the oath of the gods to be by water—Styx,<sup>c</sup> as they call it. Now what is most ancient is most revered, and what is most revered is what we swear by. Whether this view of the primary entity is really ancient and time-honoured may perhaps be considered uncertain; however, it is said that this was Thales' opinion concerning the first cause. (I say nothing of Hippo,<sup>d</sup> because no one would presume to include him in this company, in view of the paltriness of his intelligence)

Anaximenes <sup>e</sup> and Diogenes <sup>f</sup> held that air is prior to water, and is of all corporeal elements most truly the first principle. Hippasus <sup>g</sup> of Metapontum and Heraclitus <sup>h</sup> of Ephesus hold this of fire; and Empedocles <sup>i</sup>—adding earth as a fourth to those already mentioned—takes all four. These, he says, always persist, and are only generated in respect of multitude and paucity, according as they are combined into unity or differentiated out of unity.

Anaxagoras of Clazomenae—prior to Empedocles in point of age, but posterior in his activities—says that the first principles are infinite in number. For he says that as a general rule all things which are,

<sup>e</sup> The third Milesian monist; *fl. circa* 545 B C

<sup>f</sup> Diogenes of Apollonia, an eclectic philosopher roughly contemporary with Hippo.

<sup>g</sup> A Pythagorean, probably slightly junior to Heraclitus.

<sup>h</sup> *Fl.* about 500 B C.

<sup>i</sup> Of Acragas, *fl.* 450 B C

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<sup>4 a</sup>  
 15 οὕτω γίνεσθαι καὶ ἀπόλλυσθαι φησι, συγκρίσει  
 καὶ διακρίσει μόνον, ἄλλως δ' οὔτε γίνεσθαι οὔτ'  
 ἀπόλλυσθαι, ἀλλὰ διαμένειν αἴδια. Ἐκ μὲν οὖν  
 τούτων μόνην τις αἰτίαν νομίσειεν ἂν τὴν ἐν ὕλης  
 εἶδει λεγομένην· προιόντων δ' οὕτως, αὐτὸ τὸ  
 πρᾶγμα ὠδοποίησεν αὐτοῖς καὶ συνηνάγκασε ζητεῖν  
 20 εἰ γὰρ ὅτι μάλιστα πᾶσα γέनेσις καὶ φθορά<sup>1</sup> ἔκ  
 τινος ἐνὸς ἢ καὶ πλειόνων ἐστίν, διὰ τί τοῦτο συμ-  
 βαίνει, καὶ τί τὸ αἴτιον; οὐ γὰρ δὴ τό γε ὑπο-  
 κείμενον αὐτὸ ποιεῖ μεταβάλλειν ἑαυτὸ λέγω δ' οἶον  
 οὔτε τὸ ξύλον οὔτε ὁ χαλκὸς αἴτιος τοῦ μεταβάλ-  
 λειν ἑκάτερον αὐτῶν, οὐδὲ ποιεῖ τὸ μὲν ξύλον  
 25 κλίην ὁ δὲ χαλκὸς ἀνδριάντα, ἀλλ' ἕτερόν τι τῆς  
 μεταβολῆς αἴτιον. τὸ δὲ τοῦτο ζητεῖν ἐστὶ τὸ τὴν  
 ἑτέραν ἀρχὴν ζητεῖν, ὡς ἂν ἡμεῖς φαίημεν, ὅθεν ἡ  
 ἀρχὴ τῆς κινήσεως. Οἱ μὲν οὖν πάμπαν ἐξ  
 ἀρχῆς ἀψάμενοι τῆς μεθόδου τῆς τοιαύτης καὶ ἐν  
 φάσκοντες εἶναι τὸ ὑποκείμενον οὐθεν ἐδυσχέραναν  
 30 ἑαυτοῖς, ἀλλ' ἐνιοί γε τῶν ἐν λεγόντων, ὥσπερ  
 ἠττηθέντες ὑπὸ ταύτης τῆς ζητήσεως, τὸ ἐν ἀκίνη-  
 τόν φασιν εἶναι καὶ τὴν φύσιν ὅλην οὐ μόνον κατὰ  
 γέनेσιν καὶ φθορὰν (τοῦτο μὲν γὰρ ἀρχαῖόν τε καὶ  
 πάντες ὠμολόγησαν), ἀλλὰ καὶ κατὰ τὴν ἄλλην  
 1 b μεταβολὴν πᾶσαν· καὶ τοῦτο αὐτῶν ἰδιόν ἐστιν.  
 Τῶν μὲν οὖν ἐν φασκόντων εἶναι τὸ πᾶν οὐθενὶ  
 συνέβη τὴν τοιαύτην συνιδεῖν αἰτίαν, πλὴν εἰ ἄρα

<sup>1</sup> γέनेσις καὶ φθορά: φθορά καὶ γέनेσις ΕΓ.

<sup>a</sup> This is Aristotle's illustration; apparently Anaxagoras



like fire and water,<sup>a</sup> homoeomerous, are generated and destroyed in this sense only, by combination and differentiation ; otherwise they are neither generated nor destroyed, but persist eternally <sup>b</sup>

From this account it might be supposed that the only cause is of the kind called " material." But as men proceeded in this way, the very circumstances of the case led them on and compelled them to seek further ; because if it is really true that all generation and destruction is out of some one entity or even more than one, *why* does this happen, and what is the cause ? It is surely not the substrate itself which causes itself to change I mean, *e g*, that neither wood nor bronze is responsible for changing itself ; wood does not make a bed, nor bronze a statue, but something else is the cause of the change Now to investigate this is to investigate the second type of cause · the *source of motion*, as we should say.

Those who were the very first to take up this inquiry, and who maintained that the substrate is one thing, had no misgivings on the subject, but some of those <sup>c</sup> who regard it as one thing, being baffled, as it were, by the inquiry, say that that one thing (and indeed the whole physical world) is immovable in respect not only of generation and destruction (this was a primitive belief and was generally admitted) but of all other change. This belief is peculiar to them.

None of those who maintained that the universe is a unity achieved any conception of this type of composed of parts which are similar to one another and to the whole) Cf. *De Caelo* 302 a 28, *De Gen. et Corr.* 314 a 24.

<sup>b</sup> Cf. frag. 4 (Diels), and see Burnet, *E.G.P.* 130.

Παρμενίδη, καὶ τούτῳ κατὰ τοσοῦτον ὅσον οὐ  
 μόνον ἐν ἀλλὰ καὶ δύο πως τίθησιν αἰτίας εἶναι  
 5 τοῖς δὲ δὴ πλείω ποιούσι μᾶλλον ἐνδέχεται λέγειν,  
 οἷον τοῖς θερμὸν καὶ ψυχρὸν ἢ πῦρ καὶ γῆν· χρῶνται  
 γὰρ ὡς κινητικὴν ἔχοντι τῷ πυρὶ τὴν φύσιν, ὕδατι  
 δὲ καὶ γῆ καὶ τοῖς τοιοῦτοις τοῦναντίον Μετὰ  
 δὲ τούτους καὶ τὰς τοιαύτας ἀρχάς, ὡς οὐχ ἰκα-  
 νῶν οὐσῶν γεννησάσαι τὴν τῶν ὄντων φύσιν, πάλιν  
 10 ὑπ' αὐτῆς τῆς ἀληθείας, ὥσπερ εἶπομεν, ἀναγκαζό-  
 μενοι τὴν ἐχομένην ἐζήτησαν ἀρχὴν τοῦ γὰρ εὖ  
 καὶ καλῶς τὰ μὲν ἔχειν τὰ δὲ γίνεσθαι τῶν ὄντων  
 ἴσως οὔτε πῦρ οὔτε γῆν οὔτ' ἄλλο τῶν τοιοῦτων  
 οὐθὲν οὔτ' εἰκὸς αἴτιον εἶναι οὔτ' ἐκείνους οἰηθῆναι·  
 οὐδ' αὖ τῷ αὐτομάτῳ καὶ τύχῃ τοσοῦτον ἐπι-  
 15 τρέψαι πρᾶγμα καλῶς εἶχεν. νοῦν δὴ τις εἰπὼν  
 ἐνεῖναι, καθάπερ ἐν τοῖς ζώοις, καὶ ἐν τῇ φύσει τὸν  
 αἴτιον τοῦ κόσμου καὶ τῆς τάξεως πάσης οἷον  
 νήφων ἐφάνη παρ' εἰκῇ λέγοντας τοὺς πρότερον.  
 φανερώς μὲν οὖν Ἀναξαγόραν ἴσμεν ἀψάμενον  
 τούτων τῶν λόγων, αἰτίαν δ' ἔχει πρότερον Ἐρ-  
 20 μότιμος ὁ Κλαζομένιος εἰπεῖν. οἱ μὲν οὖν οὕτως  
 ὑπολαμβάνοντες ἅμα τοῦ καλῶς τὴν αἰτίαν ἀρχὴν  
 εἶναι τῶν ὄντων ἔθεσαν, καὶ τὴν τοιαύτην ὅθεν ἢ  
 κίνησις ὑπάρχει τοῖς οὖσιν.

IV. Ὑποπτεύσειε δ' ἂν τις Ἡσίοδον πρῶτον  
 ζητῆσαι τὸ τοιοῦτον, κἂν εἴ τις ἄλλος ἔρωτα ἢ  
 25 ἐπιθυμίαν ἐν τοῖς οὖσιν ἔθηκεν ὡς ἀρχὴν, οἷον καὶ

<sup>a</sup> Founder of the above, *f* about 475.

<sup>b</sup> *i.e.* in the *Δόξα*. Fr. 8 (Diels), R P. 121.

<sup>c</sup> Aristotle is probably thinking of Empedocles.

cause, except perhaps Parmenides <sup>a</sup>; and him only <sup>ef</sup> in so far as he admits, in a sense, not one cause only <sup>ca</sup> but two <sup>b</sup>. But those who recognize more than one <sup>14</sup> entity, *e g* hot and cold, or fire and earth, are better <sup>as</sup> able to give a systematic explanation, because they <sup>m</sup> avail themselves of fire as being of a kinetic nature, and of water, earth, etc., as being the opposite <sup>o</sup>.

After these thinkers and the discovery of these causes, since they were insufficient to account for the generation of the actual world, men were again compelled (as we have said) by truth itself to investigate the next first principle. For presumably it <sup>15</sup> is unnatural that either fire or earth or any other <sup>(u</sup> such element should cause existing things to be or <sup>pl</sup> become well and beautifully disposed, or indeed <sup>eff</sup> that those thinkers should hold such a view. Nor <sup>hr</sup> again was it satisfactory to commit so important a <sup>st</sup> matter to spontaneity and chance. Hence when <sup>Al</sup> someone <sup>d</sup> said that there is Mind in nature, just as in animals, and that this is the cause of all order and arrangement, he seemed like a sane man in contrast with the haphazard statements of his predecessors <sup>e</sup>. We know definitely that Anaxagoras adopted this <sup>17</sup> view; but Hermodotus <sup>f</sup> of Clazomenae is credited with having stated it earlier. Those thinkers, then, who held this view assumed a principle in things which is the cause of beauty, and the sort of cause by which motion is communicated to things.

IV. It might be inferred that the first person to <sup>al</sup> consider this question was Hesiod, or indeed anyone <sup>th</sup> else who assumed Love or Desire as a first principle <sup>be</sup> <sup>ba</sup>.

<sup>a</sup> Anaxagoras.

<sup>e</sup> Cf Plato, *Phaedo* 97 B-98 B.

<sup>f</sup> A semi-mythical person supposed to have been a pre-

<sup>1</sup> b Παρμενίδης· καὶ γὰρ οὗτος κατασκευάζων τὴν  
τοῦ παντὸς γένεσιν

πρώτιστον μὲν (φησιν) ἔρωτα θεῶν μητίσατο  
πάντων,

Ἡσίodos δὲ

πάντων μὲν πρώτιστα χάος γένητ', αὐτὰρ ἔπειτα  
γαί' εὐρύστερος, — —

ἦδ' ἔρος, ὃς πάντεσσι μεταπρέπει ἀθανάτοισιν,

<sup>30</sup> ὡς δέον ἐν τοῖς οὖσις ὑπάρχειν τιν' αἰτίαν ἣτις  
κινήσει καὶ συνάξει τὰ πράγματα. Τούτους μὲν

οὖν πῶς χρὴ διανεῖμαι περὶ τοῦ τίς πρῶτος, ἐξέστω  
κρίνειν ὕστερον· ἐπεὶ δὲ καὶ τὰναντία τοῖς ἀγαθοῖς  
ἐνόητα ἐφαίνετο ἐν τῇ φύσει, καὶ οὐ μόνον τάξις καὶ

<sup>a</sup> τὸ καλὸν ἀλλὰ καὶ ἀταξία καὶ τὸ αἰσχροῦν, καὶ πλείω  
τὰ κακὰ τῶν ἀγαθῶν καὶ τὰ φαῦλα τῶν καλῶν,

οὕτως ἄλλος τις φιλίαν εἰσήνεγκε καὶ νεῖκος, ἐκάτε-  
ρον ἐκατέρων αἴτιον τούτων εἰ γὰρ τις ἀκολουθοίη

<sup>5</sup> καὶ λαμβάνοι πρὸς τὴν διάνοιαν καὶ μὴ πρὸς ἃ ψελ-  
λίζεται λέγων Ἐμπεδοκλῆς, εὐρήσει τὴν μὲν φιλίαν

αἰτίαν οὖσαν τῶν ἀγαθῶν, τὸ δὲ νεῖκος τῶν κακῶν·  
ὥστ' εἴ τις φαίη τρόπον τινὰ καὶ λέγειν καὶ πρῶτον

λέγειν τὸ κακὸν καὶ τὸ ἀγαθὸν ἀρχὰς Ἐμπεδοκλέα,  
τάχ' ἂν λέγοι καλῶς, εἶπερ τὸ τῶν ἀγαθῶν ἀπάν-

<sup>10</sup> των αἴτιον αὐτὸ τὰγαθὸν ἐστὶ [καὶ τῶν κακῶν τὸ  
κακόν]<sup>1</sup> οὗτοι μὲν οὖν, ὥσπερ λέγομεν, καὶ μέχρι

τούτου δυοῖν αἰτίαι<sup>2</sup> ὧν ἡμεῖς διωρίσαμεν ἐν τοῖς  
περὶ φύσεως ἡμμένοι φαίνονται,<sup>3</sup> τῆς τε ὕλης καὶ

<sup>1</sup> om. A<sup>b</sup> comm.

<sup>2</sup> αἰτίαι ἐφήσαντο ΕΓ.

<sup>3</sup> ἡμμένοι φαίνονται om. ΕΓ.

in things; *e.g.* Parmenides. For he says, where he<sup>ea</sup>  
is describing the creation of the universe,<sup>ti</sup>

Love she<sup>a</sup> created first of all the gods.<sup>b</sup>

And Hesiod says,<sup>c</sup>

First of all things was Chaos made, and then  
Broad-bosomed Earth . . .  
And Love, the foremost of immortal beings,

thus implying that there must be in the world some cause to move things and combine them.

The question of arranging these thinkers in order<sup>2</sup> of priority may be decided later. Now since it was apparent that nature also contains the opposite of what is good, *i.e.* not only order and beauty, but disorder and ugliness; and that there are more bad and common things than there are good and beautiful: in view of this another thinker introduced Love<sup>Er</sup> and Strife<sup>ini</sup> <sup>3</sup> as the respective causes of these things —because if one follows up and appreciates the statements of Empedocles with a view to his real<sup>an</sup> meaning and not to his obscure language, it will be<sup>ca</sup> found that Love is the cause of good, and Strife of<sup>as</sup> evil. Thus it would perhaps be correct to say that Empedocles in a sense spoke of evil and good as first principles, and was the first to do so—that is, if the cause of all good things is absolute good.

These thinkers then, as I say, down to the time of 4  
Empedocles, seem to have grasped two of the causes<sup>A:</sup>  
which we have defined in the *Physics*<sup>e</sup>. the material<sup>ca</sup><sup>no</sup>

<sup>b</sup> Fr. 13 (Diels).

<sup>c</sup> *Theogony* 116-20. The quotation is slightly inaccurate.

<sup>d</sup> Fr. 17, 26 (Diels); R. P. 166 Cf. Burnet, *E.G.P.* 108 ff.

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<sup>a</sup> τοῦ ὄθεν ἢ κίνησις, ἀμυδρῶς μέντοι καὶ οὐθὲν σαφῶς, ἀλλ' οἷον ἐν ταῖς μάχαις οἱ ἀγύμναστοι ποιούσιν καὶ γὰρ ἐκείνοι περιφερόμενοι τύπτουσι πολλάκις καλὰς πληγὰς, ἀλλ' οὔτε ἐκείνοι ἀπὸ ἐπιστήμης οὔτε οὗτοι εἰκόασιν εἰδέναι<sup>1</sup> ὅτι λέγουσιν σχεδὸν γὰρ οὐθὲν χρώμενοι φαίνονται τούτοις ἀλλ' ἢ κατὰ μικρὸν Ἐναξαγόρας τε γὰρ μηχανῆ χρηταὶ τῷ νῶ πρὸς τὴν κοσμοποιίαν, καὶ ὅταν ἀπορήσῃ διὰ τίν' αἰτίαν ἐξ ἀνάγκης ἐστί, τότε παρέλκει αὐτόν, ἐν δὲ τοῖς ἄλλοις πάντα μᾶλλον αἰτιᾶται τῶν γιγνομένων ἢ νοῦν, καὶ Ἐμπεδοκλῆς ἐπὶ πλεόν μὲν τούτου χρηταὶ τοῖς αἰτίοις, οὐ μὴν οὔθ' ἰκανῶς, οὔτ' ἐν τούτοις εὐρίσκει τὸ ὁμολογούμενον πολλαχοῦ γοῦν αὐτῷ ἢ μὲν φιλία διακρίνει τὸ δὲ νεῖκος συγκρίνει ὅταν μὲν γὰρ εἰς τὰ στοιχεῖα δίστηται τὸ πᾶν ὑπὸ τοῦ νεῖκου, τότε τὸ<sup>2</sup> πῦρ εἰς ἓν συγκρίνεται καὶ τῶν ἄλλων στοιχείων ἕκαστον ὅταν δὲ πάλιν<sup>3</sup> ὑπὸ τῆς φιλίας συνίωσιν εἰς τὸ ἓν, ἀναγκαῖον ἐξ ἐκάστου τὰ μόρια διακρίνεσθαι πάλιν. Ἐμπεδοκλῆς μὲν οὖν παρὰ τοὺς πρότερον πρῶτος τὸ τὴν αἰτίαν διελεῖν<sup>4</sup> εἰσήνεγκεν, οὐ μίαν ποιήσας τὴν τῆς κινήσεως ἀρχὴν ἀλλ' ἑτέρας τε καὶ ἐναντίας ἔτι δὲ τὰ ὡς ἐν ὕλης εἶδει λεγόμενα στοιχεῖα τέτταρα πρῶτος εἶπεν· οὐ μὴν χρηταὶ γε τέτταρσιν, ἀλλ' ὡς δυσὶν οὔσι μόνοις, πυρὶ μὲν καθ' αὐτό, τοῖς δ' ἀντικειμένους ὡς μιᾷ φύσει, γῆ τε καὶ ἀέρι καὶ ὕδατι· λάβοι δ' ἂν τις

<sup>1</sup> εἰδέναι: εἰδόσιν λέγειν ΕΓ<sup>2</sup> τότε τὸ. τὸ τε Α<sup>b</sup>.<sup>3</sup> πάλιν πάντα recc.<sup>4</sup> τὸ . . διελεῖν: ταύτην διελὼν ΕΓ Asclepius.

cause and the source of motion ; but only vaguely and indefinitely They are like untrained soldiers in a battle, who rush about and often strike good blows, but without science ; in the same way these thinkers do not seem to understand their own statements. since it is clear that upon the whole they seldom or never apply them Anaxagoras avails himself of Mind as an artificial device for producing order, and drags it in whenever he is at a loss to explain some necessary result ; but otherwise he makes anything rather than Mind the cause of what happens<sup>a</sup> Again, Empedocles does indeed use causes to a greater degree than Anaxagoras, but not sufficiently , nor does he attain to consistency in their use At any rate Love often differentiates and Strife combines . because whenever the universe is differentiated into its elements by Strife, fire and each of the other elements are agglomerated into a unity ; and whenever they are all combined together again by Love, the particles of each element are necessarily again differentiated

Empedocles, then, differed from his predecessors in that he first introduced the division of this cause, making the source of motion not one but two contrary forces Further, he was the first to maintain that the so-called material elements are four—not that he uses them as four, but as two only, treating fire on the one hand by itself, and the elements opposed to it—earth, air and water—on the other, as a single nature.<sup>b</sup> This can be seen from a study

<sup>a</sup> Cf. Plato, *Phaedo* 98 B, *Laws* 967 B ; also *infra*, vii. 5.

<sup>b</sup> Cf. iii 14

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<sup>1</sup> <sup>b</sup> αὐτὸ θεωρῶν ἐκ τῶν ἐπῶν οὗτος μὲν οὖν, ὥσπερ λέγομεν, οὕτω τε καὶ τοσαύτας εἴρηκε τὰς<sup>1</sup> ἀρχάς.

<sup>5</sup> Λευκίππος δὲ καὶ ὁ ἑταῖρος αὐτοῦ Δημόκριτος στοιχεῖα μὲν τὸ πλήρες καὶ τὸ κενὸν εἶναι φασί, λέγοντες τὸ μὲν ὄν τὸ δὲ μὴ ὄν, τούτων δὲ τὸ μὲν πλήρες καὶ στερεὸν τὸ ὄν, τὸ δὲ κενόν τε<sup>2</sup> καὶ μανὸν τὸ μὴ ὄν (διὸ καὶ οὐθὲν μᾶλλον τὸ ὄν τοῦ μὴ ὄντος εἶναι φασιν, ὅτι οὐδὲ τοῦ κενοῦ τὸ

<sup>10</sup> σῶμα<sup>3</sup>), αἷτια δὲ τῶν ὄντων ταῦτα ὡς ὕλην. καὶ καθάπερ οἱ ἐν ποιῶντες τὴν ὑποκειμένην οὐσίαν τᾶλλα τοῖς πάθεσιν αὐτῆς γεννῶσι, τὸ μανὸν καὶ τὸ πυκνὸν ἀρχὰς τιθέμενοι τῶν παθημάτων, τὸν αὐτὸν τρόπον καὶ οὗτοι τὰς διαφορὰς αἰτίας τῶν ἄλλων εἶναι φασιν. ταύτας μέντοι τρεῖς εἶναι

<sup>15</sup> λέγουσι, σχῆμά τε καὶ τάξιν καὶ θέσιν· διαφέρειν γάρ φασί τὸ ὄν ῥυσμῶ καὶ διαθιγῆ καὶ τροπῆ μόνον τούτων δὲ ὁ μὲν ῥυσμός σχῆμά ἐστίν, ἡ δὲ διαθιγὴ τάξις, ἡ δὲ τροπὴ θέσις· διαφέρει γὰρ τὸ μὲν Α τοῦ Ν σχήματι, τὸ δὲ ΑΝ τοῦ ΝΑ τάξει, τὸ δὲ Ξ τοῦ Η<sup>4</sup> θέσει. περὶ δὲ κινήσεως, ὅθεν ἡ

<sup>20</sup> πῶς ὑπάρχει τοῖς οὐσί, καὶ οὗτοι παραπλησίως τοῖς ἄλλοις ῥαθύμως ἀφείσαν. περὶ μὲν οὖν τῶν δύο αἰτιῶν, ὥσπερ λέγομεν, ἐπὶ τοσοῦτον ἔοικεν ἐζητῆσθαι παρὰ τῶν πρότερον.

V. Ἐν δὲ τούτοις καὶ πρὸ τούτων οἱ καλούμενοι

<sup>1</sup> τὰς om. recce.

<sup>2</sup> γε recce.

<sup>3</sup> τοῦ κενοῦ τὸ σῶμα Schwegler: τὸ κενὸν τοῦ σώματος.

<sup>4</sup> Ξ τοῦ Η Wilamowitz (on the ground that Ξ was the symbol for Ζ in Aristotle's time). Ζ τοῦ Ν.

<sup>a</sup> e.g. fr. 62 (Diels).

<sup>b</sup> Of Miletus; fl. circ. 440 (?) B.C. See Burnet, *E.G.P.* 171 ff.

<sup>c</sup> Of Abdera; fl. circ. 420 B.C. *E.G.P. loc. cit.*



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of his writings<sup>a</sup> Such, then, as I say, is his account 9  
of the nature and number of the first principles.

Leucippus,<sup>b</sup> however, and his disciple Democritus<sup>c</sup> Digress  
Physic.  
theorie  
of the  
Atoms  
hold that the elements are the Full and the Void—  
calling the one “ what is ” and the other “ what is  
not.” Of these they identify the full or solid with  
“ what is,” and the void or rare with “ what is not ”  
(hence they hold that what is not is no less real than  
what is,<sup>d</sup> because Void is as real as Body) ; and they  
say that these are the material causes of things.  
And just as those who make the underlying substance 10  
a unity generate all other things by means of its  
modifications, assuming rarity and density as first  
principles of these modifications, so these thinkers  
hold that the “ differences ”<sup>e</sup> are the causes of  
everything else. These differences, they say, are 11  
three · shape, arrangement, and position ; because  
they hold that what is differs only in *contour*, *inter-*  
*contact*, and *inclination*<sup>f</sup> (Of these *contour* means  
shape, *inter-contact* arrangement, and *inclination*  
position) Thus, *e.g.*, A differs from N in shape,  
AN from NA in arrangement, and Z from N<sup>g</sup> in  
position. As for motion, whence and how it arises 12  
in things, they casually ignored this point, very much  
as the other thinkers did. Such, then, as I say, seems  
to be the extent of the inquiries which the earlier  
thinkers made into these two kinds of cause.

V. At the same time, however, and even earlier The P  
agorea

<sup>a</sup> For the probable connexion between the Atomists and  
the Eleatics see *E G P.* 173, 175, and *cf. De Gen. et Corr.*  
324 b 35-325 a 32

<sup>b</sup> *i.e.*, of the atoms.

<sup>c</sup> *Cf. R.P.* 194.

<sup>d</sup> These letters will convey Aristotle's point better to the  
English reader, but see critical note.

<sup>5 b</sup> Πυθαγόρειοι τῶν μαθημάτων ἀψάμενοι πρῶτοι  
<sup>25</sup> ταυτὰ τε<sup>1</sup> προήγαγον, καὶ ἐντραφέντες ἐν αὐτοῖς  
 τὰς τούτων ἀρχὰς τῶν ὄντων ἀρχὰς ᾤήθησαν εἶναι  
 πάντων ἐπεὶ δὲ τούτων οἱ ἀριθμοὶ φύσει πρῶτοι,  
 ἐν δὲ τούτοις<sup>2</sup> ἐδόκουν θεωρεῖν ὁμοιώματα πολλὰ  
 τοῖς οὖσι καὶ γιγνομένοις, μᾶλλον ἢ ἐν πυρὶ καὶ γῆ  
 καὶ ὕδατι, ὅτι τὸ μὲν τοιονδὶ τῶν ἀριθμῶν πάθος  
<sup>30</sup> δικαιοσύνη, τὸ δὲ τοιονδὶ ψυχῇ καὶ νοῦς, ἕτερον δὲ  
 καιρὸς, καὶ τῶν ἄλλων ὡς εἰπεῖν ἕκαστον ὁμοίως·  
 ἔτι δὲ τῶν ἀρμονικῶν ἐν ἀριθμοῖς ὄρωντες τὰ πάθη  
 καὶ τοὺς λόγους, ἐπεὶ δὴ<sup>3</sup> τὰ μὲν ἄλλα τοῖς ἀριθμοῖς  
<sup>6 a</sup> ἐφαίνοντο<sup>4</sup> τὴν φύσιν ἀφωμοιωθῆσαι πᾶσαν, οἱ δ'  
 ἀριθμοὶ πάσης τῆς φύσεως πρῶτοι, τὰ τῶν ἀρι-  
 θμῶν στοιχεῖα τῶν ὄντων στοιχεῖα πάντων ὑπ-  
 ἔλαβον εἶναι,<sup>5</sup> καὶ τὸν ὅλον οὐρανὸν ἀρμονίαν εἶναι  
 καὶ ἀριθμόν· καὶ ὅσα εἶχον ὁμολογούμενα δεικνύναι  
<sup>5</sup> ἐν τε τοῖς ἀριθμοῖς καὶ ταῖς ἀρμονίαις πρὸς τὰ  
 τοῦ οὐρανοῦ πάθη καὶ μέρη καὶ πρὸς τὴν ὅλην δια-  
 κόσμησιν, ταυτὰ συνάγοντες ἐφήρμοττον κἂν εἴ  
 τί που διέλειπε, προσεγλίχοντο τοῦ συνειρομένην  
 πᾶσαν αὐτοῖς εἶναι τὴν πραγματείαν. λέγω δ' οἶον,  
<sup>10</sup> περιεληφέναι τὴν τῶν ἀριθμῶν φύσιν, καὶ τὰ

<sup>1</sup> τε om E.

<sup>2</sup> τούτοις. τοῖς ἀριθμοῖς EF Asclepius.

<sup>3</sup> ἐπεὶ δὴ Christ: ἐπειδὴ.

<sup>4</sup> ἐφαίνετο E.

<sup>5</sup> εἶναι ὑπέλαβον EF.

<sup>a</sup> Aristotle seems to have regarded Pythagoras as a legendary person.

<sup>b</sup> Pythagoras himself (fl 532 B C) is said by Aristoxenus (ap. Stobaeus 1 20. 1) to have been the first to make a theoretical study of arithmetic

<sup>c</sup> 1 or the meaning of this statement see Introd p xvi.

<sup>d</sup> (cf XIV v, ff

<sup>e</sup> Apparently (cf. *infra*, l. 17) they identified these con-

the so-called<sup>a</sup> Pythagoreans applied themselves to mathematics, and were the first to develop this science<sup>b</sup>; and through studying it they came to believe that its principles are the principles of everything<sup>c</sup>. And since numbers are by nature first<sup>2</sup> among these principles, and they fancied that they could detect in numbers, to a greater extent than in fire and earth and water, many analogues<sup>d</sup> of what is and comes into being—such and such a property of number being *justice*,<sup>e</sup> and such and such *soul* or *mind*, another *opportunity*, and similarly, more or less, with all the rest—and since they saw further that the properties and ratios of the musical scales are based on numbers,<sup>f</sup> and since it seemed clear that all other things have their whole nature modelled upon numbers, and that numbers are the ultimate things in the whole physical universe, they assumed the elements of numbers to be the elements of everything, and the whole universe to be a proportion<sup>g</sup> or number. Whatever analogues to the processes and parts of the heavens and to the whole order of the universe they could exhibit in numbers and proportions, these they collected and correlated; and if there was any deficiency anywhere, they made<sup>3</sup> haste to supply it, in order to make their system a connected whole. For example, since the decad<sup>h</sup> is considered to be a complete thing and to comprise

not only with properties of number but with numbers themselves. Thus justice (properly = squareness) = 4, the first square number; soul or mind = 1, opportunity = 7 (Alexander).

<sup>f</sup> Pythagoras himself is credited with having discovered the ratios of the octave (2 : 1), the fifth (3 : 2) and the fourth (4 : 3) Burnet. *E.G.P.* 51.

<sup>g</sup> Or "harmony." Cf. *De Caelo*, II. ix., and *E.G.P.* 152.

<sup>h</sup> On the number 10 and the "tetraktys" see *Introd.* p. xvi.

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with  
and d  
every  
from  
2  
eleme  
numb

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φερόμενα κατὰ τὸν οὐρανὸν δέκα μὲν εἶναι φασι, ὄντων δὲ ἑννέα μόνον τῶν φανερῶν διὰ τοῦτο δεκάτην τὴν ἀντίχθονα ποιούσιν διώρισται δὲ περὶ τούτων ἐν ἑτέροις ἡμῖν ἀκριβέστερον ἀλλ' οὐδὲ χάριν ἐπερχόμεθα, τοῦτό ἐστιν ὅπως λάβωμεν καὶ παρὰ τούτων τίνας εἶναι τιθέασι τὰς ἀρχὰς καὶ πῶς εἰς τὰς εἰρημένας ἐμπίπτουσιν αἰτίας φαίνονται δὴ καὶ οὗτοι τὸν ἀριθμὸν νομίζοντες ἀρχὴν εἶναι καὶ ὡς ὕλην τοῖς οὐσι καὶ ὡς πάθη τε καὶ ἕξεις, τοῦ δὲ ἀριθμοῦ στοιχεῖα τό τε ἄρτιον καὶ τὸ περιττόν, τούτων δὲ τὸ μὲν πεπερασμένον τὸ δὲ ἄπειρον, τὸ δ' ἐν ἑξ ἄμφοτέρων εἶναι τούτων (καὶ γὰρ ἄρτιον εἶναι καὶ περιττόν), τὸν δ' ἀριθμὸν ἐκ τοῦ ἑνός, ἀριθμοὺς δέ, καθάπερ εἴρηται, τὸν ὅλον οὐρανόν

Ἔτεροι δὲ τῶν αὐτῶν τούτων τὰς ἀρχὰς δέκα λέγουσιν εἶναι τὰς κατὰ συστοιχίαν λεγομένας, πέρασ ἄπειρον, περιττόν ἄρτιον, ἐν πλήθος, δεξιὸν ἀριστερόν, ἄρρεν θῆλυ, ἡρεμοῦν κινούμενον, εὐθὺ καμπύλον, φῶς σκότος, ἀγαθὸν κακόν, τετράγωνον ἑτερόμηκες· ὅνπερ τρόπον ἔοικε καὶ Ἀλκμαίων ὁ Κροτωνιάτης ὑπολαβεῖν, καὶ ἦτοι οὗτος παρ' ἐκείνων ἢ ἐκείνοι παρὰ τούτου παρέλαβον τὸν λόγον τοῦτον. καὶ γὰρ [ἐγένετο τὴν ἡλικίαν]<sup>1</sup> Ἀλκμαίων

<sup>1</sup> om. A<sup>b</sup>.

<sup>a</sup> Earth, sun, moon, five planets, and the sphere of the fixed stars.

<sup>b</sup> i.e. "counter-earth"; a planet revolving round the "central fire" in such a way as to be always in opposition to the earth.

<sup>c</sup> In the lost work *On the Pythagoreans*; but cf. *De*

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the whole essential nature of the numerical system, they assert that the bodies which revolve in the heavens are ten; and there being only nine <sup>a</sup> that are visible, they make the "antichthon" <sup>b</sup> the tenth. We have treated this subject in greater detail elsewhere <sup>c</sup>; but the object of our present review is to discover from these thinkers too what causes they assume and how these coincide with our list of causes. Well, it is obvious that these thinkers too consider number to be a first principle, both as the material <sup>d</sup> of things and as constituting their properties and states <sup>e</sup>. The elements of number, according to them, are the Even and the Odd. Of these the former is limited and the latter unlimited; Unity consists of both (since it is both odd and even) <sup>f</sup>; number is derived from Unity; and numbers, as we have said, compose the whole sensible universe. <sup>g</sup>

<sup>d</sup> The  
rega  
Nun  
both  
mat  
and  
form  
prin

Others <sup>h</sup> of this same school hold that there are ten principles, which they enunciate in a series of corresponding pairs: (i) Limit and the Unlimited, (ii) Odd and Even; (iii.) Unity and Plurality; (iv) Right and Left; (v) Male and Female; (vi.) Rest and Motion; (vii) Straight and Crooked, (viii) Light and Darkness; (ix.) Good and Evil; (x) Square and Oblong. Apparently Alcmaeon of Croton speculated along the same lines, and either he derived the theory from them or they from him, for [Alcmaeon

Som  
reco  
as pr  
ten  
cont

<sup>a</sup> See Introd p. xvii, and Burnet, *E G P* 143-146

<sup>e</sup> *ι ε*, as a formal principle. Cf. Ross *ad loc.*, and see Introd p. xvi

<sup>f</sup> Either because by addition it makes odd numbers even and even odd (Alexander, Theo Smyrnaeus) or because it was regarded as the principle of both odd and even numbers (Heath).

<sup>g</sup> See Introd pp. xv-xvii.

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<sup>8 a</sup>  
<sup>30</sup> [ἐπὶ γέροντι Πυθαγόρα,]<sup>1</sup> ἀπεφήνατο [δὲ]<sup>1</sup> παρα-  
 πλησίως τούτοις φησὶ γὰρ εἶναι δύο τὰ πολλὰ τῶν  
 ἀνθρωπίνων, λέγων τὰς ἐναντιότητας οὐχ ὥσπερ  
 οὔτοι διωρισμένας ἀλλὰ τὰς τυχούσας, οἶον λευκὸν  
 μέλαν, γλυκὺ πικρὸν, ἀγαθὸν κακόν, μέγα μικρόν <sup>2</sup>  
<sup>8 b</sup> οὗτος μὲν οὖν ἀδιορίστως ἐπέρριψε περὶ τῶν λοιπῶν,  
 οἱ δὲ Πυθαγόρειοι καὶ πόσαι καὶ τίνες αἱ ἐναντιώ-  
 σεις ἀπεφήναντο. παρὰ μὲν οὖν τούτων ἀμφοῖν  
 τοσοῦτον ἔστι λαβεῖν, ὅτι τὰναντία ἀρχαὶ τῶν  
 ὄντων τὸ δ' ὅσαι παρὰ τῶν ἑτέρων, καὶ τίνες  
<sup>5</sup> αὐταὶ εἰσιν πῶς μέντοι πρὸς τὰς εἰρημένας αἰτίας  
 ἐνδέχεται συνάγειν, σαφῶς μὲν οὐ διήρθρωται παρ'  
 ἐκείνων, εἰκόσασι δ' ὡς ἐν ὕλης εἶδει τὰ στοιχεῖα  
 τάττειν ἐκ τούτων γὰρ ὡς ἐνυπαρχόντων συν-  
 εστάναι καὶ πεπλάσθαι φασὶ τὴν οὐσίαν. Τῶν μὲν  
 οὖν παλαιῶν καὶ πλείω λεγόντων τὰ στοιχεῖα τῆς  
<sup>10</sup> φύσεως ἐκ τούτων ἰκανόν ἔστι θεωρῆσαι τὴν διά-  
 νοιαν εἰσὶ δέ τινες οἱ περὶ τοῦ παντός ὡς ἂν μιᾶς  
 οὔσης φύσεως ἀπεφήναντο, τρόπον δὲ οὐ τὸν αὐτὸν  
 πάντες οὔτε τοῦ καλῶς οὔτε τοῦ κατὰ τὴν φύσιν.  
 εἰς μὲν οὖν τὴν νῦν σκέψιν τῶν αἰτίων οὐδαμῶς  
 συναρμόττει περὶ αὐτῶν ὁ λόγος οὐ γὰρ ὥσπερ  
<sup>15</sup> ἔνιοι τῶν φυσιολόγων ἐν ὑποθέμενοι τὸ ὄν ὁμως  
 γεννῶσιν ὡς ἐξ ὕλης τοῦ ἑνός, ἀλλ' ἕτερον τρόπον  
 οὔτοι λέγουσιν· ἐκείνοι μὲν γὰρ προστιθέασι κίνη-  
 σιν, γεννῶντές γε τὸ πᾶν, οὔτοι δὲ ἀκίνητον εἶναι

<sup>1</sup> om. A<sup>b</sup>.

<sup>2</sup> μέγα μικρόν] μικρὸν μέγα E Asclepius.

<sup>a</sup> This statement is probably true, but a later addition

<sup>b</sup> He was generally regarded as a Pythagorean.

<sup>c</sup> The section of Pythagoreans mentioned in § 6, and

was contemporary with the old age of Pythagoras, and] <sup>a</sup> his doctrines were very similar to theirs. <sup>b</sup> He says that the majority of things in the world of men are in pairs ; but the contraries which he mentions are not, as in the case of the Pythagoreans, carefully defined, but are taken at random, *e g* white and black, sweet and bitter, good and bad, great and small. Thus Alcmaeon only threw out vague hints with regard to the other instances of contrariety, but the Pythagoreans pronounced how many and what the contraries are. Thus from both these authorities <sup>c</sup> we can gather thus much, that the contraries are first principles of things, and from the former, how many and what the contraries are. How these can be referred to our list of causes is not definitely expressed by them, but they appear to reckon their elements as material ; for they say that these are the original constituents of which Being is fashioned and composed.

From this survey we can sufficiently understand the meaning of those ancients who taught that the elements of the natural world are a plurality. Others, however, theorized about the universe as though it were a single entity, but their doctrines are not all alike either in point of soundness or in respect of conformity with the facts of nature. For the purposes of our present inquiry an account of their teaching is quite irrelevant, since they do not, while assuming a unity, at the same time make out that Being is generated from the unity *qua* matter, as do some physicists, but give a different explanation ; for the physicists assume motion also, at any rate when explaining the generation of the universe ; but these thinkers hold that it is immovable. Nevertheless

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<sup>b</sup> φασιν· οὐ μὴν ἀλλὰ τοσοῦτόν γε οἰκείον ἐστὶ τῆ  
 νῦν σκέψει. Παρμενίδης μὲν γὰρ ἔοικε τοῦ κατὰ  
 10 τὸν λόγον ἑνὸς ἄπτεσθαι, Μέλισσος δὲ τοῦ κατὰ  
 τὴν ὕλην (διὸ καὶ ὁ μὲν πεπερασμένον, ὁ δ' ἄπειρόν  
 φησιν εἶναι αὐτό) Ξενοφάνης δὲ πρῶτος τούτων  
 ἐνίσας (ὁ γὰρ Παρμενίδης τούτου λέγεται γενέ-  
 σθαι<sup>1</sup> μαθητῆς) οὐθὲν διεσαφήνισεν, οὐδὲ τῆς φύσεως  
 τούτων οὐδετέρας ἔοικε θίγειν, ἀλλ' εἰς τὸν ὄλον  
 5 οὐρανὸν ἀποβλέψας τὸ ἐν εἶναι φησι τὸν θεόν  
 οὔτοι μὲν οὖν, καθάπερ εἶπομεν, ἀφετέοι πρὸς τὴν  
 νῦν<sup>2</sup> ζήτησιν, οἱ μὲν δύο καὶ πάμπαν ὡς ὄντες  
 μικρὸν ἀγροικότεροι, Ξενοφάνης καὶ Μέλισσος·  
 Παρμενίδης δὲ μᾶλλον βλέπων ἔοικέ που λέγειν  
 παρὰ γὰρ τὸ ὄν τὸ μὴ ὄν οὐθὲν ἀξιῶν εἶναι, ἐξ  
 1) ἀνάγκης ἐν οἷεται εἶναι τὸ ὄν, καὶ ἄλλο οὐθὲν (περὶ  
 οὗ σαφέστερον ἐν τοῖς περὶ φύσεως εἰρήκαμεν),  
 ἀναγκαζόμενος δ' ἀκολουθεῖν τοῖς φαινομένοις,  
 καὶ τὸ ἐν μὲν κατὰ τὸν λόγον, πλείω δὲ κατὰ τὴν  
 αἴσθησιν ὑπολαμβάνων εἶναι, δύο τὰς αἰτίας καὶ  
 δύο τὰς ἀρχὰς πάλιν τίθησι, θερμὸν καὶ ψυχρὸν,  
 οἶον πῦρ καὶ γῆν λέγων τούτων δὲ κατὰ μὲν τὸ  
 ὄν τὸ θερμὸν τάττει, θάτερον δὲ κατὰ τὸ μὴ ὄν.

<sup>2</sup> Ἐκ μὲν οὖν τῶν εἰρημένων καὶ παρὰ τῶν συν-

<sup>1</sup> om EF.

<sup>2</sup> νῦν παρούσαν A<sup>b</sup>.

<sup>a</sup> His argument was "Everything that is is one, if 'what is' has one meaning" (πάντα ἐν, εἰ τὸ ὄν ἐν σημαίνει, *Phys.* 187 a 1); but he probably believed, no less than Melissus, in the material unity of reality. Cf. fr. 8 (Diels). It has been suggested, however (by the Rev. C F. Angus), that he was simply trying to convey in figurative language a conception of absolute existence.



thus much is pertinent to our present inquiry. It appears that Parmenides conceived of the Unity as one in definition,<sup>a</sup> but Melissus<sup>b</sup> as materially one. Hence the former says that it is finite,<sup>c</sup> and the latter that it is infinite.<sup>d</sup> But Xenophanes,<sup>e</sup> the first exponent of the Unity (for Parmenides is said to have been his disciple), gave no definite teaching, nor does he seem to have grasped either of these conceptions of unity; but regarding the whole material universe he stated that the Unity is God. This school then, as we have said, may be disregarded for the purposes of our present inquiry; two of them, Xenophanes and Melissus, may be completely ignored, as being somewhat too crude in their views. Parmenides, however, seems to speak with rather more insight. For holding as he does that Not-being, as contrasted with Being, is nothing, he necessarily supposes that Being is one and that there is nothing else (we have discussed this point in greater detail in the *Physics*<sup>f</sup>); but being compelled to accord with phenomena, and assuming that Being is one in definition but many in respect of sensation, he posits in his turn two causes, *æ* two first principles, Hot and Cold; or in other words, Fire and Earth. Of these he ranks Hot under Being and the other under Not-being.<sup>g</sup>

From the account just given, and from a consideration of those thinkers who have already

<sup>b</sup> Of Samos; defeated the Athenian fleet in 441 B.C.

<sup>c</sup> Fr. 8, ll. 32-3, 42-3.

<sup>d</sup> Fr. 3.

<sup>e</sup> Of Colophon, b. 565 (?) B.C. Criticized and ridiculed most of the views of his day, especially the anthropomorphic conception of the gods. Burnet, *E.G.P.* 55 ff, esp. 61-62. Cf. fr. 23 (Diels).

<sup>f</sup> *Phus* I. iii.

<sup>g</sup> Cf. note on iii 13.

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<sup>a</sup> ἡδρευκότητων ἤδη τῷ λόγῳ σοφῶν ταῦτα<sup>1</sup> παρειλή-  
 φαμεν, παρὰ μὲν τῶν πρώτων σωματικὴν τε τὴν  
 5 ἀρχὴν (ὑδὼρ γὰρ καὶ πῦρ καὶ τὰ τοιαῦτα σώματά  
 ἔστιν), καὶ τῶν μὲν μίαν τῶν δὲ πλείους τὰς<sup>2</sup> ἀρχὰς  
 τὰς σωματικὰς, ἀμφοτέρων μέντοι ταύτας ὡς ἐν  
 ὕλης εἶδει τιθέντων, παρὰ δέ τινων ταύτην τε τὴν  
 αἰτίαν τιθέντων καὶ πρὸς ταύτη τὴν ὄθεν ἢ κίνησις,  
 καὶ ταύτην παρὰ τῶν μὲν μίαν παρὰ τῶν δὲ δύο.  
 0 μέχρι μὲν οὖν τῶν Ἰταλικῶν καὶ χωρὶς ἐκείνων  
 μορυχώτερον<sup>3</sup> εἰρήκασιν οἱ ἄλλοι περὶ αὐτῶν, πλήν  
 ὥσπερ εἶπομεν δυοῖν τε αἰτίαι τυγχάνουσι κεχρη-  
 μένοι, καὶ τούτων τὴν ἑτέραν οἱ μὲν μίαν οἱ δὲ  
 δύο ποιοῦσι, τὴν ὄθεν ἢ κίνησις οἱ δὲ Πυθαγό-  
 ρειοι δύο μὲν τὰς ἀρχὰς κατὰ τὸν αὐτὸν εἰρήκασι  
 5 τρόπον, τοσοῦτον δὲ προσεπέθεσαν, ὃ καὶ ἴδιον  
 ἔστιν αὐτῶν, ὅτι τὸ πεπερασμένον καὶ τὸ ἄπειρον  
 [καὶ τὸ ἐν]<sup>4</sup> οὐχ ἑτέρας τινὰς ᾤθησαν εἶναι φύσεις,  
 οἷον πῦρ ἢ γῆν ἢ τι τοιοῦτον ἕτερον, ἀλλ' αὐτὸ τὸ  
 ἄπειρον καὶ αὐτὸ τὸ ἐν οὐσίαν εἶναι τούτων ὧν  
 κατηγοροῦνται, διὸ καὶ ἀριθμὸν εἶναι τὴν οὐσίαν  
 1 πάντων.<sup>5</sup> περὶ τε τούτων οὖν τοῦτον ἀπεφάνησαντο  
 τὸν τρόπον, καὶ περὶ τοῦ τί ἐστὶν ἤρξαντο μὲν  
 λέγειν καὶ ὀρίζεσθαι, λίαν δ' ἀπλῶς ἐπραγματεύ-  
 θησαν. ὠρίζοντό τε γὰρ ἐπιπολαίως, καὶ ᾧ πρώτῳ  
 ὑπάρξειεν ὁ λεχθεὶς ὄρος, τοῦτ' εἶναι τὴν οὐσίαν  
 τοῦ πράγματος ἐνόμιζον, ὥσπερ εἴ τις οἶοιτο ταῦ-  
 1 τὸν εἶναι διπλάσιον καὶ τὴν δυάδα διότι πρώτον  
 ὑπάρχει τοῖς δυοῖν τὸ διπλάσιον. ἀλλ' οὐ ταῦτὸν  
 ἴσως ἐστὶ τὸ εἶναι διπλασίῳ καὶ δυάδι· εἰ δὲ μή,

<sup>1</sup> τοσαῦτα A<sup>b</sup>.<sup>2</sup> τὰς om E.<sup>3</sup> μορυχώτερον Ross ex Alexandrio: μαλακώτερον A<sup>b</sup>: μετριώ-  
 τερον E Bekker. <sup>4</sup> καὶ τὸ ἐν A<sup>b</sup>: om. cet. <sup>5</sup> ἀπαντων E.

debated this question, we have acquired the following information. From the earliest philosophers we have learned that the first principle is corporeal (since water and fire and the like are bodies); some of them assume one and others more than one corporeal principle, but both parties agree in making these principles material. Others assume in addition to this cause the *source of motion*, which some hold to be one and others two. Thus down to and apart from the Italian<sup>a</sup> philosophers the other thinkers have expressed themselves vaguely on the subject, except that, as we have said, they actually employ two causes, and one of these—the source of motion—some regard as one and others as two. The Pythagoreans, while they likewise spoke of two principles, made this further addition, which is peculiar to them: they believed, not that the Limited and the Unlimited are separate entities, like fire or water or some other such thing, but that the Unlimited itself and the One itself are the essence of those things of which they are predicated, and hence that number is the essence of all things. Such is the nature of their pronouncements on this subject. They also began to discuss and define the “what” of things; but their procedure was far too simple. They defined superficially, and supposed that the essence of a thing is that to which the term under consideration first applies—*e.g.* as if it were to be thought that “double” and “2” are the same, because 2 is the first number which is double another. But presumably “to be double a number” is not the same as “to be the number 2.” Otherwise, one

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<sup>a</sup> The Pythagoreans; so called because Pythagoras founded his society at Croton.

7<sup>a</sup> πολλὰ τὸ ἔν ἔσται, ὃ κακείνοις συνέβαινεν. παρὰ μὲν οὖν τῶν πρότερον καὶ τῶν ἄλλων τοσαῦτα ἔστι λαβεῖν.

VI. Μετὰ δὲ τὰς εἰρημένας φιλοσοφίας ἢ Πλά-  
 30 τωνος ἐπεγένετο πραγματεία, τὰ μὲν πολλὰ τούτοις ἀκολουθοῦσα, τὰ δὲ καὶ ἴδια παρὰ τὴν τῶν Ἰταλικῶν ἔχουσα φιλοσοφίαν ἐκ νέου τε γὰρ συνήθησ γενόμενος πρῶτον Κρατύλῳ καὶ ταῖς Ἡρακλειτείοις δόξαις, ὡς ἀπάντων τῶν αἰσθητῶν ἀεὶ ρέοντων καὶ ἐπιστήμης περὶ αὐτῶν οὐκ οὔσης, ταῦτα  
 4 μὲν καὶ ὕστερον οὕτως ὑπέλαβεν Σωκράτους δὲ περὶ μὲν τὰ ἠθικὰ πραγματευομένου, περὶ δὲ τῆς ὅλης φύσεως οὐθέν, ἐν μέντοι τούτοις τὸ καθόλου ζητοῦντος καὶ περὶ ὀρισμῶν ἐπιστήσαντος πρῶτου τὴν διάνοιαν, ἐκείνῳ ἀποδεξάμενος διὰ τὸ τοιοῦτον  
 5 ὑπέλαβεν ὡς περὶ ἐτέρων τοῦτο γιγνόμενον καὶ οὐ τῶν αἰσθητῶν<sup>1</sup>. ἀδύνατον γὰρ εἶναι τὸν κοινὸν ὅρον τῶν αἰσθητῶν τινός, ἀεὶ γε μεταβαλλόντων. οὗτος οὖν τὰ μὲν<sup>2</sup> τοιαῦτα τῶν ὄντων ἰδέας προσηγόρευσε, τὰ δ' αἰσθητὰ παρὰ ταῦτα καὶ κατὰ ταῦτα λέγε-  
 10 σθαι πάντα· κατὰ μέθεξιν γὰρ εἶναι τὰ πολλὰ τῶν συνωνύμων [τοῖς εἶδεσι].<sup>3</sup> (τὴν δὲ μέθεξιν τοῦνομα

<sup>1</sup> αἰσθητῶν: αἰσθητῶν τινος E Alexander.

<sup>2</sup> οὖν τὰ μὲν· μὲν οὖν τὰ recc.

<sup>3</sup> τοῖς εἶδεσι secl. Gillespie συνωνύμων δυνάμει τοῖς εἶδεσι. F.

<sup>a</sup> i.e., the same number might be the first to which each of several definitions applied; then that number would be each of the concepts so defined.

<sup>b</sup> See *Intro.* p. xx, and with the whole of §§ 1-2 compare XIII. iv. 2-5.

<sup>c</sup> Cf. IV. v. 18.

thing will be many—a consequence which actually followed in their system <sup>a</sup> This much, then, can be learned from other and earlier schools of thought.

VI The philosophies described above were succeeded by the system of Plato,<sup>b</sup> which in most respects accorded with them, but contained also certain peculiar features distinct from the philosophy of the Italians. In his youth Plato first became acquainted with Cratylus <sup>c</sup> and the Heraclitean doctrines—that the whole sensible world is always in a state of flux,<sup>d</sup> and that there is no scientific knowledge of it—and in after years he still held these opinions. And when Socrates, disregarding the physical universe and confining his study to moral questions,<sup>e</sup> sought in this sphere for the universal and was the first to concentrate upon definition, Plato followed him and assumed that the problem of definition is concerned not with any sensible thing but with entities of another kind; for the reason that there can be no general definition of sensible things which are always changing. These entities he called "Ideas,"<sup>f</sup> and held that all sensible things are named after them and in virtue of their relation to them, for the plurality of things which bear the same name as the Forms <sup>g</sup> exist by participation in them. (With

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<sup>a</sup> Plato, *Cratylus* 402 A (fr. 41 Bywater).

<sup>b</sup> See *Intro.* p. xx.

<sup>c</sup> I have translated *ιδέα* by Idea and *εἶδος* by Form wherever Aristotle uses the words with reference to the Platonic theory. Plato apparently uses them indifferently, and so does Aristotle in this particular connexion, but he also uses *εἶδος* in the sense of form in general. For a discussion of the two words see Taylor, *Varia Socratica*, 178-267, and Gillespie, *Classical Quarterly*, vi. 179-203

<sup>g</sup> For this interpretation of *παρὰ ταῦτα* see Ross's note *ad loc.*

7 b μόνον μετέβαλεν· οἱ μὲν γὰρ Πυθαγόρειοι μίμησει τὰ ὄντα φασὶν εἶναι τῶν ἀριθμῶν, Πλάτων δὲ μέθεξι, τοῦνομα μεταβαλῶν· τὴν μέντοι γε μέθεξιν ἢ τὴν μίμησιν ἤτις ἂν εἴη [τῶν εἰδῶν],<sup>1</sup> ἀφείσαν ἐν  
 15 κοινῷ ζητεῖν) Ἐπι δὲ παρὰ τὰ αἰσθητὰ καὶ τὰ εἶδη τὰ μαθηματικὰ τῶν πραγμάτων εἶναι φησι μεταξύ, διαφέροντα τῶν μὲν αἰσθητῶν τῷ αἰδία καὶ ἀκίνητα εἶναι, τῶν δ' εἰδῶν τῷ τὰ μὲν πόλλ' ἄττα ὁμοια εἶναι τὸ δὲ εἶδος αὐτὸ ἐν ἕκαστον μόνον.

Ἐπεὶ δ' αἷτια τὰ εἶδη τοῖς ἄλλοις, τὰ κείνων στοι-  
 20 χεῖα πάντων ᾤθηθη τῶν ὄντων εἶναι στοιχεῖα. ὡς μὲν οὖν ὕλην τὸ μέγα καὶ τὸ μικρὸν εἶναι ἀρχάς, ὡς δ' οὐσίαν τὸ ἐν ἐξ ἐκείνων γὰρ κατὰ μέθεξιν τοῦ ἐνὸς [τὰ εἶδη]<sup>2</sup> εἶναι τοὺς ἀριθμοὺς τὸ μέντοι γε ἐν οὐσίαν εἶναι, καὶ μὴ ἕτερόν γέ τι ὄν λέγεσθαι ἐν, παραπλησίως τοῖς Πυθαγορείοις ἔλεγε, καὶ τὸ  
 25 τοὺς ἀριθμοὺς αἰτίους εἶναι τοῖς ἄλλοις τῆς οὐσίας ὡσαύτως ἐκείνοις· τὸ δὲ ἀντὶ τοῦ ἀπείρου ὡς ἐνὸς δυάδα ποιῆσαι τὸ δ'<sup>3</sup> ἀπείρου ἐκ μεγάλου καὶ μικροῦ, τοῦτ' ἴδιον καὶ ἔτι<sup>4</sup> ὁ μὲν τοὺς ἀριθμοὺς παρὰ τὰ αἰσθητά, οἱ δ' ἀριθμοὺς εἶναι φασὶν αὐτὰ τὰ πράγματα, καὶ τὰ μαθηματικὰ μεταξύ τούτων  
 30 οὐ τιθέασιν. τὸ μὲν οὖν τὸ ἐν καὶ τοὺς ἀριθμοὺς παρὰ τὰ πράγματα ποιῆσαι, καὶ μὴ ὡσπερ οἱ Πυθαγόρειοι, καὶ ἢ τῶν εἰδῶν εἰσαγωγή διὰ τὴν ἐν τοῖς λόγοις ἐγένετο σκέψιν (οἱ γὰρ πρότεροι διαλεκτικῆς οὐ μετείχον), τὸ δὲ δυάδα ποιῆσαι τὴν

<sup>1</sup> Gillespie<sup>2</sup> Zeller.<sup>3</sup> τὸ δ': καὶ τὸ Α<sup>b</sup>Γ.<sup>4</sup> ἔτι: ὅτι Α<sup>b</sup> Asclepius.<sup>a</sup> i. e. arithmetical numbers and geometrical figures.<sup>b</sup> See IV. ii, 19-20, and cf. XIII. iv. 4.

regard to the "participation," it was only the term that he changed; for whereas the Pythagoreans say that things exist by imitation of numbers, Plato says that they exist by participation—merely a change of term. As to what this "participation" or "imitation" may be, they left this an open question.)

Further, he states that besides sensible things and the Forms there exists an intermediate class, the *objects of mathematics*,<sup>a</sup> which differ from sensible things in being eternal and immutable, and from the Forms in that there are many similar objects of mathematics, whereas each Form is itself unique.

Now since the Forms are the causes of everything else, he supposed that their elements are the elements of all things. Accordingly the material principle is the "Great and Small," and the essence (or formal principle) is the One, since the numbers are derived from the "Great and Small" by participation in the One. In treating the One as a substance instead of a predicate of some other entity, his teaching resembles that of the Pythagoreans, and also agrees with it in stating that the numbers are the causes of Being in everything else; but it is peculiar to him to posit a duality instead of the single Unlimited, and to make the Unlimited consist of the "Great and Small." He is also peculiar in regarding the numbers as distinct from sensible things, whereas they hold that things themselves *are* numbers, nor do they posit an intermediate class of mathematical objects. His distinction of the One and the numbers from ordinary things (in which he differed from the Pythagoreans) and his introduction of the Forms were due to his investigation of logic (the earlier thinkers were strangers to Dialectic)<sup>b</sup>. his concep-

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## ARISTOTLE

<sup>b</sup> ἐτέραν φύσιν διὰ τὸ τοὺς ἀριθμοὺς ἕξω τῶν πρώτων  
<sup>a</sup> εὐφυῶς ἐξ αὐτῆς γεννᾶσθαι, ὥσπερ ἕκ τινος ἐκμα-  
 γείου. καίτοι συμβαίνει γ' ἐναντίως οὐ γὰρ εὐλο-  
 γον οὕτως οἱ μὲν γὰρ ἐκ τῆς ὕλης πολλὰ ποιοῦσιν,  
 τὸ δ' εἶδος ἅπαξ γεννᾶ μόνον, φαίνεται δ' ἐκ μιᾶς  
 ὕλης μία τράπεζα, ὃ δὲ τὸ εἶδος ἐπιφέρων εἰς ὧν  
<sup>3</sup> πολλὰς ποιεῖ. ὁμοίως δ' ἔχει καὶ τὸ ἄρρεν πρὸς τὸ  
 θῆλυ τὸ μὲν γὰρ<sup>1</sup> ὑπὸ μιᾶς πληροῦται ὀχείας, τὸ δ'  
 ἄρρεν πολλὰ πληροῖ. καίτοι ταῦτα μιμήματα τῶν  
 ἀρχῶν ἐκείνων ἐστίν.

Πλάτων μὲν οὖν περὶ τῶν ζητουμένων οὕτω  
 διώρισεν φανερόν δ' ἐκ τῶν εἰρημένων ὅτι δυοῖν  
<sup>3</sup> αἰτίαι μόνον κέχρηται, τῇ τε τοῦ τί ἐστι καὶ  
 τῇ κατὰ τὴν ὕλην (τὰ γὰρ εἶδη τοῦ τί ἐστιν  
 αἰτία τοῖς ἄλλοις, τοῖς δ' εἶδεσι τὸ ἐν), καὶ τίς  
 ἢ ὕλη ἢ ὑποκειμένη καθ' ἧς τὰ εἶδη μὲν ἐπὶ τῶν

<sup>1</sup> γὰρ θῆλυ A<sup>b</sup>

<sup>a</sup> ἕξω τῶν πρώτων is very difficult, but it can hardly be a gloss, and no convincing emendation has been suggested. Whatever the statement means, it is probably (as the criticism which follows is certainly) based upon a misunderstanding. From Plato, *Parmenides* 113 c-111 v, it might be inferred that the Great and Small (the Indeterminate Dyad) played no part in the generation of numbers; but there the numbers are not Ideal, as here they must be. In any case Aristotle is obsessed with the notion that the Dyad is a duplicative principle (XIII. viii 14), which if true would imply that it could generate no *odd* number. Hence Heinze proposed reading περιπτῶν (odd) for πρώτων (which may be right, although the corruption is improbable) and Alexander tried to extract the meaning of "odd" from πρώτων by understanding it as "prime to 2." However, as Ross points out (note *ad loc.*), we may keep πρώτων in the sense of "prime" if we suppose Aristotle to be referring either (a) to the numbers within the decad (XIII viii 17) and forgetting a



tion of the other principle as a duality to the belief that numbers other than primes<sup>a</sup> can be readily generated from it, as from a matrix<sup>b</sup>. The fact, however, is just the reverse, and the theory is illogical, for whereas the Platonists derive multiplicity from matter although their Form generates only once,<sup>c</sup> it is obvious that only one table can be made from one piece of timber, and yet he who imposes the form upon it, although he is but one, can make many tables. Such too is the relation of male to female: the female is impregnated in one coition, but one male can impregnate many females. And these relations are analogues of the principles referred to.

This, then, is Plato's verdict upon the question which we are investigating. From this account it is clear that he only employed two causes<sup>d</sup>: that of the essence, and the material cause; for the Forms are the cause of the essence in everything else, and the One is the cause of it in the Forms. He also tells us what the material substrate is of which the Forms are predicated in the case of sensible things,

the other odd numbers being primes, or (b) to numbers in general, and forgetting the entire class of compound odd numbers. Neither of these alternatives is very satisfactory, but it seems better to keep the traditional text.

<sup>b</sup> For a similar use of the word *ἐκμαρτέιον* cf. Plato, *Timaeus* 50 c.

<sup>c</sup> Aristotle's objection is that it is unreasonable that a single operation of the formal upon the material principle should result in more than one product; i.e. that the material principle should be in itself duplicative.

<sup>d</sup> Plato refers several times in the dialogues to an efficient cause (e.g. the Demiurgus, *Sophist* 265 B-D, *Timaeus* 28 c ff.) and a final cause (e.g. *Philebus* 20 D, 53 E, *Timaeus* 29 D ff.); but Aristotle does not seem to take these allusions seriously.

8<sup>a</sup> αἰσθητῶν τὸ δ' ἓν ἐν τοῖς εἶδεσι λέγεται, ὅτι αὕτη  
 δυάς ἐστὶ, τὸ μέγα καὶ τὸ μικρὸν ἔτι δὲ τὴν τοῦ  
 15 εὖ καὶ τοῦ κακῶς αἰτίαν τοῖς στοιχείοις ἀπέδωκεν  
 ἑκατέρους ἑκατέραν, ὡσπερ φημὲν καὶ τῶν προ-  
 τέρων ἐπιζητησαί τινας φιλοσόφων, οἷον Ἐμπε-  
 δοκλέα καὶ Ἀναξαγόραν

VII Συντόμως μὲν οὖν καὶ κεφαλαιωδῶς ἐπ-  
 εληλύθαμεν τίνες τε καὶ πῶς τυγχάνουσιν εἰρηκότες  
 20 περὶ τε τῶν ἀρχῶν καὶ τῆς ἀληθείας· ὅμως δὲ  
 τοσοῦτόν γ' ἔχομεν ἐξ αὐτῶν, ὅτι τῶν λεγόντων  
 περὶ ἀρχῆς καὶ αἰτίας οὐθεις ἔξω τῶν ἐν τοῖς περὶ  
 φύσεως ἡμῶν διωρισμένων εἶρηκεν, ἀλλὰ πάντες  
 ἀμυδρῶς μὲν ἐκείνων δὲ πως φαίνονται θιγγά-  
 νοντες οἱ μὲν γὰρ ὡς ὕλην τὴν ἀρχὴν λέγουσιν,  
 25 ἂν τε μίαν ἂν τε πλείους ὑποθῶσι, καὶ ἑάν τε σῶμα  
 ἑάν τε ἀσώματον τοῦτο<sup>1</sup> τιθῶσιν (οἷον Πλάτων μὲν  
 τὸ μέγα καὶ τὸ μικρὸν λέγων, οἱ δ' Ἴταλικοὶ τὸ  
 ἄπειρον, Ἐμπεδοκλῆς δὲ πῦρ καὶ γῆν καὶ ὕδωρ καὶ  
 αἶρα, Ἀναξαγόρας δὲ τὴν τῶν ὁμοιομερῶν ἀπει-  
 ρίαν· οὗτοί τε δὴ πάντες τῆς τοιαύτης αἰτίας  
 30 ἡμμένοι εἰσὶ, καὶ ἔτι ὅσοι αἶρα ἢ πῦρ ἢ ὕδωρ ἢ  
 πυρὸς μὲν πυκνότερον αἶρος δὲ λεπτότερον· καὶ  
 γὰρ τοιοῦτόν τινες εἰρήκασιν εἶναι τὸ πρῶτον  
 στοιχεῖον)—οὗτοι μὲν οὖν ταύτης τῆς αἰτίας  
 ἡψαντο μόνον, ἕτεροι δὲ τινες ὅθεν ἢ ἀρχὴ τῆς  
 κινήσεως (οἷον ὅσοι φιλίαν καὶ νεῖκος ἢ νοῦν ἢ  
 35 ἔρωτα ποιοῦσιν ἀρχὴν) τὸ δὲ τί ἦν εἶναι καὶ τὴν  
 οὐσίαν σαφῶς μὲν οὐθεις ἀποδέδωκε,<sup>2</sup> μάλιστα δ'

<sup>1</sup> om. Bekker.

<sup>2</sup> ἀπέδωκε recc

<sup>a</sup> Cf. *Philebus* 25 E-26 B

<sup>b</sup> iii. 17; iv. 3

<sup>c</sup> *Physics* II iii

<sup>d</sup> See note on v 15.

<sup>e</sup> The various references in Aristotle to material principles

and the One in that of the Forms—that it is this duality, the “Great and Small.” Further, he assigned to these two elements respectively the causation of good <sup>a</sup> and of evil, a problem which, as we have said, <sup>b</sup> had also been considered by some of the earlier philosophers, *e g* Empedocles and Anaxagoras.

VII. We have given only a concise and summary account of those thinkers who have expressed views about the causes and reality, and of their doctrines. Nevertheless we have learned thus much from them : that not one of those who discuss principle or cause has mentioned any other type than those which we have distinguished in the *Physics* <sup>c</sup>. Clearly it is after these types that they are groping, however uncertainly. Some speak of the first principle as material, whether they regard it as one or several, as corporeal or incorporeal. *e g* Plato speaks of the “Great and Small” ; the Italians <sup>d</sup> of the Unlimited, Empedocles of Fire, Earth, Water and Air ; Anaxagoras of the infinity of homoeomeries. All these have apprehended this type of cause, and all those too who make their first principle air or water or “something denser than fire but rarer than air” <sup>e</sup> (for some have so described the primary element) These, then, apprehended this cause only, but others apprehended the *source of motion*—*e g*. all such as make Love and Strife, or Mind, or Desire a first principle. As for the *essence* or *essential nature*, nobody has definitely introduced it ; but the inventors of intermediate between certain pairs of “elements” have been generally regarded as applying to Anaximander’s ἀπειρον or Indeterminate ; but the references are so vague (*cf.* viii. 6, *Physics* 187 a 14, 189 b 3, 203 a 18) that it seems better to connect them with later and minor members of the Milesian school. *Cf.* Ross’s note *ad loc.*

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988 b οἱ τὰ εἶδη τιθέντες λέγουσιν (οὔτε γὰρ ὡς ὕλην τοῖς αἰσθητοῖς τὰ εἶδη καὶ τὸ ἐν<sup>1</sup> τοῖς εἶδεσιν, οὔθ' ὡς ἐντεῦθεν τὴν ἀρχὴν τῆς κινήσεως γιγνομένην ὑπολαμβάνουσιν—ἀκινήσιός γὰρ αἷτια<sup>2</sup> μᾶλλον καὶ τοῦ  
 5 ἐν ἡρεμίᾳ εἶναι φασιν—ἀλλὰ τὸ τί ἦν εἶναι ἐκάστω τῶν ἄλλων τὰ εἶδη παρέχονται, τοῖς δ' εἶδεσι τὸ ἐν). τὸ δ' οὐ ἔνεκα αἰ πράξεις καὶ αἰ μεταβολαὶ καὶ αἰ κινήσεις, τρόπον μὲν τινα λέγουσιν αἷτιον, οὔτω δὲ οὐ λέγουσιν, οὐδ' ὄνπερ πέφυκεν οἱ μὲν γὰρ νοῦν λέγοντες ἢ φιλίαν ὡς ἀγαθὸν μὲν<sup>3</sup> ταύτας τὰς  
 10 αἷτίας τιθέασιν, οὐ μὴν ὡς ἔνεκά γε τούτων ἢ ὄν ἢ γιγνόμενόν τι τῶν ὄντων, ἀλλ' ὡς ἀπὸ τούτων τὰς κινήσεις οὔσας λέγουσιν ὡς δ' αὐτως καὶ οἱ τὸ ἐν ἢ τὸ ὄν φάσκοντες εἶναι τὴν τοιαύτην φύσιν, τῆς μὲν οὐσίας αἷτιόν φασιν εἶναι, οὐ μὴν τούτου γε ἔνεκα ἢ εἶναι ἢ γίγνεσθαι ὥστε λέγειν τε καὶ μὴ  
 15 λέγειν πως συμβαίνει αὐτοῖς τὰγαθὸν αἷτιον οὐ γὰρ ἀπλῶς ἀλλὰ κατὰ συμβεβηκὸς λέγουσιν ὅτι μὲν οὖν ὀρθῶς διώριστα περὶ τῶν αἷτιων, καὶ πόσα καὶ ποῖα, μαρτυρεῖν εἰκόασιν ἡμῖν καὶ οὔτοι πάντες, οὐ δυνάμενοι θίγειν ἄλλης αἷτίας· πρὸς δὲ τούτοις, ὅτι ζητητέαι αἰ ἀρχαὶ ἢ οὔτως ἅπασαι ἢ τινὰ τρόπον  
 20 τοιοῦτον,<sup>4</sup> δῆλον Πῶς δὲ τούτων ἕκαστος εἶρηκε, καὶ πῶς ἔχει περὶ τῶν ἀρχῶν, τὰς ἐνδεχομένας ἀπορίας μετὰ τοῦτο διέλθωμεν περὶ αὐτῶν.

VIII. Ὅσοι μὲν οὖν ἐν τε τὸ πᾶν καὶ μίαν τινὰ φύσιν ὡς ὕλην τιθέασιν, καὶ ταύτην σωματικὴν καὶ μέγεθος ἔχουσαν, δῆλον ὅτι πολλαχῶς ἀμαρτάνουσιν.

<sup>1</sup> τὸ ἐν Bonitz· τὰ ἐν.

<sup>2</sup> αἷτιαν Ab.

<sup>3</sup> μὲν τι E.

<sup>4</sup> τοιοῦτον Bywater· τούτων.

the Forms express it most nearly For they do not conceive of the Forms as the *matter* of sensible things (and the One as the matter of the Forms), nor as producing the *source of motion* (for they hold that they are rather the cause of immobility and tranquillity); but they adduce the Forms as the *essential nature* of all other things, and the One as that of the Forms The *end* towards which actions, changes and 5 motions tend they do in a way treat as a cause, but not in this sense, *ie* not in the sense in which it is naturally a cause. Those who speak of Mind or Love assume these causes as being something *good*; but nevertheless they do not profess that anything exists or is generated *for the sake* of them, but only that motions originate from them.<sup>a</sup> Similarly also 6 those who hold that Unity or Being is an entity of this kind state that it is the cause of existence, but not that things exist or are generated for the sake of it So it follows that in a sense they both assert and deny that the Good is a cause, for they treat it as such not absolutely, but incidentally It appears, 7 then, that all these thinkers too (being unable to arrive at any other cause) testify that we have classified the causes rightly, as regards both number and nature. Further, it is clear that all the principles must be sought either along these lines or in some similar way.

Let us next examine the possible difficulties arising out of the statements of each of these thinkers, and out of his attitude to the first principles

VIII. All those who regard the universe as a unity, and assume as its matter some one nature, and that corporeal and extended, are clearly mistaken in many Crit  
the  
of e.  
thin

18 b  
 25 τῶν γὰρ σωμάτων τὰ στοιχεῖα τιθέασι μόνον, τῶν  
 δ' ἄσωμάτων οὐ, ὄντων καὶ ἄσωμάτων καὶ περὶ  
 γενέσεως καὶ φθορᾶς ἐπιχειροῦντες τὰς αἰτίας  
 λέγειν, καὶ περὶ πάντων φυσιολογοῦντες, τὸ τῆς  
 κινήσεως αἴτιον ἀναιροῦσιν. ἔτι δὲ τῶ<sup>1</sup> τὴν οὐσίαν  
 μηθενὸς αἰτίαν τιθέναι, μηδὲ τὸ τί ἐστὶ, καὶ πρὸς  
 30 τούτοις τῶ<sup>1</sup> ῥαδίως τῶν ἀπλῶν σωμάτων λέγειν  
 ἀρχὴν ὅτιοῦν πλὴν γῆς, οὐκ ἐπισκεψάμενοι τὴν ἐξ  
 ἀλλήλων γένεσιν πῶς ποιοῦνται, λέγω δὲ πῦρ καὶ  
 ὕδωρ καὶ γῆν καὶ ἀέρα. τὰ μὲν γὰρ συγκρίσει, τὰ  
 δὲ διακρίσει ἐξ ἀλλήλων γίνεταί. τοῦτο δὲ πρὸς  
 τὸ πρότερον εἶναι καὶ ὕστερον διαφέρει πλείστον·  
 35 τῇ μὲν γὰρ ἂν δόξειε στοιχειωδέστατον εἶναι πάντων  
 1 a ἐξ οὗ γίνονται συγκρίσει πρώτου, τοιοῦτον δὲ τὸ  
 μικρομερέστατον καὶ λεπτότατον ἂν εἴη τῶν  
 σωμάτων. διόπερ ὅσοι πῦρ ἀρχὴν τιθέασι, μά-  
 λιστα ὁμολογουμένως ἂν τῶ λόγῳ τούτῳ λέγοιεν.  
 τοιοῦτον δὲ καὶ τῶν ἄλλων ἕκαστος ὁμολογεῖ τὸ  
 5 στοιχεῖον εἶναι τὸ τῶν σωμάτων. οὐθεὶς γοῦν  
 ἠξίωσε τῶν<sup>2</sup> ἐν λεγόντων γῆν εἶναι στοιχεῖον,  
 δηλονότι διὰ τὴν μεγαλομέρειαν, τῶν δὲ τριῶν  
 ἕκαστον στοιχείων<sup>3</sup> εἴληφέ τινα κριτὴν<sup>4</sup>. οἱ μὲν γὰρ  
 πῦρ, οἱ δ' ὕδωρ, οἱ δ' ἀέρα τοῦτ' εἶναί φασι (καίτοι  
 10 πολλοὶ τῶν ἀνθρώπων; πάντα γὰρ εἶναί φασι γῆν,  
 φησὶ δὲ καὶ Ἡσίοδος τὴν γῆν πρώτην γενέσθαι  
 τῶν σωμάτων· οὕτως ἀρχαίαν καὶ δημοτικὴν  
 συμβέβηκεν εἶναι τὴν ὑπόληψιν). κατὰ μὲν οὖν  
 τοῦτον τὸν λόγον οὗτ' εἴ τις τούτων τι λέγει πλὴν

<sup>1</sup> τῶ Bywater: τὸ

<sup>2</sup> ἠξίωσε τῶν: τῶν ὕστερον ἠξίωσε καὶ E Asclepius.

<sup>3</sup> στοιχείων ἕκαστον recc.

<sup>4</sup> κριτὴν τινα E.

respects. They only assume elements of corporeal <sup>(1)</sup> things, and not of incorporeal ones, which also exist. <sub>Mor</sub>  
 They attempt to state the causes of generation and destruction, and investigate the nature of everything, and at the same time do away with the cause of motion. Then there is their failure to regard the 2  
*essence* or formula as a cause of anything; and further their readiness to call any one of the simple bodies—except earth—a first principle, without inquiring how their reciprocal generation is effected. I refer to fire, water, earth and air. Of these some are generated from each other by combination and others by differentiation; and this difference is of 3  
 the greatest importance in deciding their relative priority. In one way it might seem that the most elementary body is that from which first other bodies are produced by combination; and this will be that body which is rarest and composed of the finest particles. Hence all who posit Fire as first principle 4  
 will be in the closest agreement with this theory. However, even among the other thinkers everyone agrees that the primary corporeal element is of this kind. At any rate none of the Monists thought earth likely to be an element—obviously on account of the size of its particles—but each of the other three 5  
 has had an advocate; for some name fire as the primary element, others water, and others air.<sup>a</sup> And yet why do they not suggest earth too, as common opinion does? for people say “Everything is earth.” And Hesiod too says<sup>b</sup> that earth was 6  
 generated first of corporeal things—so ancient and popular is the conception found to be. Thus according to this theory anyone who suggests any of these

<sup>a</sup> Cf. III. 5, 8.

<sup>b</sup> Cf. IV. 1.

## ARISTOTLE

<sup>a</sup> πυρός, οὐτ' εἴ τις αἶρος μὲν πυκνότερον τοῦτο  
 5 τίθησιν ὕδατος δὲ λεπτότερον, οὐκ ὀρθῶς ἂν λέγοι  
 εἰ δ' ἔστι τὸ τῆ γενέσει ὕστερον τῆ φύσει πρότερον,  
 τὸ δὲ πεπεμμένον καὶ συγκεκριμένον ὕστερον τῆ  
 γενέσει, τούναντίον ἂν εἴη τούτων, ὕδωρ μὲν αἶρος  
 πρότερον, γῆ δὲ ὕδατος περὶ μὲν οὖν τῶν μίαν  
 τιθεμένων αἰτίαν οἷαν εἶπομεν, ἔστω ταῦτ' εἰρη-  
 1) μένα· τὸ δ' αὐτὸ κἂν εἴ τις ταῦτα πλείω τίθησιν,  
 οἷον Ἐμπεδοκλῆς τέτταρά φησιν εἶναι σώματα τὴν  
 ὕλην καὶ γὰρ τούτῳ τὰ μὲν ταῦτὰ τὰ δ' ἴδια  
 συμβαίνειν ἀνάγκη γιγνόμενά τε γὰρ ἐξ ἀλλήλων  
 ὁρῶμεν ὡς οὐκ αἰεὶ διαμένοντος πυρός καὶ γῆς τοῦ  
 αὐτοῦ σώματος (εἴρηται δὲ ἐν τοῖς περὶ φύσεως  
 , περὶ αὐτῶν) καὶ περὶ τῆς τῶν κινουμένων αἰτίας,  
 πότερον ἐν ἡ δύο θετέον, οὐτ' ὀρθῶς οὔτε εὐλόγως  
 οἰητέον εἰρησθαι παντελῶς. ὅλως τε ἀλλοίωσιν  
 ἀναιρεῖσθαι ἀνάγκη τοῖς οὕτω λέγουσιν· οὐ γὰρ  
 ἐκ θερμοῦ ψυχρὸν οὐδὲ ἐκ ψυχροῦ θερμόν ἔσται.  
 τί<sup>1</sup> γὰρ αὐτὰ ἂν<sup>2</sup> πάσχοι τἄναντία, καὶ τίς<sup>3</sup> εἴη ἂν<sup>4</sup>  
 μία φύσις ἢ γιγνομένη πῦρ καὶ ὕδωρ, ὃ ἐκεῖνος  
 οὐ φησιν. Ἄναξαγόραν δ' εἴ τις ὑπολάβοι δύο  
 λέγειν στοιχεῖα, μάλιστ' ἂν ὑπολάβοι κατὰ λόγον,  
 ὃν ἐκεῖνος αὐτὸς μὲν οὐ διήρθρωσεν, ἠκολούθησε  
 μέντ' ἂν ἐξ ἀνάγκης τοῖς ἐπάγουσιν αὐτόν. ἀτόπου  
 γὰρ ὄντος καὶ ἄλλως τοῦ φάσκειν μεμιχθαι τὴν  
 ἀρχὴν πάντα, καὶ διὰ τὸ συμβαίνειν ἄμικτα δεῖν

<sup>1</sup> τί Asclepius: τί.<sup>2</sup> ἂν αὐτὰ recc.<sup>3</sup> τίς Asclepius: τίς.<sup>4</sup> ἂν εἴη recc<sup>a</sup> Cf. vii. 3 n.<sup>b</sup> De Caelo, iii. 7; De Gen et Corr ii. 6.<sup>c</sup> Cf. iv. 6<sup>d</sup> Mind, and the "mixture" of homoeomerous particles.



bodies other than fire, or who assumes something "denser than air but rarer than water,"<sup>a</sup> will be wrong. On the other hand if what is posterior in generation is prior in nature, and that which is developed and combined is posterior in generation, then the reverse will be the case; water will be prior to air, and earth to water. So much for those who posit *one* cause such as we have described.

The same will apply too if anyone posits more than <sup>(ii) E</sup> one, as *e g* Empedocles says that matter consists of <sup>pedoc</sup> four bodies; objections must occur in his case also, 8 some the same as before, and some peculiar to him. First, we can see things being generated from each other in a way which shows that fire and earth do *not* persist as the same corporeal entity (This subject has been treated in my works on Natural Science <sup>b</sup>) Again with regard to the cause of motion in things, whether one or two should be assumed, it must not be thought that his account is entirely correct or even reasonable <sup>c</sup>. And in general those 9 who hold such views as these must of necessity do away with qualitative alteration; for on such a theory cold will not come from hot nor hot from cold, because to effect this there must be something which actually takes on these contrary qualities—some single element which becomes both fire and water—which Empedocles denies.

If one were to infer that Anaxagoras recognized <sup>10</sup> two <sup>d</sup> elements, the inference would accord closely <sup>(iii) J</sup> with a view which, although he did not articulate it <sup>agora</sup> himself, he must have accepted as developed by others. To say that originally everything was a <sup>11</sup> mixture is absurd for various reasons, but especially since (a) it follows that things must have existed

προυπάρχειν, καὶ διὰ τὸ μὴ πεφυκέναι τῷ τυχόντι μίγνυσθαι τὸ τυχόν, πρὸς δὲ τούτοις ὅτι τὰ πάθη καὶ τὰ συμβεβηκότα χωρίζουτ' ἂν τῶν οὐσιῶν (τῶν γὰρ αὐτῶν μίξις ἐστὶ καὶ χωρισμός), ὅμως εἴ τις ἀκολουθήσειε συνδιαρθρῶν ἃ βούλεται λέγειν, ἴσως ἂν φανείη καινοπρεπεστέρως λέγων. ὅτε γὰρ οὐθέν ἦν ἀποκεκριμένον, δῆλον ὡς οὐθέν ἦν ἕληθές εἰπεῖν κατὰ τῆς οὐσίας ἐκείνης, λέγω δ' οἶον ὅτι οὔτε λευκὸν οὔτε μέλαν ἢ φαιὸν ἢ ἄλλο χρῶμα, ἀλλὰ ἄχρων ἦν ἐξ ἀνάγκης· εἶχε γὰρ ἂν τι τούτων τῶν χρωμάτων ὁμοίως δὲ καὶ ἄχυμον γῶ<sup>1</sup> αὐτῷ λόγῳ τούτῳ, οὐδὲ ἄλλο<sup>2</sup> τῶν ὁμοίων οὐθέν· οὔτε γὰρ ποιόν τι οἶόν τε αὐτὸ εἶναι οὔτε τοσόν οὔτε τί τῶν γὰρ ἐν μέρει τι λεγομένων ἰδῶν ὑπῆρχεν ἂν αὐτῷ, τοῦτο δὲ ἀδύνατον μεμιγμένων γε πάντων ἤδη γὰρ ἂν ἀπεκέκριτο, φησὶ ἰ' εἶναι μεμιγμένα πάντα πλὴν τοῦ νοῦ, τοῦτον δὲ ἱμιγῆ μόνον καὶ καθαρὸν. ἐκ δὴ τούτων συμβαίνει λέγειν αὐτῷ τὰς ἀρχὰς τό τε ἐν (τοῦτο γὰρ ἱπλοῦν καὶ ἀμιγές) καὶ θάτερον, οἶον τίθεμεν τὸ ἰόριστον πρὶν ὀρισθῆναι καὶ μετασχεῖν εἶδους τινός, ὅστε λέγει<sup>3</sup> μὲν οὔτε ὀρθῶς οὔτε σαφῶς, βούλεται μὲντοι τι παραπλήσιον τοῖς τε ὕστερον λέγουσι καὶ τοῖς νῦν φαινομένοις μάλλον. Ἄλλὰ γὰρ οὗτοι μὲν τοῖς περὶ γένεσιν λόγοις καὶ φθορὰν καὶ εἴησις οἰκεῖοι τυγχάνουσι μόνον (σχεδὸν γὰρ περὶ τῆς τοιαύτης οὐσίας καὶ τὰς ἀρχὰς καὶ τὰς αἰτίας ζητοῦσι μόνως<sup>4</sup>)· ὅσοι δὲ περὶ μὲν ἀπάντων τῶν

<sup>1</sup> τῶ: καὶ τῶ A<sup>b</sup>.  
<sup>3</sup> λέγεται E.

<sup>2</sup> ἄλλο. ἄλλο τι A<sup>b</sup>.  
<sup>4</sup> μόνον E.

previously in an unmixed state; (b) it is contrary to nature for *anything* to mix with *anything*; (c) moreover affections and attributes would then be separable from their substances (because what is mixed can also be separated). At the same time, if one were to follow his doctrine carefully and interpret its meaning, perhaps it would be seen to be more up-to-date; because when nothing was yet 12 differentiated, obviously nothing could be truly predicated of that substance—*e g* that it was white or black or buff or any other colour. It must necessarily have been colourless, since otherwise it would have had one of these colours. Similarly by the same 13 argument it had no taste or any other such attribute; for it cannot have had any quality or magnitude or individuality. Otherwise some particular form would have belonged to it; but this is impossible on the assumption that everything was mixed together, for then the form would have been already differentiated, whereas he says that everything was mixed together except Mind, which alone was pure and unmixed <sup>a</sup>. It follows from this that he recognizes 14 as principles the One (which is simple and unmixed) and the Other, which is such as we suppose the Indeterminate to be before it is determined and partakes of some form. Thus his account is neither correct nor clear, but his meaning approximates to more recent theories and what is now more obviously true

However, these thinkers are really concerned only 15 with the theories of generation and destruction and motion (for in general it is only with reference to this aspect of reality that they look for their principles and causes). Those, however, who make their study 16

1 b

25 ὄντων ποιοῦνται τὴν θεωρίαν, τῶν δ' ὄντων τὰ  
 μὲν αἰσθητὰ τὰ δ' οὐκ αἰσθητὰ τιθέασι, δῆλον  
 ὡς περὶ ἀμφοτέρων τῶν γενῶν ποιοῦνται τὴν  
 ἐπίσκεψιν διὸ μᾶλλον ἂν τις ἐνδιατρίψειε περὶ  
 αὐτῶν, τί καλῶς ἢ μὴ καλῶς λέγουσιν εἰς τὴν τῶν  
 νῦν ἡμῖν προκειμένων σκέψιν. Οἱ μὲν οὖν καλού-  
 30 μενοι Πυθαγόρειοι ταῖς μὲν ἀρχαῖς καὶ τοῖς στοι-  
 χείοις ἐκτοπωτέροις<sup>1</sup> χρῶνται τῶν φυσιολόγων (τὸ  
 δ' αἴτιον ὅτι παρέλαβον αὐτὰς οὐκ ἐξ αἰσθητῶν·  
 τὰ γὰρ μαθηματικὰ τῶν ὄντων ἄνευ κινήσεως  
 ἐστίν, ἔξω τῶν περὶ τὴν ἀστρολογίαν), διαλέγονται  
 μέντοι καὶ πραγματεύονται περὶ φύσεως πάντα·  
 a γεννώσιν τε γὰρ τὸν οὐρανόν, καὶ περὶ τὰ τούτου  
 μέρη καὶ τὰ πάθη καὶ τὰ ἔργα διατηροῦσι τὸ συμ-  
 βαῖνον, καὶ τὰς ἀρχὰς καὶ τὰ αἴτια εἰς ταῦτα  
 καταναλίσκουσιν, ὡς ὁμολογοῦντες τοῖς ἄλλοις  
 φυσιολόγοις ὅτι τό γε ὄν τοῦτ' ἐστὶν ὅσον αἰσθητόν  
 5 ἐστὶ καὶ περιείληφεν ὁ καλούμενος οὐρανός τὰς  
 δ' αἰτίας καὶ τὰς ἀρχὰς, ὥσπερ εἶπομεν, ἱκανὰς  
 λέγουσιν ἐπαναβῆναι καὶ ἐπὶ τὰ ἀνωτέρω τῶν  
 ὄντων, καὶ μᾶλλον ἢ τοῖς περὶ φύσεως λόγοις  
 ἀρμοττούσας. ἐκ τίνος μέντοι τρόπου κίνησις  
 ἔσται πέρατος καὶ ἀπείρου μόνων<sup>2</sup> ὑποκειμένων  
 1 καὶ περιπτου καὶ ἀρτίου, οὐθὲν λέγουσιν, ἢ πῶς  
 δυνατὸν ἄνευ κινήσεως καὶ μεταβολῆς γένεσιν  
 εἶναι καὶ φθορὰν ἢ τὰ τῶν φερομένων ἔργα κατὰ  
 τὸν οὐρανόν. ἔτι δὲ εἴτε δοίη τις αὐτοῖς ἐκ τούτων

<sup>1</sup> Alexander, Bonitz. ἐκτοπωτέρεως.<sup>2</sup> μόνων A<sup>b</sup>Γ.

cover the whole of reality, and who distinguish between sensible and non-sensible objects, clearly give their attention to both kinds; hence in their case we may consider at greater length what contributions, valuable or otherwise, they make to the inquiry which is now before us

The so-called Pythagoreans employ abstruser 17 principles and elements than the physicists. The (iv Pyt reason is that they did not draw them from the gor, The sensible world; for mathematical objects, apart assi abs from those which are connected with astronomy, are devoid of motion. Nevertheless all their discussions 18 and investigations are concerned with the physical world. They account for the generation of the prii and the sensible universe, and observe what happens in acc for respect of its parts and affections and activities, and rea they use up their principles and causes in this connexion, as though they agreed with the others—the physicists—that reality is just so much as is sensible and is contained in the so-called “heavens.” All the same, as we have said,<sup>a</sup> the causes and prin- 19 ciples which they describe are capable of application to the remoter class of realities as well, and indeed are better fitted to these than to their physical theories. But as to how there is to be motion, if all 20 that is premissed is Limit and the Unlimited, and Odd and Even, they do not even hint; nor how, without motion and change, there can be generation and destruction, or the activities of the bodies which traverse the heavens. And further, assuming that 21 it be granted to them or proved by them that *mag-*

<sup>a</sup> § 17 *supra*.

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<sup>a</sup> εἶναι<sup>1</sup> μέγεθος εἴτε δειχθείη τοῦτο, ὅμως τίνα τρόπον ἔσται τὰ μὲν κοῦφα, τὰ δὲ βάρως ἔχοντα τῶν σωμάτων; ἐξ ὧν γὰρ ὑποτίθενται καὶ λέγουσιν, οὐθὲν μᾶλλον περὶ τῶν μαθηματικῶν λέγουσι σωμάτων ἢ<sup>2</sup> τῶν αἰσθητῶν· διὸ περὶ πυρὸς ἢ γῆς ἢ τῶν ἄλλων τῶν τοιούτων σωμάτων οὐδ' ὅτι οὖν εἰρήκασιν, ἅτε οὐθὲν περὶ τῶν αἰσθητῶν οἶμαι λέγοντες ἴδιον ἔτι δὲ πῶς δεῖ λαβεῖν αἷτια μὲν εἶναι τὰ τοῦ ἀριθμοῦ πάθη καὶ τὸν ἀριθμὸν τῶν κατὰ τὸν οὐρανὸν ὄντων καὶ γιγνομένων καὶ ἐξ ἀρχῆς καὶ νῦν, ἀριθμὸν δ' ἄλλον μηθένα εἶναι παρὰ τὸν ἀριθμὸν τοῦτον ἐξ οὗ συνέστηκεν ὁ κόσμος, ὅταν γὰρ ἐν τῷ μὲν τῷ μέρει δόξα καὶ καιρὸς αὐτοῖς ἦ, μικρὸν δὲ ἄνωθεν ἢ κάτωθεν ἀδικία καὶ κρίσις ἢ μίξις, ἀπόδειξιν δὲ λέγωσιν, ὅτι τούτων μὲν<sup>3</sup> ἕκαστον ἀριθμὸς ἐστίν, συμβαίνει δὲ κατὰ τὸν τόπον τοῦτον ἤδη πλήθος εἶναι τῶν συνισταμένων μεγεθῶν διὰ τὸ τὰ πάθη ταῦτα ἀκολουθεῖν τοῖς τόποις ἑκάστοις, πότερον οὗτος ὁ αὐτὸς ἐστίν ἀριθμὸς ὁ ἐν τῷ οὐρανῷ, ὃν δεῖ λαβεῖν ὅτι τούτων ἕκαστόν ἐστιν, ἢ παρὰ τοῦτον ἄλλος; ὁ μὲν γὰρ Πλάτων ἕτερον εἶναι φησιν·

<sup>1</sup> εἶναι το A<sup>b</sup>.

<sup>2</sup> ἢ περὶ E.

<sup>3</sup> μὲν Alexander. μὲν ἐν E: ἐν A<sup>b</sup>Γ Bonitz.

<sup>a</sup> Aristotle uses the word μέγεθος both of magnitude in general and of spatial magnitude or extension. Here the meaning seems to be the former. Numbers obviously have magnitude, and might be regarded as causing it, but (except on the Number-Atomism theory, for which see *Introd.* p. xvii) they are no more the cause of extension than that of gravity.

<sup>b</sup> *i.e.*, how can number be both reality and the cause of reality?

*nitide* <sup>a</sup> is composed of these factors, yet how is it to be explained that some bodies are light, and others have weight? For in their premisses and statements they are speaking just as much about sensible as about mathematical objects; and this is why they have made no mention of fire or earth or other similar bodies, because, I presume, they have no separate explanation of sensible things. Again, <sup>22</sup> how are we to understand that number and the modifications of number are the causes of all being and generation, both in the beginning and now, and at the same time that there is no other number than the number of which the universe is composed? <sup>b</sup> Because when they make out that Opinion and <sup>23</sup> Opportunity are in such and such a region, and a little above or below them Injustice and Separation or Mixture, and when they state as proof of this that each of these abstractions is a number, and that also in this region there is already a plurality of the magnitudes composed of number, inasmuch as these modifications of number correspond to these several regions,—is the number which we must understand each of these abstractions to be the same number which is present in the sensible universe, or another kind of number? <sup>c</sup> Plato at least says that <sup>24</sup>

<sup>c</sup> The point seems to be this. The Pythagoreans say that Opinion is a number, 3 (or 2, according to another version), and is located in a certain region of the universe because that region is proper to a corporeal magnitude composed of the number 3 (air was so composed according to Syrianus). Are we to understand, says Aristotle, that the abstract number identified with Opinion is the same as the concrete number of which air consists? The difficulty is probably due to an attempt to combine two different Pythagorean views of number. See *Introd* p xvii

## ARISTOTLE

καίτοι κακείνος ἀριθμούς οἶεται καὶ ταῦτα εἶναι καὶ τὰς τούτων αἰτίας, ἀλλὰ τοὺς μὲν νοητοὺς αἰτίους, τούτους δὲ αἰσθητοὺς

IX Περὶ μὲν οὖν τῶν Πυθαγορείων ἀφείσθω τὰ νῦν· ἱκανὸν γὰρ αὐτῶν ἄψασθαι τοσοῦτον. οἱ δὲ τὰς ἰδέας αἰτίας τιθέμενοι πρῶτον μὲν ζητοῦντες τωνδὶ τῶν ὄντων λαβεῖν τὰς αἰτίας ἕτερα τούτοις ἴσα τὸν ἀριθμὸν ἐκόμισαν, ὥσπερ εἴ τις ἀριθμῆσαι βουλόμενος ἐλαττόνων μὲν ὄντων οἶοιτο μὴ δυνήσεσθαι, πλείω δὲ ποιήσας ἀριθμοίη σχεδὸν γὰρ ἴσα ἢ οὐκ ἐλάττω ἐστὶ τὰ εἶδη<sup>1</sup> τούτοις<sup>2</sup> περὶ ὧν ζητοῦντες τὰς αἰτίας ἐκ τούτων ἐπ' ἐκείνα προήλθον καθ' ἕκαστον γὰρ ὁμώνυμόν τι ἔστι καὶ παρὰ τὰς οὐσίας, τῶν τε ἄλλων ἔστιν ἓν ἐπὶ πολλῶν, καὶ ἐπὶ τοῖσδε καὶ ἐπὶ τοῖς αἰδίσις. Ἔτι δὲ καὶ καθ' οὓς τρόπους δείκνυμεν ὅτι ἔστι τὰ εἶδη, κατ' οὐθέν ἓνα φαίνεται τούτων ἐξ ἐνίων μὲν γὰρ οὐκ ἀνάγκη γίνεσθαι συλλογισμόν, ἐξ ἐνίων δὲ καὶ οὐχ ὧν οἰόμεθα τούτων εἶδη γίνεσθαι. κατὰ τε γὰρ τοὺς λόγους τοὺς ἐκ τῶν ἐπιστημῶν εἶδη ἔσται πάντων ὄσων ἐπιστῆμαι εἰσί, καὶ κατὰ τὸ ἓν ἐπὶ πολλῶν καὶ τῶν ἀποφάσεων, κατὰ δὲ τὸ νοεῖν τι φθαρέν-

<sup>1</sup> τὰ εἶδη ἐστὶ E Asclepius.

<sup>2</sup> τούτων E Asclepius.

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<sup>a</sup> For a discussion of the Ideal theory and Aristotle's conception of it see *Introd.* p. xxi; and with the whole contents of ch. ix. 1-15 *cf.* XIII. iv. 6-v.

<sup>b</sup> An Idea which represents their common denominator.

<sup>c</sup> The heavenly bodies

<sup>d</sup> Aristotle is here speaking as a Platonist. Contrast the language of XIII. iv. 7 ff., and see *Introd.* p. xxxii.

<sup>e</sup> Scientific knowledge must have a permanent object (*cf.* vi. 2).

<sup>f</sup> Including artificial products; *cf.* 15 *infra*.



it is another. It is true that he too supposes that numbers are both these magnitudes and their causes, but in his view the causative numbers are intelligible and the others sensible.

IX. The Pythagoreans, then, may be dismissed for the present, for it is enough to touch upon them thus briefly. As for those who posit the Forms as causes,<sup>a</sup> in the first place in their attempt to find the causes of things in our sensible world, they introduced an equal number of other entities—as though a man who wishes to count things should suppose that it would be impossible when they are few, and should attempt to count them when he has added to them. For the Forms are as many as, or not fewer than, the things in search of whose causes these thinkers were led to the Forms; because corresponding to each thing there is a synonymous entity apart from the substances (and in the case of non-substantial things there is a One over the Many<sup>b</sup>), both in our everyday world and in the realm of eternal entities.<sup>c</sup>

Again, not one of the arguments by which we<sup>d</sup> try to prove that the Forms exist demonstrates our point. From some of them no necessary conclusion follows, and from others it follows that there are Forms of things of which we hold that there are no Forms. For according to the arguments from the sciences<sup>e</sup> there will be Forms of all things of which there are sciences<sup>f</sup>; and according to the "One-over-Many" argument,<sup>g</sup> of negations too; and according to the argument that "we have some conception of what has perished," of perishable things;

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<sup>a</sup> The fact that several particulars can have a common quality or nature implies a single Idea of which they all partake (*Republic* 596 A).

10 b  
 15 τος τῶν φθαρτῶν· φάντασμα γάρ τι τούτων ἔστιν.  
 ἔτι δὲ οἱ ἀκριβέστεροι τῶν λόγων οἱ μὲν τῶν πρὸς  
 τι ποιούσιν ιδέας, ὧν οὐ φαμεν εἶναι καθ' αὐτό  
 γένος, οἱ δὲ τὸν τρίτον ἄνθρωπον λέγουσιν ὅλως  
 τε ἀναιροῦσιν οἱ περὶ τῶν εἰδῶν λόγοι ἂ μᾶλλον  
 εἶναι βουλόμεθα<sup>1</sup> [οἱ λέγοντες εἶδη]<sup>2</sup> τοῦ τὰς  
 20 ιδέας εἶναι συμβαίνει γὰρ μὴ εἶναι τὴν δυάδα  
 πρώτην ἀλλὰ τὸν ἀριθμόν, καὶ τὸ πρὸς τι τοῦ  
 καθ' αὐτό, καὶ πάνθ' ὅσα τινὲς ἀκολουθήσαντες  
 ταῖς περὶ τῶν ιδεῶν δόξαις ἠναντιώθησαν ταῖς  
 ἀρχαῖς.

Ἔτι<sup>3</sup> κατὰ μὲν τὴν ὑπόληψιν καθ' ἣν εἶναι  
 φαμεν τὰς ιδέας, οὐ μόνον τῶν οὐσιῶν ἔσται  
 25 εἶδη ἀλλὰ πολλῶν καὶ ἐτέρων (καὶ γὰρ τὸ νόημα  
 ἐν οὐ μόνον περὶ τὰς οὐσίας ἀλλὰ καὶ κατὰ  
 τῶν ἄλλων ἐστί, καὶ ἐπιστῆμαι οὐ μόνον τῆς  
 οὐσίας εἰσὶν ἀλλὰ καὶ ἐτέρων, καὶ ἄλλα δὲ  
 μυρία συμβαίνει τοιαῦτα) κατὰ δὲ τὸ ἀναγκαῖον  
 καὶ τὰς δόξας τὰς περὶ αὐτῶν, εἰ ἔστι μεθεκτὰ  
 τὰ εἶδη, τῶν οὐσιῶν ἀναγκαῖον ιδέας εἶναι μόνον·  
 30 οὐ γὰρ κατὰ συμβεβηκὸς μετέχονται, ἀλλὰ δεῖ  
 ταύτη ἐκάστου μετέχειν, ἢ μὴ καθ' ὑποκειμένου  
 λέγεται. λέγω δ' οἷον εἴ τι αὐτοδιπλασίου

<sup>1</sup> βουλόμεθα E Asclepius. βούλουται.

<sup>2</sup> Blass.

<sup>3</sup> ἔτι δὲ E Asclepius.

<sup>a</sup> The theory always admitted Ideas of perishable things, e.g. "man." The objection here is that if the memory of dead men establishes the Idea of "man," the memory of a dead individual establishes an Idea of that (perishable) individual.

<sup>b</sup> *Phaedo* 74 A-77 A, *Republic* 479 A-480 A.

<sup>c</sup> Several arguments bore this name. Here the reference is probably to the following: If X is a man because he re-

because we have a mental picture of these things <sup>a</sup> with  
 Again, of Plato's more exact arguments some estab- <sup>princ</sup>  
 lish Ideas of relations, <sup>b</sup> which we do not hold to form <sup>the t</sup>  
 a separate genus; and others state the "Third <sup>4</sup>  
 Man" <sup>c</sup> And in general the arguments for the  
 Forms do away with things which are more important  
 to us exponents of the Forms than the existence of  
 the Ideas; for they imply that it is not the Dyad  
 that is primary, but Number <sup>d</sup>, and that the relative  
 is prior to the absolute <sup>e</sup>, and all the other conclusions  
 in respect of which certain persons, by following up  
 the views held about the Ideas, have gone against  
 the principles of the theory

Again, according to the assumption by which we <sup>5</sup>  
 hold that the Ideas exist, there will be Forms not <sup>(c) It</sup>  
 only of substances but of many other things (since <sup>funde</sup>  
 the concept is one not only in the case of substances, <sup>impli</sup>  
 but also in the case of all other things; and there <sup>of the</sup>  
 are sciences not only of substances but of other things <sup>that</sup>  
 as well; and there are a thousand other similar <sup>are I,</sup>  
 consequences); but according to logical necessity, <sup>other</sup>  
 and from the views generally held about them, it <sup>besid</sup>  
 follows that if the Forms are participated in, then <sup>subst</sup>  
 there can only be Ideas of substances For they are <sup>but t</sup>  
 not participated in *qua* accidents; each Form can only <sup>illogi</sup>  
 be participated in in so far as it is not predicated of <sup>contr</sup>  
 a subject. I mean, *e g.*, that if anything participates <sup>pract</sup>  
 resembles the Idea of Man, there must be a third "man" in  
 whom the humanity of these two is united Cf. *Parmenides*  
 132 A-133 A.

<sup>a</sup> The Indeterminate Dyad, being to Aristotle a glorified  
 2, falls under the Idea of Number, which is therefore prior  
 to it.

<sup>e</sup> This seems to be a development of the same objection.  
 Number, which is relative, becomes prior to the supposedly  
 self-subsistent Dyad.

<sup>b</sup> μετέχει, τοῦτο καὶ αἰδίου μετέχει, ἀλλὰ κατὰ συμβεβηκός· συμβέβηκε γὰρ τῷ διπλασίῳ αἰδίῳ εἶναι ὥστ' ἔσται οὐσία τὰ εἶδη· ταῦτὰ δὲ ἐνταῦθα οὐσίαν σημαίνει κακεί· ἢ τί ἔσται τὸ εἶναι φάναι τι παρὰ ταῦτα, τὸ ἐν ἐπὶ πολλῶν, καὶ εἰ μὲν ταῦτὸ εἶδος τῶν ἰδεῶν καὶ τῶν μετεχόντων, ἔσται τι κοινόν· τί γὰρ μᾶλλον ἐπὶ τῶν φθαρτῶν δυνάδων, καὶ τῶν πολλῶν μὲν αἰδίων δέ, τὸ δυὰς σημαίνει<sup>1</sup> ἐν καὶ ταυτόν, ἢ ἐπὶ τ' αὐτῆς<sup>2</sup> καὶ τῆς τινός, εἰ δὲ μὴ τὸ αὐτὸ εἶδος, ὁμώνυμα ἂν εἴη, καὶ ὁμοιον ὥσπερ ἂν εἴ τις καλοῖ ἄνθρωπον τόν τε Καλλίαν καὶ τὸ ξύλον, μηδεμίαν κοινωνίαν ἐπιβλέψας αὐτῶν.

Πάντων δὲ μάλιστα διαπορήσειεν ἂν τις, τί ποτε οὐ συμβάλλεται τὰ εἶδη τοῖς αἰδίοις τῶν αἰσθητῶν ἢ τοῖς γιγνομένοις καὶ φθειρομένοις οὔτε γὰρ κινήσεως οὔτε μεταβολῆς οὐδεμιᾶς ἐστὶν αἷτια αὐτοῖς. ἀλλὰ μὴν οὔτε πρὸς τὴν ἐπιστήμην οὔθεν βοηθεῖ τὴν τῶν ἄλλων (οὐδὲ γὰρ οὐσία ἐκεῖνα τούτων· ἐν τούτοις γὰρ ἂν ἦν), οὔτε εἰς τὸ εἶναι, μὴ ἐνυπάρχοντά γε τοῖς μετέχουσιν· οὕτω μὲν γὰρ ἂν ἴσως αἷτια δόξειεν εἶναι ὡς τὸ λευκὸν μεμιγμένον τῷ λευκῷ, ἀλλ' οὗτος μὲν ὁ λόγος

<sup>1</sup> σημαίνει Bywater: εἶναι.

<sup>2</sup> τ' αὐτῆς Bonitz: ταύτης.

<sup>a</sup> Sensible double things are not eternal, therefore they do not, in the proper sense of "participation," participate in the Idea of Doubleness *qua* having the accidental attribute "eternal." Therefore Ideas, *qua* participated in, are not attributes but substances

<sup>b</sup> *i.e.* pairs of sensible objects.

<sup>c</sup> *i.e.* mathematical 2 s.

<sup>d</sup> The argument of §§ 7-8 is: Ideas are substances. The common name which an Idea shares with its particulars must mean the same of both, otherwise "participation"

in "absolute Doubleness" it participates also in "eternal," but only accidentally; because it is an *accident* of Doubleness to be eternal.<sup>a</sup> Thus the 7 Forms must be substance. But the same names denote substance in the sensible as in the Ideal world; otherwise what meaning will there be in saying that something exists beside the particulars, *z e* the unity comprising their multiplicity? If the form of the 8 Ideas and of the things which participate in them is the same, they will have something in common (for why should Duality mean one and the same thing in the case of perishable "twos"<sup>b</sup> and the "twos" which are many but eternal,<sup>c</sup> and not in the case of the Idea of Duality and a particular "two"?); but if the form is not the same, they will simply be homonyms, just as though one were to call both Callias and a piece of wood "man," without remarking any property common to them.<sup>d</sup>

Above all we might examine the question what 9 on earth the Forms contribute to sensible things, whether eternal or subject to generation and decay; for they are not the cause of any motion or change in them. Again, they are no help towards the 10 *knowledge* of other things<sup>e</sup> (for they are not the substance of things, otherwise they would be *in* things), nor to their *existence*, since they are not present in the things which partake of them. If they were, it might perhaps seem that they are causes, in the sense in which the admixture of white causes a thing to be white; but this theory, which 11 is merely homonymy. But as applied to Ideas it denotes substance; therefore particulars must be substances.

<sup>a</sup> This objection, like the next, is chiefly directed against the transcendence of the Ideas. It is anticipated by Plato in *Parmenides* 134 D.

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## ARISTOTLE

ἰν εὐκίνητος, ὃν Ἀναξαγόρας μὲν πρῶτος  
 ἰδοξος δ' ὕστερον καὶ ἄλλοι τινὲς ἔλεγον· ῥάδιον  
 ρ συναγαγεῖν πολλὰ καὶ ἀδύνατα πρὸς τὴν  
 ἰαύτην δόξαν ἀλλὰ μὴν οὐδ' ἐκ τῶν εἰδῶν  
 τὶ τᾶλλα κατ' οὐθένα τρόπον τῶν εἰωθότων  
 γεσθαι. τὸ δὲ λέγειν παραδείγματα αὐτὰ  
 ἰαι καὶ μετέχειν αὐτῶν τᾶλλα κενολογεῖν ἐστὶ  
 ἰ μεταφορὰς λέγειν ποιητικὰς. τί γάρ ἐστι  
 ἰ ἐργαζόμενον πρὸς τὰς ἰδέας ἀποβλέπον, ἐν-  
 ἰ χεταιί τε καὶ εἶναι καὶ γίνεσθαι ὁμοιον ὀτιοῦν  
 ἰ μὴ εἰκαζόμενον πρὸς ἐκείνο, ὥστε καὶ  
 ἰτος Σωκράτους καὶ μὴ ὄντος γένοιτ' ἂν οἰόσ-  
 ἰο Σωκράτης (ὁμοίως δὲ δῆλον ὅτι κἂν εἰ ἦν ὁ  
 ἰκράτης αἰδῖος) ἔσται τε πλείω παραδείγματα  
 ἰ αὐτοῦ, ὥστε καὶ εἶδη, οἶον τοῦ ἀνθρώπου τὸ  
 ἰον καὶ τὸ δίπουν, ἅμα δὲ καὶ τὸ αὐτοάνθρωπος.  
 οὐ μόνον τῶν αἰσθητῶν παραδείγματα τὰ εἶδη,  
 ἰὰ καὶ αὐτῶν,<sup>1</sup> οἶον τὸ γένος ὡς γένος εἰδῶν·  
 ἰτε τὸ αὐτὸ ἔσται παράδειγμα καὶ εἰκῶν.  
 δόξειεν ἂν ἀδύνατον εἶναι χωρὶς τὴν οὐσίαν  
 ἰ οὐ ἡ οὐσία· ὥστε πῶς ἂν αἰ ἰδέαι οὐσῖαι τῶν  
 ἰχμάτων οὐσαι χωρὶς εἶεν; ἐν δὲ τῷ Φαίδωνι  
 ἰω λέγεται, ὡς καὶ τοῦ εἶναι καὶ τοῦ γίνεσθαι  
 ἰια τὰ εἶδη ἐστίν. καίτοι τῶν εἰδῶν ὄντων ὁμως  
 γίγνεται τὰ μετέχοντα ἂν μὴ ἦ τὸ κινῆσον,

<sup>1</sup> αὐτῶν τῶν ἰδεῶν recc.

Fr 12 *ad fin.*

See note on XII. viii 9 Apparently he was a Platonist  
 & regarded the Ideas as immanent in particulars.

Plato says "the Demiurgus"; *Timaeus* 28 c, 29 a.

was first stated by Anaxagoras <sup>a</sup> and later by Eudoxus <sup>b</sup> and others, is very readily refutable, for it is easy to adduce plenty of impossibilities against such a view. Again, other things are not in any accepted sense *derived* from the Forms. To say that the Forms are patterns, and that other things participate in them, is to use empty phrases and poetical metaphors, for what is it that fashions things on the model of the Ideas <sup>c</sup>? Besides, anything may both be and become like something else without being imitated from it, thus a man may become just like Socrates whether Socrates exists or not, and even if Socrates were eternal, clearly the case would be the same. Also there will be several "patterns," and hence Forms, of the same thing; e.g. "animal" and "two-footed" will be patterns of "man," and so too will the Idea of Man <sup>d</sup>. Further, the Forms will be patterns not only of sensible things but of themselves (e.g. genus in the sense of genus of species), and thus the same thing will be both pattern and copy <sup>e</sup>. Further, it would seem impossible that the substance and the thing of which it is the substance exist in separation; hence how can the Ideas, if they are the substances of things, exist in separation from them <sup>f</sup>? It is stated in the *Phaedo* <sup>g</sup> that the Forms are the causes both of existence and of generation. Yet, assuming that the Forms exist, still the things which participate in them are not generated unless there is something to impart

existence  
of thing

To say that the Ideas are "patterns" does not help the theory

it only raises further difficulties

Plato describes Ideas as

causing existence  
generating

<sup>a</sup> Why this consequence is objectionable is not quite clear. Perhaps it is on the ground that to "account for appearances" in this way is not economical.

<sup>b</sup> The species will be the "pattern" of individuals, and the genus of the species.

<sup>f</sup> Cf. 10 *supra*.

<sup>g</sup> *Phaedo* 100 D.

## ARISTOTLE

καὶ πολλὰ γίνεταί ἕτερα, οἷον οἰκία καὶ δακτύλιος, ὧν οὐ φαμεν εἶδη εἶναι· ὥστε δῆλον ὅτι ἐνδέχεται καὶ τάλλα καὶ εἶναι καὶ γίνεσθαι διὰ τοιαύτας αἰτίας οἷας καὶ τὰ ῥηθέντα νῦν "Ἐπι εἴπερ εἰσὶν ἀριθμοὶ τὰ εἶδη, πῶς αἴτιοι ἔσονται, πότερον ὅτι ἕτεροι ἀριθμοὶ εἰσὶ τὰ ὄντα, οἷον ἰδί μὲν [ἀριθμὸς]<sup>1</sup> ἄνθρωπος, ὀδί δὲ Σωκράτης, ἰδί δὲ Καλλίας; τί οὖν ἐκείνοι τούτοις αἰτιοὶ εἰσιν; οὐδὲ γὰρ εἰ οἱ μὲν αἰδιοὶ οἱ δὲ μή, οὐδὲν διοίσει εἰ δ' ὅτι λόγοι ἀριθμῶν πάνταυθα, οἷον ἡ συμφωνία, δῆλον ὅτι ἐστὶν ἓν γέ τι ὧν εἰσὶ λόγοι. εἰ δὴ τοῦτο,<sup>2</sup> ἢ ὕλη, φανερόν ὅτι καὶ αὐτοὶ οἱ ἀριθμοὶ λόγοι τινὲς ἔσονται ἐτέρου πρὸς ἕτερον λέγω δ' οἷον, εἰ ἔστιν ὁ Καλλίας λόγος ἐν ἀριθμοῖς πυρὸς καὶ γῆς καὶ ὕδατος καὶ ἀέρος, καὶ<sup>3</sup> ἄλλων τινῶν ὑποκειμένων ἔσται καὶ ἡ ἰδέα ἀριθμὸς· καὶ αὐτοάνθρωπος, εἴτ' ἀριθμὸς τις ὧν εἴτε μή, ὅμως ἔσται λόγος ἐν ἀριθμοῖς τινῶν, καὶ οὐκ ἀριθμὸς, οὐδ' ἔσται τις ἰδέα<sup>4</sup> διὰ ταῦτα ἀριθμὸς "Ἐπι ἐκ πολλῶν ἀριθμῶν εἰς ἀριθμὸς γίνεταί, ἐξ εἰδῶν δὲ ἓν εἶδος πῶς, εἰ δὲ μή ἐξ αὐτῶν ἄλλ' ἐκ τῶν ἐναρίθμων, οἷον ἐν τῇ κυριάδι, πῶς ἔχουσιν αἱ μονάδες; εἴτε γὰρ ὁμοειδεῖς, πολλὰ συμβήσεται ἄτοπα, εἴτε μὴ ὁμοειδεῖς, μήτε αἱ αὐταὶ ἀλλήλαις μήτε αἱ ἄλλαι

<sup>1</sup> ἀριθμὸς seclusi.

<sup>3</sup> om recc.

<sup>2</sup> τοῦτο: τι τοῦτο E.

<sup>4</sup> Jaeger.

<sup>a</sup> Introd. p. xxii

<sup>b</sup> The point, which is not very clearly expressed, is that the Ideas will not be pure numerical expressions or ratios, but will have a substrate just as particulars have.



motion; while many other things *are* generated (e.g. house, ring) of which we hold that there are no Forms. Thus it is clearly possible that all other things may both exist and be generated for the same causes as the things just mentioned.

Further, if the Forms are numbers,<sup>a</sup> in what sense will they be causes? Is it because things are other numbers, e.g. such and such a number Man, such and such another Socrates, such and such another Callias? then why are those numbers the causes of these? Even if the one class is eternal and the other not, it will make no difference. And if it is because the things of our world are ratios of numbers (e.g. a musical concord), clearly there is some one class of things of which they are ratios. Now if there is this something, *scilicet* their *matter*, clearly the numbers themselves will be ratios of one thing to another. I mean, e.g., that if Callias is a numerical ratio of fire, earth, water and air, the corresponding Idea too will be a number of certain other things which are its substrate. The Idea of Man, too, whether it is in a sense a number or not, will yet be an arithmetical ratio of certain things, and not a mere number; nor, on these grounds, will any Idea be a number.<sup>b</sup>

Again, one number can be composed of several numbers, but how can one Form be composed of several Forms? And if the one number is not composed of the other numbers themselves, but of their constituents (e.g. those of the number 10,000), what is the relation of the units? If they are specifically alike, many absurdities will result, and also if they are not (whether (a) the units in a given number are unlike, or (b) the units in each number

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comp

1 b  
 πᾶσαι πάσαις τίνι γὰρ διοίσουσιν ἀπαθείς οὐσαι;  
 οὔτε γὰρ εὐλόγα ταῦτα οὔτε ὁμολογούμενα τῇ  
 νοήσει Ἔτι δ' ἀναγκαῖον ἕτερον<sup>1</sup> γένος ἀριθμοῦ  
 κατασκευάζειν, περὶ δὲ ἡ ἀριθμητική, καὶ πάντα  
 τὰ μεταξὺ λεγόμενα ὑπὸ τινων· ἂ πῶς<sup>2</sup> ἢ ἐκ τίνων  
 30 ἐστὶν ἀρχῶν, ἢ διὰ τί<sup>3</sup> μεταξὺ τῶν δευρὸ τ'  
 ἔσται καὶ αὐτῶν, ἔτι αἱ μονάδες αἱ ἐν τῇ δυάδι  
 a ἑκατέρα ἐκ τινος προτέρας δυάδος καίτοι ἀδύνατον  
 Ἔτι διὰ τί ἐν ὁ ἀριθμὸς συλλαμβανόμενος, ἔτι  
 δὲ πρὸς τοῖς εἰρημένους, εἶπερ εἰσὶν αἱ μονάδες  
 διάφοροι, ἐχρήν οὔτω λέγειν ὥσπερ καὶ ὅσοι τὰ  
 στοιχεῖα τέτταρα ἢ δύο λέγουσιν· καὶ γὰρ τούτων  
 5 ἕκαστος οὐ τὸ κοινὸν λέγει στοιχείον, οἶον τὸ  
 σῶμα, ἀλλὰ πῦρ καὶ γῆν, εἴτ' ἔστι τι κοινόν, τὸ  
 σῶμα, εἴτε μή. νῦν δὲ λέγεται ὡς ὄντος τοῦ ἐνὸς  
 ὥσπερ πυρὸς ἢ ὕδατος ὁμοιομεροῦς εἰ δ' οὕτως,  
 οὐκ ἔσονται οὐσίαι οἱ ἀριθμοί, ἀλλὰ δῆλον ὅτι,  
 εἶπερ ἐστὶ τι ἐν αὐτὸ καὶ τοῦτό ἐστιν ἀρχή, πλεο-  
 0 ναχῶς λέγεται τὸ ἐν· ἄλλως γὰρ ἀδύνατον Βου-  
 λόμενοι δὲ τὰς οὐσίας ἀνάγειν εἰς τὰς ἀρχὰς μήκη

<sup>1</sup> ἕτερόν τι EJ Asclepius

<sup>2</sup> τινων· ἂ πῶς. τινων ἀπλῶς· EF Alexander.

<sup>3</sup> τί τὰ EF

<sup>a</sup> That the words in brackets give the approximate sense seems clear from XIII. vi. 2-3, vii. 15, but it is difficult to get it out of the Greek.

<sup>b</sup> Cf vi. 4

<sup>c</sup> i.e., if 2 is derived from a prior 2 (the Indeterminate Dyad, Aristotle always regards this as a *number* 2), and at the same time consists of two units or 1s, 2 will be prior both to itself and to 1.

are unlike those in every other number) <sup>a</sup> For in what can they differ, seeing that they have no qualities? Such a view is neither reasonable nor compatible with our conception of units

Further, it becomes necessary to set up another <sup>2</sup> kind of number (with which calculation deals), and <sup>(g</sup> all the objects which are called "intermediate" <sup>th</sup> by some thinkers <sup>ne</sup> <sup>b</sup> But how or from what principles <sup>a</sup> can these be derived? or on what grounds are <sup>of</sup> they to be considered intermediate between things <sup>w</sup> *here* and Ideal numbers? Further, each of the <sup>al</sup> units in the number 2 comes from a prior 2, but <sup>ev</sup> this is impossible <sup>c</sup>

Further, why should a number <of units>, taken <sup>2</sup> together, be one thing? And further, in addition <sup>(h</sup> to the above objections, if the units are unlike, they <sup>ur</sup> should be treated as the thinkers who assume two <sup>Id</sup> or four elements treat those elements; for not <sup>be</sup> one of them applies the term "element" to the <sup>fu</sup> common substrate, *e g* body, but to fire and earth— <sup>di</sup> whether there is a common substrate (*i e.* body) or not <sup>d</sup> As it is, the One is spoken of as though it <sup>2</sup> were homogeneous, like fire or water But if this is so, the numbers will not be substances And if there is an absolute One which is a principle, clearly the term "one" is ambiguous; otherwise this is impossible <sup>e</sup>

When we wish to refer substances to their prin- <sup>2</sup>

<sup>a</sup> In the *De Gen. et Corr.* 320 b 23 Aristotle says that there is not.

<sup>e</sup> This last sentence shows that in what goes before A. has been regarding the Platonic One as a unit. If this is so, he says, substance cannot be composed of it. If on the other hand the One is something different from the unit, they ought to make this clear.

<sup>2 a</sup> μὲν τίθεμεν ἐκ βραχέος καὶ μακροῦ,<sup>1</sup> ἕκ τινος  
 μικροῦ καὶ μεγάλου, καὶ ἐπίπεδον ἐκ πλατέος καὶ  
 στενοῦ, σῶμα δ' ἐκ βαθέος καὶ ταπεινοῦ καίτοι  
 πῶς ἕξει ἢ τὸ ἐπίπεδον γραμμῆν, ἢ τὸ στερεὸν  
 15 γραμμῆν καὶ ἐπίπεδον, ἄλλο γὰρ γένος τὸ πλατὺ  
 καὶ<sup>2</sup> στενὸν καὶ βαθὺ καὶ ταπεινόν· ὥσπερ οὖν  
 οὐδ' ἀριθμὸς ὑπάρχει ἐν αὐτοῖς, ὅτι τὸ πολὺ καὶ  
 ὀλίγον ἕτερον τούτων, δῆλον ὅτι οὐδ' ἄλλο οὐθέν  
 τῶν ἄνω ὑπάρξει τοῖς κάτω. ἀλλὰ μὴν οὐδὲ  
 γένος τὸ πλατὺ τοῦ βαθέος ἦν γὰρ ἂν ἐπίπεδόν  
 20 τι τὸ σῶμα. ἔτι αἱ στιγμαὶ ἐκ τίνος ἐνυπάρξουσιν,  
 τούτῳ μὲν οὖν τῷ γένει καὶ διεμάχето Πλάτων  
 ὡς ὄντι γεωμετρικῶ δόγματι, ἀλλ' ἐκάλει ἀρχὴν  
 γραμμῆς (τοῦτο δὲ πολλάκις ἐτίθει, τὰς ἀτόμους  
 γραμμάς). καίτοι ἀνάγκη τούτων εἶναι τι πέρασ·  
 ὥστ' ἐξ οὗ λόγου γραμμῆ ἔστι, καὶ στιγμῆ ἔστιν.  
 25 "Ὅλως δὲ ζητούσης τῆς σοφίας περὶ τῶν φανερῶν  
 τὸ αἷτιον, τοῦτο μὲν εἰάκαμεν (οὐθέν γὰρ λέγομεν  
 περὶ τῆς αἰτίας ὅθεν ἢ ἀρχὴ τῆς μεταβολῆς), τὴν  
 δ' οὐσίαν οἰόμενοι λέγειν αὐτῶν ἑτέρας μὲν  
 οὐσίας εἶναι φασί, ὅπως δὲ ἐκείναι τούτων  
 οὐσῖαι διὰ κενῆς λέγομεν τὸ γὰρ μετέχειν, ὥσπερ  
 καὶ πρότερον εἶπομεν, οὐθέν ἔστιν οὐδὲ δὴ ὅπερ

<sup>1</sup> μακροῦ καὶ βραχέος E Asclepius.

<sup>2</sup> καὶ τὸ E

<sup>a</sup> The lines, planes and solids here discussed are probably the Ideal lines, etc., which are immediately posterior to the Idea-Numbers. Cf § 30, XIII vi 10, ix. 2, and see Introd. p. xxiv.

<sup>b</sup> Lines, planes and solids are generated from varieties of the Great and Small, but points cannot be, having no magnitude; how, then, can the latter be present in the former?

ciples we derive lines <sup>a</sup> from "Long and Short," <sup>(v)</sup> the  
 a kind of "Great and Small", and the plane from <sup>the</sup>  
 "Wide and Narrow," and the solid body from "Deep <sup>Pla</sup>  
 and Shallow." But in this case how can the plane <sup>Sol</sup>  
 contain a line, or the solid a line and a plane? for <sup>24</sup>  
 "Wide and Narrow" and "Deep and Shallow"  
 are different genera. Nor is Number contained in  
 these objects (because "Many and Few" is yet  
 another class); and in the same way it is clear that  
 none of the other higher genera will be contained  
 in the lower. Nor, again, is the Broad the genus  
 of which the Deep is a species, for then body would  
 be a kind of plane. Further, how will it be possible <sup>25</sup>  
 for figures to contain points? <sup>b</sup> Plato steadily <sup>(j)</sup>  
 rejected this class of objects as a geometrical fiction, <sup>nat</sup>  
 but he recognized "the beginning of a line," and he <sup>the</sup>  
 frequently assumed this latter class, *i.e.* the "in- <sup>inv</sup>  
 divisible lines." <sup>c</sup> But these must have some limit; <sup>fur</sup>  
 and so by the same argument which proves the exist- <sup>cor</sup>  
 ence of the line, the point also exists. <sup>d</sup> <sup>tio.</sup>

In general, although Wisdom is concerned with <sup>26</sup>  
 the cause of visible things, we have ignored this  
 question (for we have no account to give of the cause <sup>(k)</sup>  
 from which change arises), <sup>e</sup> and in the belief that we <sup>Idē</sup>  
 are accounting for their substance we assert the <sup>ign</sup>  
 existence of other substances; but as to *how* the <sup>pri</sup>  
 latter are the substances of the former, our explana- <sup>the</sup>  
 tion is worthless—for "participation," as we have <sup>im</sup>  
 said before, <sup>f</sup> means nothing. And as for that which <sup>to</sup>  
<sup>27</sup>

<sup>c</sup> That Plato denied the existence of the point and asserted  
 that of indivisible lines is not directly stated elsewhere, but  
 the same views are ascribed to Xenocrates, and were attacked  
 in the treatise *De lineis insecabilibus*. See Ross *ad loc.*

<sup>d</sup> Sc. if the point is the limit of the line

<sup>e</sup> Cf. VII. 5 and § 9 *supra*.

<sup>f</sup> § 12.

12 a  
 30 ταῖς ἐπιστήμαις ὁρῶμεν ὃν αἴτιον, δι' ὃ καὶ πᾶς  
 νοῦς καὶ πᾶσα φύσις ποιεῖ, οὐδὲ ταύτης τῆς  
 αἰτίας ἦν φαμέν εἶναι μίαν τῶν ἀρχῶν, οὐθὲν  
 ἀπτεται τὰ εἶδη, ἀλλὰ γέγονε τὰ μαθήματα τοῖς  
 2 b νῦν ἢ φιλοσοφία, φασκόντων ἄλλων<sup>1</sup> χάριν αὐτὰ  
 δεῖν πραγματεῦσθαι. "Ἐτι δὲ τὴν ὑποκειμένην  
 οὐσίαν ὡς ὕλην μαθηματικωτέραν ἂν τις ὑπο-  
 λάβοι, καὶ μᾶλλον κατηγορεῖσθαι καὶ διαφορὰν  
 εἶναι τῆς οὐσίας καὶ τῆς ὕλης ἢ ὕλην, οἷον τὸ μέγα  
 5 καὶ τὸ μικρὸν, ὥσπερ καὶ οἱ φυσιολόγοι φασὶ τὸ  
 μανὸν καὶ τὸ πυκνόν, πρώτας τοῦ ὑποκειμένου  
 φάσκοντες εἶναι διαφορὰς ταύτας ταῦτα γὰρ ἔστιν  
 ὑπεροχὴ τις καὶ ἔλλειψις περὶ τε κινήσεως, εἰ  
 μὲν ἔσται ταῦτα κινήσεις, δῆλον ὅτι κινήσεται τὰ  
 εἶδη· εἰ δὲ μή, πόθεν ἦλθεν, ὅλη γὰρ ἢ περὶ  
 10 φύσεως ἀνήρηται σκέψις ὃ τε δοκεῖ ράδιον εἶναι,  
 τὸ δεῖξαι ὅτι ἐν ἅπαντα, οὐ γίνγεται· τῇ γὰρ  
 ἐκθέσει οὐ γίνγεται πάντα ἐν, ἀλλ' αὐτό τι ἐν,  
 ἂν διδῶ τις πάντα· καὶ οὐδὲ τοῦτο, εἰ μὴ γένος  
 δώσει τὸ καθόλου εἶναι τοῦτο δ' ἐν ἐνίοις ἀδύνατον  
 οὐθένα δ' ἔχει λόγον οὐδὲ τὰ μετὰ τοὺς ἀριθμοὺς  
 μήκη τε καὶ ἐπίπεδα καὶ στερεά, οὔτε ὅπως ἔστιν  
 15 ἢ ἔσται, οὔτε<sup>2</sup> τίνα ἔχει δύναμιν· ταῦτα γὰρ οὔτε

<sup>1</sup> ἄλλων. τῶν ἄλλων A<sup>b</sup>.

<sup>2</sup> οὐτ' εἰ E Asclepius

<sup>a</sup> The final cause. Cf vi. 9-10.

<sup>b</sup> e.g. Speusippus, for whom see VII. 11 4.

<sup>c</sup> Cf. Plato, *Republic* 531 c-d.

<sup>d</sup> Cf iv 10.

<sup>e</sup> The word *ἐκθεσις* has various technical meanings. The process referred to here apparently consisted in taking, e.g., particular men, and reducing them with reference to their common nature to a single unit or universal, "man", then taking "man," "horse," "dog," etc. and treating them in

we can see to be the cause in the sciences, and through which all mind and all nature works—this cause <sup>a</sup> which we hold to be one of the first principles—the Forms have not the slightest bearing upon it either. Philosophy has become mathematics for modern thinkers,<sup>b</sup> although they profess <sup>c</sup> that mathematics is only to be studied as a means to some other end.

Further, one might regard the substance which they make the material substrate as too mathematical, and as being a predicate and differentia of substance or matter rather than as matter itself. I mean the "Great and Small," which is like the "Rare and Dense" of which the physicists speak,<sup>d</sup> holding that they are the primary differentiae of the substrate; because these qualities are a species of excess and defect. Also with regard to motion, if the "Great and Small" is to constitute motion, obviously the Forms will be moved; if not, whence did it come? On this view the whole study of physics is abolished. And what is supposed to be easy, to prove that everything is One, does not follow; because from their exposition <sup>e</sup> it does not follow, even if you grant them all their assumptions, that everything is One, but only that there is an absolute One—and not even this, unless you grant that the universal is a class; which is impossible in some cases <sup>f</sup>. Nor is there any explanation of the lines, planes and solids which "come after" the Numbers <sup>g</sup> neither as to how they exist or can exist, nor as to what their importance is. They the same way, until a unit is reached which embraces everything (Alexander).

<sup>f</sup> Probably those of relative or negative terms. Cf. § 3.

<sup>g</sup> See note on § 23.

<sup>b</sup> εἶδη οἷόν τε εἶναι (οὐ γὰρ εἰσιν ἀριθμοί) οὔτε τὰ μεταξὺ (μαθηματικά γὰρ ἐκεῖνα) οὔτε τὰ φθαρτά, ἀλλὰ πάλιν τέταρτον ἄλλο φαίνεται τοῦτό τι γένος.

Ὅλως τε τὸ τῶν ὄντων ζητεῖν στοιχεῖα μὴ διελόν-  
 20 τας, πολλαχῶς λεγομένων, ἀδύνατον εὑρεῖν, ἄλλως  
 τε καὶ τοῦτον τὸν τρόπον ζητοῦντας ἐξ οἷων ἐστὶ  
 στοιχείων ἐκ τίνων γὰρ τὸ ποιεῖν ἢ πάσχειν, ἢ  
 τὸ εὐθύ, οὐκ ἔστι δῆπου λαβεῖν, ἀλλ' εἴπερ, τῶν  
 οὐσιῶν μόνον ἐνδέχεται ὥστε τὸ τῶν ὄντων  
 ἀπάντων τὰ στοιχεῖα ἢ ζητεῖν ἢ οἶεσθαι ἔχειν οὐκ  
 ἀληθές πῶς δ' ἂν τις καὶ μάθοι τὰ τῶν πάντων  
 15 στοιχεῖα, δῆλον γὰρ ὡς οὐθὲν οἷόν τε προυπ-  
 ἀρχειν γνωρίζοντα πρότερον. ὥσπερ γὰρ τῷ γεω-  
 μετρεῖν μαθάνοντι ἄλλα μὲν ἐνδέχεται προειδέναι,  
 ὧν δὲ ἢ ἐπιστήμη καὶ περὶ ὧν μέλλει μαθάνειν  
 οὐθὲν προγιγνώσκει, οὔτω δὲ καὶ ἐπὶ τῶν ἄλλων  
 ὥστ' εἴ τις τῶν πάντων ἔστιν ἐπιστήμη, οἷαν δῆ<sup>1</sup>  
 0 τινές φασιν, οὐθὲν ἂν προυπάρχοι γνωρίζων οὗτος.  
 καίτοι πᾶσα μάθησις διὰ προγιγνωσκομένων ἢ  
 πάντων ἢ τινῶν ἐστὶ, καὶ ἡ<sup>2</sup> δι' ἀποδείξεως <καὶ>  
 ἡ<sup>3</sup> δι' ὀρισμῶν· δεῖ γὰρ ἐξ ὧν ὁ ὀρισμὸς προειδέναι  
 καὶ εἶναι γνώριμα ὁμοίως δὲ καὶ ἡ δι' ἐπαγωγῆς.  
 ἃ ἀλλὰ μὴν εἰ καὶ τυγχάνοι<sup>4</sup> συμφυτος οὔσα, θαυ-  
 μαστὸν πῶς λανθάνομεν ἔχοντες τὴν κρατίστην  
 τῶν ἐπιστημῶν ἔτι πῶς τις γνωριεῖ ἐκ τίνων  
 ἐστὶ, καὶ πῶς ἔσται δῆλον; καὶ γὰρ τοῦτ' ἔχει

<sup>1</sup> οἷαν δῆ: ὡς ΕΓ Asclepius.

<sup>2</sup> ἡ Bonitz: ἡ.

<sup>3</sup> <καὶ> ἡ Bonitz. ἡ.

<sup>4</sup> καὶ εἰ τυγχάνει Ε Asclepius.

<sup>a</sup> e.g. Plato's *Dialectic*.

<sup>b</sup> Cf. the doctrine of ἀνάμνησις (recollection), Plato, *Meno* 81 c, *Phaedo* 72 e.



cannot be Forms (since they are not numbers) or Intermediates (which are the objects of mathematics) or perishables; clearly they form yet another fourth class.

In general, to investigate the elements of existing things without distinguishing the various senses in which things are said to exist is a hopeless task; especially when one inquires along these lines into the nature of the elements of which things are composed. For (a) we cannot surely conceive of the elements of activity or passivity or straightness; this is possible, if at all, only in the case of substances. Hence to look for, or to suppose that one has found, the elements of *everything* that exists, is a mistake. (b) How can one apprehend the elements of *everything*? Obviously one could not have any previous knowledge of anything; because just as a man who is beginning to learn geometry can have previous knowledge of other facts, but no previous knowledge of the principles of that science or of the things about which he is to learn, so it is in the case of all other branches of knowledge. Hence if there is a science which embraces everything (as some say), the student of it can have no previous knowledge at all. But all learning proceeds, wholly or in part, from what is already known; whether it is through demonstration or through definition—since the parts of the definition must be already known and familiar. The same is true of induction. On the other hand, assuming that this knowledge should turn out to be innate,<sup>b</sup> it is astonishing that we should possess unawares the most important of the sciences. Further, how is one to know of what elements things consist? how is it to be established?

ἀπορίαν· ἀμφισβητήσσειε γὰρ ἂν τις, ὥσπερ καὶ  
 5 περὶ ἐνίας συλλαβάς οἱ μὲν γὰρ τὸ ζα<sup>1</sup> ἐκ τοῦ  
 σ καὶ δ<sup>2</sup> καὶ α φασὶν εἶναι, οἱ δὲ τινες ἕτερον  
 φθόγγον φασὶν εἶναι, καὶ οὐθένα τῶν γνωρίμων.

Ἔτι δὲ ὧν ἐστὶν αἰσθησις, ταῦτα πῶς ἂν τις μὴ  
 ἔχων τὴν αἴσθησιν γνοίῃ, καίτοι ἔδει, εἶγε πάντων  
 ταῦτά<sup>3</sup> στοιχειά ἐστὶν ἐξ ὧν, ὥσπερ αἱ σύνθετοι  
 10 φωναὶ εἰσὶν ἐκ τῶν οἰκείων στοιχείων.

Χ Ὅτι μὲν οὖν τὰς εἰρημένας ἐν τοῖς φυσικοῖς  
 αἰτίας ζητεῖν εὐόκασι πάντες, καὶ τούτων ἐκτὸς  
 οὐδεμίαν ἔχομεν ἂν εἰπεῖν, δῆλον καὶ ἐκ τῶν  
 πρότερον εἰρημένων ἀλλ' ἀμυδρῶς ταύτας, καὶ  
 15 πον δὲ τινα οὐδαμῶς ψελλιζομένη γὰρ ἔοικεν ἢ  
 πρώτη φιλοσοφία περὶ πάντων, ἅτε νέα τε καὶ<sup>4</sup>  
 κατ' ἀρχὰς οὔσα [καὶ τὸ πρῶτον],<sup>5</sup> ἐπεὶ καὶ Ἐμ-  
 πεδοκλῆς ὁστοῦν τῷ λόγῳ φησὶν εἶναι, τοῦτο δ'  
 ἐστὶ τὸ τί ἦν εἶναι καὶ ἡ οὐσία τοῦ πράγματος.  
 ἀλλὰ μὴν ὁμοίως ἀναγκαῖον καὶ σάρκας<sup>6</sup> καὶ τῶν  
 20 ἄλλων ἕκαστον<sup>7</sup> εἶναι τὸν λόγον, ἢ μηδὲ ἐν<sup>8</sup>.  
 διὰ τοῦτο γὰρ καὶ σὰρξ καὶ ὁστοῦν ἔσται καὶ  
 τῶν ἄλλων ἕκαστον, καὶ οὐ διὰ τὴν ὕλην, ἦν

<sup>1</sup> ζα Bonitz σμα

<sup>2</sup> δ Bonitz· μ.

<sup>3</sup> Bessarion, comm ταῦτα codd.

<sup>4</sup> καὶ om EA<sup>b</sup> Asclepius.

<sup>5</sup> Ross· om Bessarion, Alexander.

<sup>6</sup> σάρκας A<sup>b</sup> Bonitz· σαρκός.

<sup>7</sup> ἕκαστον· ἐκάστων Γ, Bekker

<sup>8</sup> μηδὲ ἐν: μηθένος A<sup>b</sup> Alexander

<sup>a</sup> στοιχεῖον means both "an element" and "a letter of the alphabet"; hence letters are often used as analogues of the material elements. The point here is. Is Z (or rather the Greek ζ) a στοιχεῖον, or is it further analysable? Since

Even this presents a difficulty, because the facts 35  
 might be disputed, as happens in the case of certain (3)  
 syllables—for some say that ZA is composed of S, <sup>eler</sup>  
 D and A, while others say that it is a distinct sound <sup>the</sup>  
 and not any one of those which are familiar to us <sup>ma</sup>  
<sup>be</sup> <sup>t</sup> <sup>a</sup>

Further, how can one gain knowledge of the ob- 36  
 jects of a particular sense-perception without pos- (4)  
 sessing that sense? Yet it should be possible, that <sup>sen-</sup>  
 is if the elements of which all things consist, as com- <sup>obje</sup>  
 posite sounds consist of their peculiar <sup>b</sup> elements, are <sup>the</sup>  
 the same <sup>cler</sup>  
<sup>sigt</sup>  
<sup>ena</sup>  
<sup>to h</sup>  
<sup>sow</sup>  
<sup>this</sup>

X Thus it is obvious, from the statements of earlier  
 thinkers also, that all inquiry is apparently directed  
 towards the causes described in the *Physics*,<sup>c</sup> and  
 that we cannot suggest any other cause apart from  
 these. They were, however, only vaguely conceived;  
 and although in one sense they have all been stated  
 before, in another they have not been stated at all  
 For the earliest philosophy speaks falteringly, as it 2  
 were, on all subjects; being new and in its infancy <sup>prin</sup>  
 Even Empedocles says that bone exists by virtue of <sup>caus</sup>  
 its ratio,<sup>d</sup> which is the definition or essence of a  
 thing. But by similar reasoning both flesh and every 3  
 other thing, or else nothing at all, must be ratio;  
 for it must be because of this, and not because of  
 their matter—which he calls fire, earth, water and  
 this can be disputed, we must expect differences of opinion  
 about the elements in general

<sup>b</sup> Peculiar to them as sounds, not as individual sounds.  
 If sights and sounds had the same elements, sight, which  
 knows those elements as composing sights, would know  
 them as composing sounds, *i. e.*, we could see sounds

<sup>c</sup> *Phys* II III, VII.

<sup>d</sup> Fri 96, 98 (Diels), Ritter and Pieller 175 Aristotle  
 says that Empedocles had some idea of the essence or formal  
 cause, but did not apply it generally.

## ARISTOTLE

<sup>a</sup> ἐκεῖνος λέγει πῦρ καὶ γῆν καὶ ὕδωρ καὶ ἀέρα.  
 ἀλλὰ ταῦτα ἄλλου μὲν λέγοντος συνέφησεν ἂν ἐξ  
 ἀνάγκης, σαφῶς δὲ οὐκ εἴρηκεν. Περὶ μὲν οὖν  
 25 τούτων<sup>1</sup> δεδήλωται καὶ πρότερον ὅσα δὲ περὶ  
 τῶν αὐτῶν τούτων ἀπορήσειεν ἂν τις, ἐπανέλθω-  
 μεν πάλιν τάχα γὰρ ἂν ἐξ αὐτῶν εὐπορήσαιμὲν  
 τι πρὸς τὰς ὕστερον ἀπορίας

<sup>1</sup> τούτων: τῶν τοιούτων E Alexandini lemma

air—that flesh and bone and every other thing exists. If anyone else had stated this, he would necessarily have agreed, but his own statement was not clear.

These and similar points have been explained already. We will now return to the difficulties which might be raised about these same questions, for they may throw some light upon subsequent difficulties.<sup>a</sup>

<sup>a</sup> The reference is to Book III. See Introd. p. xxxi.

## A ELATTON

I Ἡ περὶ τῆς ἀληθείας θεωρία τῇ μὲν χαλεπῇ τῇ δὲ ῥαδία. σημεῖον δὲ τὸ μῆτ' ἀξίως μηδένα δύνασθαι θιγεῖν<sup>1</sup> αὐτῆς, μήτε πάντας ἀποτυγχάνειν, ἀλλ' ἕκαστον λέγειν τι περὶ τῆς φύσεως, καὶ καθ' ἓνα μὲν μηθὲν ἢ μικρὸν ἐπιβάλλειν αὐτῇ, ἐκ πάντων δὲ συναθροιζομένων γίνεσθαι τι μέγεθος ὥστ' εἴπερ ἔοικεν ἔχειν καθάπερ τυγχάνομεν παροιμιαζόμενοι, τίς ἂν θύρας ἀμάρτοι; ταύτῃ μὲν ἂν εἶη ῥαδία· τὸ δ' ὅλον τι ἔχειν καὶ μέρος μὴ δύνασθαι δηλοῖ τὸ χαλεπὸν αὐτῆς ἴσως δὲ καὶ τῆς χαλεπότητος οὔσης κατὰ δύο τρόπους, οὐκ ἐν τοῖς πράγμασιν ἀλλ' ἐν ἡμῖν τὸ αἷτιον<sup>2</sup> αὐτῆς ὥσπερ γὰρ<sup>3</sup> τὰ τῶν νυκτερίδων ὄμματα πρὸς τὸ φέγγος ἔχει τὸ μεθ' ἡμέραν, οὕτω καὶ τῆς ἡμετέρας ψυχῆς ὁ νοῦς πρὸς τὰ τῇ φύσει φανερώτατα πάντων.

Οὐ μόνον δὲ χάριν ἔχειν δίκαιον τούτοις ὧν ἂν τις κοινώσαιτο ταῖς δόξαις, ἀλλὰ καὶ τοῖς ἐπιπολαιότερον<sup>4</sup> ἀποφηνάμενοις καὶ γὰρ οὗτοι συνεβάλοντό τι τὴν γὰρ ἕξιν προήσκησαν ἡμῶν. εἰ μὲν γὰρ Τιμόθεος μὴ ἐγένετο, πολλὴν ἂν μελοποιίαν οὐκ εἶχομεν·

<sup>1</sup> θιγεῖν : τυχεῖν E Asclepius.

<sup>2</sup> αἷτιόν ἐστιν A<sup>b</sup>.

<sup>3</sup> γὰρ καὶ recc.

<sup>4</sup> ἐπιπολαιότερως E Asclepius.

## BOOK II

I THE study of Truth is in one sense difficult, in another easy. This is shown by the fact that whereas no one person can obtain an adequate grasp of it, we cannot *all* fail in the attempt; each thinker makes some statement about the natural world, and as an individual contributes little or nothing to the inquiry, but a combination of all conjectures results in something considerable. Thus in so far as it seems that Truth is like the proverbial door which no one can miss,<sup>a</sup> in this sense our study will be easy; but the fact that we cannot, although having some grasp of the whole, grasp a particular part, shows its difficulty. However, since difficulty also can be accounted for in two ways, its cause may exist not in the objects of our study but in ourselves—just as it is with bats' eyes in respect of daylight, so it is with our mental intelligence in respect of those things which are by nature most obvious.

It is only fair to be grateful not only to those whose views we can share but also to those who have expressed rather superficial opinions. They too have contributed something; by their preliminary work they have formed our mental experience. If there had been no Timotheus,<sup>b</sup> we should not possess much

<sup>a</sup> Leutsch and Schneidewin, *Paroemiographi*, II 678.

<sup>b</sup> Of Miletus, 446 (?)–357 B.C.

εἰ δὲ μὴ Φρῦνις, Τιμόθεος οὐκ ἂν ἐγένετο τὸν αὐτὸν δὲ τρόπον καὶ <ἐπὶ><sup>1</sup> τῶν περὶ τῆς ἀληθείας ἀποφηναμένων· παρὰ μὲν γὰρ ἐνίων παρειλήφασμέν τινας δόξας, οἱ δὲ τοῦ γενέσθαι τούτους αἴτιοι γεγόνασιν

Ὅρθως δ' ἔχει καὶ τὸ καλεῖσθαι τὴν φιλοσοφίαν ἐπιστήμην τῆς ἀληθείας θεωρητικῆς μὲν γὰρ τέλος ἀλήθεια, πρακτικῆς δ' ἔργον καὶ γὰρ ἂν τὸ πῶς ἔχει σκοπῶσιν, οὐ τὸ αἰδίων ἀλλὰ πρὸς τι καὶ νῦν θεωροῦσιν οἱ πρακτικοί οὐκ ἴσμεν δὲ τὸ ἀληθές ἄνευ τῆς αἰτίας ἕκαστον δὲ μάλιστα αὐτὸ τῶν ἄλλων καθ' ὃ καὶ τοῖς ἄλλοις ὑπάρχει τὸ συνώνυμον (οἷον τὸ πῦρ θερμότατον· καὶ γὰρ τοῖς ἄλλοις τὸ αἴτιον τοῦτο τῆς θερμότητος)· ὥστε καὶ ἀληθέστατον τὸ τοῖς ὑστέροις αἴτιον τοῦ ἰληθέσιν εἶναι διὸ τὰς τῶν αἰεὶ ὄντων ἀρχὰς ἵναγκαῖον αἰεὶ εἶναι ἀληθεστάτας· οὐ γὰρ ποτε ἰληθεῖς, οὐδ' ἐκείναις αἰτιόν τί ἐστι τοῦ εἶναι, ἀλλ' ἐκείναι τοῖς ἄλλοις, ὥσθ' ἕκαστον ὡς ἔχει τοῦ εἶναι, οὕτω καὶ τῆς ἀληθείας

II. Ἀλλὰ μὴν ὅτι γ' ἔστιν ἀρχή τις, καὶ οὐκ ἄπειρα γὰρ αἴτια τῶν ὄντων οὔτ' εἰς εὐθυωρίαν οὔτε κατ' ἴδος, δῆλον οὔτε γὰρ ὡς ἐξ ὕλης, τόδ' ἐκ τοῦδε ἵναπτόν ἰέναι εἰς ἄπειρον (οἷον σάρκα μὲν ἐκ γῆς, γῆν δ' ἐξ ἀέρος, ἀέρα δ' ἐκ πυρός, καὶ τοῦτο κῆ ἴστασθαι), οὔτε ὅθεν ἢ ἀρχή τῆς κινήσεως οἷον τὸν μὲν ἄνθρωπον ὑπὸ τοῦ ἀέρος κινήθῃναι,

<sup>1</sup> Jaeger.

<sup>a</sup> Of Mitylene; he is referred to as still alive in Aristophanes, *Clouds* 971. Both Phrynis and Timotheus are criti-  
36



of our music ; and if there had been no Phrynis,<sup>a</sup> thing know there would have been no Timotheus. It is just the same in the case of those who have theorized about reality : we have derived certain views from some of them, and they in turn were indebted to others.

Moreover, philosophy is rightly called a knowledge 5 of Truth. The object of theoretic knowledge is The o of pr know is act but t truth, while that of practical knowledge is action ; for even when they are investigating *how* a thing is so, practical men study not the eternal principle but the relative and immediate application. But we 6 cannot know the truth apart from the cause. Now every thing through which a common quality is objec theor know is tru know truth must the fi communicated to other things is itself of all those things in the highest degree possessed of that quality (*e g* fire is hottest, because it is the cause of heat in everything else) ; hence that also is most true which causes all subsequent things to be true. Therefore 7 in every case the first principles of things must necessarily be true above everything else—since princ and c whic them most they are not merely *sometimes* true, nor is anything the cause of their existence, but they are the cause of the existence of other things,—and so as each thing is in respect of existence, so it is in respect of truth.

II Moreover, it is obvious that there is some first Caus not ( an in chari be in varic (1) N of th kind caus form finite principle, and that the causes of things are not infinitely many either in a direct sequence or in kind. For the material generation of one thing from another cannot go on in an infinite progression (*e g* flesh from earth, earth from air, air from fire. and so on without a stop) ; nor can the source of motion (*e g.* man cized in the fragment of Pherecrates' Chiron translated by Rogers in the appendix to his ed. of the Clouds.

4<sup>a</sup> τοῦτον δ' ὑπὸ τοῦ ἡλίου, τὸν δὲ ἡλίον ὑπὸ τοῦ  
 νείκους, καὶ τούτου μηδὲν εἶναι πέρασ) ὁμοίως  
 δὲ οὐδὲ τὸ οὐ ἔνεκα εἰς ἄπειρον οἶόν τε ἰέναι,  
 βάδιον μὲν ὑγείας ἔνεκα, ταύτην δ' εὐδαιμονίας,  
 10 τὴν δ' εὐδαιμονίαν ἄλλου, καὶ οὕτως αἰεὶ ἄλλο  
 ἄλλου ἔνεκεν εἶναι· καὶ ἐπὶ τοῦ<sup>1</sup> τί ἦν εἶναι δ'  
 ὡσαύτως τῶν γὰρ μέσων, ὧν ἐστὶν ἔξω τι  
 ἔσχατον καὶ πρότερον, ἀναγκαῖον εἶναι τὸ πρό-  
 τερον αἴτιον τῶν μετ' αὐτό· εἰ γὰρ εἰπεῖν ἡμᾶς  
 δέοι τί<sup>2</sup> τῶν τριῶν αἴτιον, τὸ πρῶτον ἐροῦμεν οὐ  
 15 γὰρ δὴ τό γ' ἔσχατον, οὐδενὸς γὰρ τὸ τελευταῖον  
 ἀλλὰ μὴν οὐδὲ τὸ μέσον, ἐνὸς γάρ οὐθέν δὲ δια-  
 φέρει ἐν ἡ πλείω εἶναι, οὐδ' ἄπειρα ἢ πεπερασμένα.  
 τῶν δὲ ἀπείρων τοῦτον τὸν τρόπον καὶ ὅλως τοῦ  
 ἀπείρου πάντα τὰ μόρια μέσα ὁμοίως μέχρι τοῦ  
 νῦν· ὥστ' εἴπερ μηθέν ἐστι πρῶτον, ὅλως αἴτιον  
 20 οὐθέν ἐστιν. Ἄλλὰ μὴν οὐδ' ἐπὶ τὸ κάτω οἶόν τε  
 εἰς ἄπειρον ἰέναι, τοῦ ἄνω ἔχοντος ἀρχήν, ὥστ'  
 ἐκ πυρὸς μὲν ὕδωρ, ἐκ δὲ τούτου γῆν, καὶ οὕτως  
 αἰεὶ ἄλλο τι γίνεσθαι γένος. διχῶς γὰρ γίνεται  
 τόδε ἐκ τοῦδε, μὴ<sup>3</sup> ὡς τόδε λέγεται μετὰ τόδε,  
 οἶον ἐξ Ἰσθμίων Ὀλύμπια, ἀλλ' ἢ ὡς<sup>4</sup> ἐκ παιδὸς  
 5 ἀνήρ μεταβάλλοντος, ἢ ὡς<sup>5</sup> ἐξ ὕδατος ἀήρ. ὡς

<sup>1</sup> τοῦ: τῶν recc.

<sup>2</sup> τί Bessarion, comm. . τι codd.

<sup>3</sup> μὴ: ἢ A<sup>b</sup>, fecit E

<sup>4</sup> ἀλλ' ἢ ὡς Ross: ἢ οὐχ οὕτως ἀλλ' ὡς ἢ A<sup>b</sup> et scripsit Bekker (ἢ alt. omisso)

<sup>5</sup> ὡς A<sup>b</sup>. om. cet

<sup>a</sup> Aristotle is evidently thinking of Empedocles' system.

<sup>b</sup> ἐκ means not only "from" but "after", Aristotle dismisses this latter meaning. The Isthmian fell alternately in the same year as the Olympian festival; when this happened

be moved by air, air by the sun, the sun by Strife,<sup>a</sup> with no limit to the series) In the same way neither 2 can the Final Cause recede to infinity—walking <sup>in t</sup> having health for its object, and health happiness, <sup>up</sup> and happiness something else: one thing always <sup>dir</sup> being done for the sake of another And it is just 3 the same with the Formal Cause For in the case of all intermediate terms of a series which are contained between a first and last term, the prior term is necessarily the cause of those which follow it; because if we had to say which of the three is the cause, we should say “the first” At any rate it is not the last term, because what comes at the end is not the cause of anything Neither, again, is the intermediate term, which is only the cause of one (and it makes 4 no difference whether there is one intermediate term or several, nor whether they are infinite or limited in number) But of series which are infinite in this way, and in general of the infinite, all the parts are equally intermediate, down to the present moment Thus if there is no first term, there is no cause at all.

On the other hand there can be no infinite pro- 5 gression downwards (where there is a beginning in <sup>The</sup> the upper direction) such that from fire comes water, <sup>tru</sup> and from water earth, and in this way some other <sup>do</sup> kind of thing is always being produced There are <sup>dir</sup> two senses in which one thing “comes from” another <sup>Of</sup>—apart from that in which one thing is said to come <sup>pro</sup> *after* another, *e g* the Olympian “from” <sup>sen</sup> *b* the <sup>der</sup> Isthmian games—either as a man comes from a child <sup>one</sup> as it develops, or as air comes from water. Now we 6 <sup>the</sup>

the former was held in the spring and the latter in the summer. *Cf.* V. xxiv. 5.

994 a

μὲν οὖν ἐκ παιδὸς ἄνδρα γίνεσθαι φαμεν, ὡς ἐκ  
 τοῦ γιγνομένου τὸ γεγονὸς ἢ ἐκ τοῦ ἐπιτελουμένου  
 τὸ τετελεσμένον (ἀεὶ γὰρ ἐστὶ μεταξύ, ὥσπερ τοῦ  
 εἶναι καὶ μὴ εἶναι γένεσις, οὕτω καὶ τὸ γιγνόμενον  
 τοῦ ὄντος καὶ μὴ ὄντος ἔστι γὰρ<sup>1</sup> ὁ μανθάνων  
 γιγνόμενος ἐπιστήμων, καὶ τοῦτ' ἐστὶν ὃ λέγεται,  
 30 ὅτι γίγνεται ἐκ μανθάνοντος ἐπιστήμων). τὸ δ' ὡς  
 ἐξ ἀέρος ὕδωρ, φθειρομένου θατέρου. διὸ ἐκεῖνα  
 μὲν οὐκ ἀνακάμπει εἰς ἄλληλα (οὐδὲ γίγνεται ἐξ  
 94 b ἀνδρὸς παῖς οὐ γὰρ γίγνεται ἐκ τῆς γενέσεως τὸ  
 γιγνόμενον, ἀλλ' <ὃ><sup>2</sup> ἔστι μετὰ τὴν γένεσιν. οὕτω  
 γὰρ καὶ ἡμέρα ἐκ τοῦ πρωῆ, ὅτι μετὰ τοῦτο· διὸ  
 οὐδὲ τὸ πρωῆ ἐξ ἡμέρας), θάτερα δὲ ἀνακάμπει.  
 ἀμφοτέρως δὲ ἀδύνατον εἰς ἄπειρον ἵεσθαι τῶν μὲν  
 5 γὰρ ὄντων μεταξὺ ἀνάγκη τέλος εἶναι, τὰ δὲ εἰς  
 ἄλληλα ἀνακάμπει ἢ γὰρ θατέρου φθορὰ θατέρου  
 ἐστὶ γένεσις. ἅμα δὲ καὶ ἀδύνατον τὸ πρῶτον αἰδίον  
 ὄν φθαρῆναι ἐπεὶ γὰρ οὐκ ἄπειρος ἡ γένεσις ἐπὶ τὸ  
 ἄνω, ἀνάγκη ἐξ οὗ φθαρέντος πρώτου τι ἐγένετο  
 μὴ αἰδίον εἶναι. Ἔτι δὲ τὸ οὐ ἔνεκα τέλος,  
 10 τοιοῦτον δὲ ὃ μὴ ἄλλου ἔνεκα, ἀλλὰ τὰλλα ἐκείνου·  
 ὥστ' εἰ μὲν ἔσται τοιοῦτόν τι<sup>3</sup> ἔσχατον, οὐκ ἔσται  
 ἄπειρον εἰ δὲ μηθὲν τοιοῦτον, οὐκ ἔσται τὸ οὐ  
 ἔνεκα, ἀλλ' οἷ τὸ ἄπειρον ποιοῦντες λαμβάνουσιν

<sup>1</sup> γὰρ A<sup>b</sup> Alexander (?) δέ.<sup>2</sup> Chist.<sup>3</sup> τι Bonitz· τὸ.

<sup>a</sup> The argument is elliptical and confused. The meaning is this: Since there is an upward limit, there is a first cause which is eternal, being independent of any other cause. Therefore this cause cannot cause other things by its destruction, in the manner just described.

say that a man "comes from" a child in the sense that that which *has* become something comes from that which *is* becoming. *i.e.* the perfect from the imperfect (For just as "becoming" is always intermediate between being and not-being, so is that which is becoming between what is and what is not. The learner is becoming informed, and that is the meaning of the statement that the informed person "comes from" the learner.) On the other hand A comes from B in the sense that water comes from air by the destruction of B. Hence the former class of process is not reversible (*e.g.* a child cannot come from a man, for the result of the process of becoming is not the thing which is becoming, but that which exists after the process is complete. So day comes from early dawn, because it is after dawn; and hence dawn does not come from day) But the other class is reversible. In both cases progression to infinity is impossible; for in the former the intermediate terms must have an end, and in the second the process is reversible, for the destruction of one member of a pair is the generation of the other. At the same time the first cause, being eternal, cannot be destroyed; because, since the process of generation is not infinite in the upper direction, that cause which first, on its destruction, became something else, cannot possibly be eternal.<sup>a</sup>

Further, the Final cause of a thing is an *end*, and is such that it does not happen for the sake of something else, but all other things happen for its sake. So if there is to be a last term of this kind, the series will not be infinite; and if there is no such term, there will be no Final cause. Those who introduce infinity do not realize that they are abolishing the

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34 b ἐξαιρουῦντες τὴν τοῦ ἀγαθοῦ φύσιν (καίτοι οὐθεὶς ἂν  
 ἐγχειρήσειεν οὐθὲν πράττειν, μὴ μέλλων ἐπὶ πέρας  
 15 ἥξειν) οὐδ' ἂν εἴη νοῦς ἐν τοῖς οὖσιν<sup>1</sup>. ἔνεκα γάρ  
 τινος αἰὲν πράττει ὃ γε νοῦν ἔχων, τοῦτο δέ<sup>2</sup> ἐστὶ  
 πέρας· τὸ γὰρ τέλος πέρας ἐστίν. Ἄλλὰ μὴν  
 οὐδὲ τὸ τί ἦν εἶναι ἐνδέχεται ἀνάγεσθαι εἰς ἄλλον  
 ὀρισμὸν πλεονάζοντα τῷ λόγῳ αἰεὶ τε γὰρ ἔστιν  
 ὁ ἔμπροσθεν μᾶλλον, ὁ δ' ὕστερος οὐκ ἔστιν· οὐ δὲ  
 20 τὸ πρῶτον μὴ ἔστιν, οὐδὲ τὸ ἐχόμενον<sup>3</sup> ἔτι τὸ  
 ἐπίστασθαι ἀναιροῦσιν οἱ οὕτω λέγοντες, οὐ γὰρ  
 οἷόν τε εἰδέναι πρὶν ἢ εἰς τὰ ἄτομα ἐλθεῖν· καὶ τὸ  
 γιννώσκειν οὐκ ἔστιν, τὰ γὰρ οὕτως ἄπειρα πῶς  
 ἐνδέχεται νοεῖν; οὐ γὰρ ὁμοιον ἐπὶ τῆς γραμμῆς,  
 ἢ κατὰ τὰς διαιρέσεις μὲν οὐχ ἴσταται, νοῆσαι δ'  
 25 οὐκ ἔστι μὴ στήσαντα (διόπερ οὐκ ἀριθμήσει τὰς  
 τομὰς ὁ τὴν ἄπειρον διεξιῶν), ἀλλὰ καὶ τὴν ὕλην  
 ἐν<sup>4</sup> κινουμένῳ νοεῖν ἀνάγκη καὶ ἀπείρῳ οὐδενὶ  
 ἔστιν εἶναι εἰ δὲ μή, οὐκ ἄπειρόν γ' ἐστὶν τὸ  
 ἀπείρῳ εἶναι. Ἄλλὰ μὴν καὶ εἰ ἄπειρά γ' ἦσαν  
 πλήθει τὰ εἶδη τῶν αἰτίων, οὐκ ἂν ἦν οὐδ' οὕτω τὸ  
 30 γιννώσκειν τότε γὰρ εἰδέναι οἰόμεθα, ὅταν τὰ αἷτια

<sup>1</sup> οὖσιν A<sup>b</sup>: τοιούτοις.

<sup>3</sup> ἐχόμενον ἐστὶν EJ.

<sup>2</sup> δέ A<sup>b</sup>, Christ: γάρ

<sup>4</sup> ὕλην ἐν· ἔλην οὐ Ross

<sup>a</sup> *i.e.* infinitely divisible

<sup>b</sup> It does not follow that we can apprehend that which is infinite because we can apprehend a line which is infinitely divisible. We can only really apprehend the line by setting a limit to its divisibility and regarding it simply as divisible into a very great (but not infinite) number of sections. An infinite number of sections can neither be apprehended nor counted.

nature of the Good (although no one would attempt to do anything if he were not likely to reach some limit); nor would there be any intelligence in the world, because the man who has intelligence always acts for the sake of something, and this is a limit, because the *end* is a limit

Nor again can the Formal cause be referred back to another fuller definition; for the prior definition is always closer, and the posterior is not; and where the original definition does not apply, neither does the subsequent one. Further, those who hold such a view do away with scientific knowledge, for on this view it is impossible to know anything until one comes to terms which cannot be analysed. Understanding, too, is impossible; for how can one conceive of things which are infinite in this way? It is different in the case of the line, which, although in respect of divisibility it never stops, yet cannot be conceived of unless we make a stop (which is why, in examining an infinite<sup>a</sup> line, one cannot count the sections).<sup>b</sup> Even matter has to be conceived under the form of something which changes,<sup>c</sup> and there can be nothing which is infinite<sup>d</sup>. In any case the concept of infinity is not infinite<sup>e</sup>.

Again, if the kinds of causes were infinite in number it would still be impossible to acquire knowledge; for it is only when we have become acquainted with the causes that we assume that we

<sup>a</sup> Matter too, which is infinite in its varieties, can only be apprehended in the form of concrete sensible objects which are liable to change. This seems to be the meaning of the text, but Ross's reading and interpretation may be right, see his note *ad loc.*

<sup>b</sup> *i. e.* not actually, but only potentially.

<sup>c</sup> *Cf.* note *b.*

994 b

γνωρίσωμεν· τὸ δ' ἄπειρον κατὰ τὴν πρόσθεσιν οὐκ ἔστιν ἐν πεπερασμένῳ διεξελθεῖν.

III Αἱ δ' ἀκροάσεις κατὰ τὰ ἔθη συμβαίνουσιν  
 395 a ὡς γὰρ εἰώθαμεν, οὕτως ἀξιούμεν λέγεσθαι, καὶ τὰ παρὰ ταῦτα οὐχ ὅμοια φαίνεται ἀλλὰ διὰ τὴν ἀσυνήθειαν ἀγνωστότερα καὶ ξενικώτερα· τὸ γὰρ σὺνήθες γνώριμον.<sup>1</sup> ἡλικίην δὲ ἰσχὺν ἔχει τὸ σὺνήθες οἱ νόμοι δηλοῦσιν, ἐν οἷς τὰ μυθώδη καὶ  
 5 παιδαριώδη μείζον ἰσχύει τοῦ γινώσκειν περὶ αὐτῶν διὰ τὸ ἔθος. οἱ μὲν οὖν, ἐὰν μὴ μαθηματικῶς λέγη τις, οὐκ ἀποδέχονται τῶν λεγόντων, οἱ δ', ἂν μὴ παραδειγματικῶς, οἱ δὲ μάρτυρα ἀξιούσιν ἐπάγεσθαι ποιητὴν. καὶ οἱ μὲν πάντα ἀκριβῶς, τοὺς δὲ λυπεῖ τὸ ἀκριβὲς ἢ διὰ τὸ μὴ  
 10 δύνασθαι συνείρειν ἢ διὰ τὴν μικρολογίαν· ἔχει γάρ τι τὸ ἀκριβὲς τοιοῦτον, ὥστε καθάπερ ἐπὶ τῶν συμβολαίων, καὶ ἐπὶ τῶν λόγων ἀνελεύθερον εἶναί τισι δοκεῖ. διὸ δεῖ πεπαιδευθῆαι πῶς ἕκαστα ἀποδεκτέον, ὡς ἄτοπον ἅμα ζητεῖν ἐπιστήμην καὶ τρόπον ἐπιστήμης· ἔστι δ' οὐδὲ θάτερον<sup>2</sup> ῥάδιον  
 15 λαβεῖν τὴν δ' ἀκριβολογίαν τὴν μαθηματικὴν οὐκ ἐν ἅπασιν ἀπαιτητέον, ἀλλ' ἐν τοῖς μὴ ἔχουσιν ὕλην. διόπερ οὐ φυσικὸς ὁ τρόπος ἅπασα γὰρ ἴσως ἢ φύσις ἔχει ὕλην. διὸ σκεπτέον πρῶτον τί ἐστὶν ἢ φύσις· οὕτω γὰρ καὶ περὶ τίνων<sup>3</sup> ἢ φυσικὴ δῆλον ἔσται [καὶ εἰ μιᾶς ἐπιστήμης ἢ πλειόνων τὰ αἷτια  
 20 καὶ τὰς ἀρχὰς θεωρήσαι ἐστὶν]<sup>4</sup>

<sup>1</sup> γνωριμώτερον EJ<sup>2</sup> A<sup>b</sup> Alexander. οὐδέτερον.<sup>3</sup> τίνος EJ Asclepius<sup>4</sup> καὶ . . . ἐστὶν om. Alexander.

<sup>a</sup> These words have evidently been inserted to form a kind of link with the subject matter of the *Metaphysics*. The book is almost certainly part of a quite independent treatise, see *Introd.* p. xxxi



know a thing ; and we cannot, in a finite time, go completely through what is additively infinite.

III. The effect of a lecture depends upon the habits of the listener ; because we expect the language to which we are accustomed, and anything beyond this seems not to be on the same level, but somewhat strange and unintelligible on account of its unfamiliarity ; for it is the familiar that is intelligible. The powerful effect of familiarity is clearly shown by the laws, in which the fanciful and puerile survivals prevail, through force of habit, against our recognition of them. Thus some people will not accept the statements of a speaker unless he gives a mathematical proof, others will not unless he makes use of illustrations ; others expect to have a poet adduced as witness. Again, some require exactness in everything, while others are annoyed by it, either because they cannot follow the reasoning or because of its pettiness ; for there is something about exactness which seems to some people to be mean, no less in an argument than in a business transaction.

Hence one must have been already trained how to take each kind of argument, because it is absurd to seek simultaneously for knowledge and for the method of obtaining it ; and neither is easy to acquire. Mathematical accuracy is not to be demanded in everything, but only in things which do not contain matter. Hence this method is not that of natural science, because presumably all nature is concerned with matter. Hence we should first inquire what nature is ; for in this way it will become clear what the objects of natural science are [and whether it belongs to one science or more than one to study the causes and principles of things] <sup>a</sup>

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I Ἀνάγκη πρὸς τὴν ἐπιζητουμένην<sup>1</sup> ἐπιστήμην  
 25 ἐπελθεῖν ἡμᾶς πρῶτον περὶ ὧν ἀπορήσαι δεῖ πρῶ-  
 τον· ταῦτα δ' ἐστὶν ὅσα τε περὶ αὐτῶν ἄλλως ὑπ-  
 ειλήφασί τινες, καὶ εἴ τι χωρὶς τούτων τυγχάνει<sup>2</sup>  
 παρεωραμένον. ἔστι δὲ τοῖς εὐπορήσαι βουλο-  
 μένοις προὔργου τὸ διαπορήσαι καλῶς· ἢ γὰρ  
 ὕστερον εὐπορία λύσις τῶν πρότερον ἀπορουμένων  
 30 ἐστί, λύειν δ' οὐκ ἔστιν ἀγνοοῦντας τὸν δεσμόν,  
 ἀλλ' ἢ τῆς διανοίας ἀπορία δηλοῖ τοῦτο περὶ τοῦ  
 πράγματος· ἢ γὰρ ἀπορεῖ, ταύτῃ παραπλήσιον  
 πέπονθε τοῖς δεδεμένοις· ἀδύνατον γὰρ ἀμφοτέρως  
 προελθεῖν εἰς τὸ πρόσθεν. διὸ δεῖ τὰς δυσχερείας  
 τεθεωρηκέσαι πάσας πρότερον, τούτων τε χάριν  
 35 καὶ διὰ τὸ τοὺς ζητοῦντας ἄνευ τοῦ διαπορήσαι  
 πρῶτον ὁμοίους εἶναι τοῖς ποῖ δεῖ βαδίζειν ἀγνοοῦσι,  
 995 b καὶ πρὸς τούτοις οὐδ' εἴ ποτε τὸ ζητούμενον  
 εὔρηκεν ἢ μὴ γινώσκειν· τὸ γὰρ τέλος τούτῳ μὲν  
 οὐ δηλόν, τῷ δὲ προηπορηκότι δηλόν ἔτι δὲ  
 βέλτιον ἀνάγκη ἔχειν πρὸς τὸ κρίναι τὸν ὡσπερ  
 ἀντιδίκων καὶ τῶν ἀμφισβητούντων λόγων ἀκη-  
 κοότα πάντων.

<sup>1</sup> ζητουμένην A<sup>b</sup> Asclepius.

<sup>2</sup> τυγχάνει recc.

## BOOK III

I. IT is necessary, with a view to the science which we are investigating, that we first describe the questions which should first be discussed. These consist of all the divergent views which are held about the first principles ; and also of any other view apart from these which happens to have been overlooked. Now for those who wish to get rid of perplexities it is a good plan to go into them thoroughly, for the subsequent certainty is a release from the previous perplexities, and release is impossible when we do not know the knot. The perplexity of the mind shows that there is a "knot" in the subject ; for in its perplexity it is in much the same condition as men who are fettered. In both cases it is impossible to make any progress. Hence we should first have studied all the difficulties, both for the reasons given and also because those who start an inquiry without first considering the difficulties are like people who do not know where they are going ; besides, one does not even know whether the thing required has been found or not. To such a man the *end* is not clear ; but it is clear to one who has already faced the difficulties. Further, one who has heard all the conflicting theories, like one who has heard both sides in a lawsuit, is necessarily more competent to judge

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## ARISTOTLE

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5 Ἔστι δ' ἀπορία πρώτη μὲν περὶ ὧν ἐν τοῖς πεφρομισμασμένοις διηπορήσαμεν, πότερον μιᾶς ἢ πολλῶν ἐπιστημῶν θεωρῆσαι τὰς αἰτίας, καὶ πότερον τὰς τῆς οὐσίας ἀρχὰς τὰς πρώτας ἐστὶ τῆς ἐπιστήμης ἰδεῖν μόνον, ἢ καὶ περὶ τῶν ἀρχῶν ἐξ ὧν δεικνύουσι πάντες,<sup>1</sup> οἷον πότερον  
 10 ἐνδέχεται ταῦτ' οὕτως εἶναι φάναι καὶ ἀποφάναι ἢ οὐ, καὶ περὶ τῶν ἄλλων τῶν τοιούτων· εἴ τ'<sup>2</sup> ἐστὶ περὶ τὴν οὐσίαν, πότερον μία περὶ πάσας ἢ πλείονες εἶσι, καὶ εἰ πλείονες, πότερον ἅπασαι συγγενεῖς, ἢ τὰς μὲν σοφίας τὰς δὲ ἄλλο τι λεκτέον αὐτῶν καὶ τοῦτο δ' αὐτὸ τῶν ἀναγκαίων ἐστὶ ζητῆσαι,  
 15 πότερον τὰς αἰσθητὰς οὐσίας εἶναι μόνον φατέον ἢ καὶ παρὰ ταύτας ἄλλας, καὶ πότερον μοναχῶς ἢ πλείονα γένη τῶν οὐσιῶν, οἷον οἱ ποιῶντες τὰ τε εἶδη καὶ τὰ μαθηματικὰ μεταξὺ τούτων τε καὶ τῶν αἰσθητῶν. περὶ τε τούτων οὖν, καθάπερ φημέν, ἐπισκεπτέον, καὶ πότερον περὶ τὰς οὐσίας  
 20 ἢ θεωρία μόνον ἐστὶν ἢ καὶ περὶ τὰ συμβεβηκότα καθ' αὐτὰ ταῖς οὐσίαις πρὸς δὲ τούτοις περὶ ταύτου καὶ ἐτέρου καὶ ὁμοίου καὶ ἀνομοίου καὶ<sup>4</sup> ἐναντιότητος, καὶ περὶ προτέρου καὶ ὑστέρου καὶ τῶν ἄλλων ἀπάντων τῶν τοιούτων, περὶ ὧν οἱ διαλεκτικοὶ πειρῶνται σκοπεῖν ἐκ τῶν ἐνδόξων  
 25 μόνων<sup>5</sup> ποιούμενοι τὴν σκέψιν, τίος ἐστὶ θεωρῆσαι περὶ πάντων. ἔτι δὲ τούτοις αὐτοῖς ὅσα καθ' αὐτὰ συμβέβηκεν· καὶ μὴ μόνον τί ἐστὶ τούτων

<sup>1</sup> ἄπαν-ες EJ<sup>2</sup> εἴτ' uulgo.<sup>3</sup> καὶ. καὶ E.<sup>4</sup> καὶ αἰτιότητος καὶ ἰεcc<sup>5</sup> μόνον ΓJ<sup>a</sup> The principles and causes referred to in Book I<sup>b</sup> The problem is discussed II. 1-10, and answered IV. 1.<sup>c</sup> Discussed II. 10-15; answered IV. III

The first difficulty is concerned with the subjects <sup>a</sup> which we discussed in our prefatory remarks. (i) Does the study of the causes belong to one science or to more than one? <sup>b</sup> (ii) Has that science only to contemplate the first principles of substance, or is it also concerned with the principles which all use for demonstration—*e g* whether it is possible at the same time to assert and deny one and the same thing, and other similar principles? <sup>c</sup> And if it is concerned with substance, (iii) is there one science which deals with all substances, or more than one; and if more than one, are they all cognate, or should we call some of them “kinds of Wisdom” and others something different? <sup>d</sup> This too is a question which demands inquiry: (iv.) should we hold that only sensible substances exist, or that there are others besides? And should we hold that there is only one class of non-sensible substances, or more than one (as do those who posit the Forms and the mathematical objects as intermediate between the Forms and sensible things)? <sup>e</sup> These questions, then, as I say, must be considered; and also (v) whether our study is concerned only with substances, or also with the essential attributes of substance; and further, with regard to Same and Other, and Like and Unlike and Contrariety, and Prior and Posterior, and all other such terms which dialecticians try to investigate, basing their inquiry merely upon popular opinions; we must consider whose province it is to study all of these. Further, we must consider all the essential attributes of these same things, and

<sup>a</sup> Discussed II. 15-17; answered IV. II. 9-10, VI. 1.

<sup>e</sup> Discussed II. 20-30; answered XII. VI.-X., and also by the refutation of the Platonic Ideas and Intermediates in XIII. and XIV.

395 b ἕκαστον, ἀλλὰ καὶ ἄρα ἐν ἐνὶ ἐναντίον καὶ πότερον  
 αἱ ἀρχαὶ καὶ τὰ στοιχεῖα τὰ γένη ἐστὶν ἢ εἰς ἃ  
 διαιρεῖται ἐνυπάρχοντα ἕκαστον· καὶ εἰ τὰ γένη,  
 30 πότερον ὅσα ἐπὶ τοῖς ἀτόμοις λέγεται τελευταῖα ἢ  
 τὰ πρῶτα, οἷον πότερον ζῶον ἢ ἄνθρωπος ἀρχὴ τε  
 καὶ μᾶλλον ἔστι παρὰ τὸ καθ' ἕκαστον Μάλιστα  
 δὲ ζητητέον καὶ πραγματευτέον, πότερον ἔστι τι  
 παρὰ τὴν ὕλην αἷτιον καθ' αὐτὸ ἢ οὐ, καὶ τοῦτο  
 χωριστὸν ἢ οὐ, καὶ πότερον ἐν ἢ πλείω τὸν ἀριθμὸν,  
 35 καὶ πότερον ἔστι τι παρὰ τὸ σύνολον (λέγω δὲ τὸ  
 σύνολον, ὅταν κατηγορηθῇ τι τῆς ὕλης) ἢ οὐθέν,  
 ἢ τῶν μὲν τῶν δ' οὐ, καὶ ποῖα τοιαῦτα<sup>1</sup> τῶν ὄντων.  
 96 a ἔτι αἱ ἀρχαὶ πότερον ἀριθμῶ ἢ εἶδει ὠρισμέναι,  
 καὶ αἱ ἐν τοῖς λόγοις καὶ αἱ ἐν τῷ ὑποκειμένῳ·  
 καὶ πότερον τῶν φθαρτῶν καὶ ἀφθάρτων αἱ αὐταὶ  
 ἢ ἕτεραι· καὶ πότερον ἀφθαρτοὶ πᾶσαι, ἢ τῶν  
 5 φθαρτῶν φθαρταὶ ἔτι δὲ τὸ πάντων χαλεπώτατον  
 καὶ πλείστην ἀπορίαν ἔχον, πότερον τὸ ἐν καὶ τὸ  
 ὄν, καθάπερ οἱ Πυθαγόρειοι καὶ Πλάτων ἔλεγεν,  
 οὐχ ἕτερόν τί ἐστὶν ἀλλ' οὐσία τῶν ὄντων, ἢ οὐ,  
 ἀλλ' ἕτερόν τι τὸ ὑποκείμενον, ὡσπερ Ἐμπεδοκλῆς  
 φησὶ φιλίαν, ἄλλος δέ τις πῦρ, ὁ δὲ ὕδωρ ἢ<sup>2</sup> ἀέρα·

<sup>1</sup> τοιαῦτα· ταῦτα recc

<sup>2</sup> ἢ: ὁ δὲ A<sup>b</sup>.

<sup>a</sup> Discussed II 18-19, answered IV. II. 8-25.

<sup>b</sup> Discussed ch. III; answered VII. x, XII-xIII.

<sup>c</sup> Discussed IV. 1-8. For answers to these questions see VII. VIII., XIII.-XIV.; XII. VI.-X.; XIII. x

<sup>d</sup> Discussed IV. 8-10; answered XII. IV.-V., XIII. x.

<sup>e</sup> Discussed IV. 11-23; for Aristotle's general views on the subject see VII. VII.-X., XII 1-VII.

<sup>f</sup> Discussed IV. 24-34; answered VII. XVI 3-4, X II.

<sup>g</sup> Actually Love was no more the universal substrate than was any other of Empedocles' elements, Aristotle appears to select it on account of its unifying function.

not merely what each one of them is, but also whether each one has one opposite<sup>a</sup>; and (vi.) whether the first principles and elements of things are the genera under which they fall or the pre-existent parts into which each thing is divided, and if the genera whether they are those which are predicated ultimately of individuals, or the primary genera—*e.g.* whether “animal” or “man” is the first principle and the more independent of the individual.<sup>b</sup>

Above all we must consider and apply ourselves to the question (vii) whether there is any other cause *per se* besides matter, and if so whether it is dissociable from matter, and whether it is numerically one or several, and whether there is anything apart from the concrete thing (by the concrete thing mean matter together with whatever is predicated of it) or nothing; or whether there is in some case but not in others, and what these cases are. Further, (viii) we must ask whether the first principles are limited in number or in kind<sup>d</sup>—both those in the definitions and those in the substrate—and (ix) whether the principles of perishable and imperishable things are the same or different; and whether all are imperishable, or those of perishable things are perishable<sup>e</sup>. Further, there is the hardest and most perplexing question of all: (x) whether Unity and Being (as the Pythagoreans and Plato maintained) are not distinct, but are the substance of things; or whether this is not so, and the substrate is something distinct<sup>f</sup> (as Empedocles holds of Love,<sup>g</sup> another thinker<sup>h</sup> of fire, and another of water or air<sup>i</sup>); and (xi) whether the first

<sup>a</sup> Heraclitus.<sup>f</sup> Anaximenes.<sup>i</sup> Thales.

196 a

10 καὶ πότερον αἱ ἀρχαὶ καθόλου εἰσὶν ἢ ὡς τὰ καθ' ἕκαστα τῶν πραγμάτων, καὶ δυνάμει ἢ ἐνεργείᾳ· ἔτι πότερον ἄλλως ἢ κατὰ κίνησιν καὶ γὰρ ταῦτα ἀπορίαν ἂν παράσχοι πολλήν. πρὸς δὲ τούτοις πότερον οἱ ἀριθμοὶ καὶ τὰ μήκη καὶ τὰ σχήματα καὶ αἱ στιγμαὶ οὐσίαι τινές εἰσιν ἢ οὐ, κἂν εἰ  
15 οὐσίαι, πότερον κεχωρισμένοι τῶν αἰσθητῶν, ἢ ἐνυπάρχουσαι ἐν τούτοις. περὶ γὰρ τούτων ἀπάντων οὐ μόνον χαλεπὸν τὸ εὐπορηῆσαι τῆς ἀληθείας, ἀλλ' οὐδὲ τὸ διαπορηῆσαι τῷ λόγῳ ῥάδιον καλῶς.

II. Πρῶτον μὲν οὖν περὶ ὧν πρῶτον εἶπομεν, πότερον μιᾶς ἢ πλειόνων ἐστὶν ἐπιστημῶν θεωρῆσαι  
20 πάντα τὰ γένη τῶν αἰτίων. μιᾶς μὲν γὰρ ἐπιστήμης πῶς ἂν εἴη μὴ ἐναντίας οὐσας τὰς ἀρχὰς γνωρίζειν, ἔτι δὲ πολλοῖς τῶν ὄντων οὐχ ὑπάρχουσι πᾶσαι· τίνα γὰρ τρόπον οἶόν τε κινήσεως ἀρχὴν εἶναι τοῖς ἀκινήτοις ἢ τὴν τἀγαθοῦ φύσιν, εἶπερ ἅπαν ὃ ἂν ἢ ἀγαθὸν καθ' αὐτὸ καὶ διὰ τὴν  
25 αὐτοῦ φύσιν τέλος ἐστὶν καὶ οὕτως αἴτιον ὅτι ἐκείνου ἔνεκα καὶ γίγνεται καὶ ἔστι τᾶλλα, τὸ δὲ τέλος καὶ τὸ οὐ ἔνεκα πράξεώς τινός ἐστι τέλος, αἱ δὲ πράξεις πᾶσαι μετὰ κινήσεως, ὥστ' ἐν τοῖς ἀκινήτοις οὐκ ἂν ἐνδέχοιτο ταύτην εἶναι τὴν ἀρχὴν οὐδ' εἶναι τι αὐτοάγαθον. διὸ καὶ ἐν τοῖς  
30 μαθήμασιν οὐθὲν δείκνυται διὰ ταύτης τῆς αἰτίας, οὐδ' ἔστιν ἀπόδειξις οὐδεμία διότι βέλτιον ἢ χειρόν, ἀλλ' οὐδὲ τὸ παράπαν μέμνηται οὐθεὶς οὐθενός

<sup>a</sup> Discussed vi. 7-9, for the answer see VII. xiii.-xv, XIII. x.

<sup>b</sup> Discussed vi. 5-6, for the relation of potentiality to actuality see IX. 1-ix.; for actuality and motion see XII. vi.-vii.



principles are universal or like individual things <sup>a</sup>; and (xii.) whether they exist potentially or actually; and further whether their potentiality or actuality depends upon anything other than motion <sup>b</sup>; for these questions may involve considerable difficulty. Moreover we must ask (xiii.) whether numbers and lines and figures and points are substances in any sense, or not, and if they are, whether they are separate from sensible things or inherent in them <sup>c</sup>. With regard to these problems not only is it difficult to attain to the truth, but it is not even easy to state all the difficulties adequately. <sup>d</sup>

II (1) Firstly, then, with respect to the first point raised whether it is the province of one science or of more than one to study all the kinds of causes. How can *one* science comprehend the first principles unless they are contraries? Again, in many things they are not all present. How can a principle of motion be in immovable things? or the "nature of the Good"? for everything which is good in itself and of its own nature is an *end* and thus a cause, because for its sake other things come to be and exist; and the *end* and *purpose* is the end of some action, and all actions involve motion; thus it would be impossible either for this principle to exist in motionless things or for there to be any *absolute* Good. Hence in mathematics too nothing is proved by means of this cause, nor is there any demonstration of the kind "because it is better or worse"; indeed no one takes any such consideration into account. And so

<sup>a</sup> Discussed ch. v.; answered XIII. i-iii., vi.-ix.; XIV. i-iii, v, vi

<sup>d</sup> For another statement of the problems sketched in this chapter see XI. i., ii.

996 a

τῶν τοιούτων, ὥστε διὰ ταῦτα τῶν σοφιστῶν τινὲς  
οἶον Ἀρίστιππος προεπηλάκιζεν αὐτάς ἐν μὲν  
γὰρ ταῖς ἄλλαις τέχναις, καὶ ταῖς βαναύσοις, οἶον  
<sup>35</sup> ἐν τεκτονικῇ καὶ σκυτικῇ, διότι βέλτιον ἢ χεῖρον  
996 b λέγεσθαι πάντα, τὰς δὲ μαθηματικὰς οὐθένα  
ποιεῖσθαι λόγον περὶ ἀγαθῶν καὶ κακῶν. Ἄλλὰ  
μὴν εἴ γε πλείους ἐπιστήμαι τῶν αἰτίων εἰσὶ καὶ  
ἑτέρα<sup>1</sup> ἑτέρας ἀρχῆς, τίνα τούτων φατέον εἶναι  
τὴν ζητουμένην, ἢ τίνα μάλιστα τοῦ πράγματος  
<sup>5</sup> τοῦ ζητουμένου ἐπιστήμονα τῶν ἐχόντων αὐτάς;  
ἐνδέχεται γὰρ τῷ αὐτῷ πάντας τοὺς τρόπους  
τοὺς<sup>2</sup> τῶν αἰτίων ὑπάρχειν, οἶον οἰκίας ὅθεν μὲν  
ἢ κίνησις ἢ τέχνη καὶ ὁ οἰκοδόμος, οὗ δ' ἕνεκα τὸ  
ἔργον, ὕλη δὲ γῆ καὶ λίθοι, τὸ δ' εἶδος ὁ λόγος  
ἐκ μὲν οὖν τῶν πάσαι διωρισμένων τίνα χρὴ καλεῖν  
<sup>10</sup> τῶν ἐπιστημῶν σοφίαν ἔχει λόγον ἐκάστην προσ-  
αγορεύειν ἢ μὲν γὰρ ἀρχικωτάτη καὶ ἡγεμονικω-  
τάτη, καὶ ἢ ὥσπερ δούλας οὐδ' ἀντειπεῖν τὰς  
ἄλλας ἐπιστήμας δίκαιον, ἢ τοῦ τέλους καὶ τὰγαθοῦ  
τοιαύτη (τούτου γὰρ ἕνεκα τᾶλλα), ἢ δὲ τῶν πρῶ-  
των αἰτίων καὶ τοῦ μάλιστα ἐπιστητοῦ διωρίσθη  
εἶναι, ἢ τῆς οὐσίας ἂν εἴη τοιαύτη πολλαχῶς  
<sup>15</sup> γὰρ ἐπισταμένων τὸ αὐτὸ μᾶλλον μὲν εἰδέναί  
φαμέν τὸν τῷ εἶναι γνωρίζοντα τί τὸ πρᾶγμα ἢ  
τῷ μὴ εἶναι, αὐτῶν δὲ τούτων ἕτερον ἑτέρου  
μᾶλλον, καὶ μάλιστα τὸν τί ἐστίν, ἀλλ' οὐ τὸν

<sup>1</sup> ἕτεραι A<sup>b</sup>.<sup>2</sup> τοὺς om recc.

<sup>a</sup> Founder of the Cyrenaic school in the early fourth century

<sup>b</sup> For a defence of mathematics see XIII. iii. 10-12.

<sup>c</sup> Cf I. ii. 5-6.

for this reason<sup>a</sup> some of the sophists, *e g* Aristippus,<sup>b</sup> spurned mathematics, on the ground that in the other arts, even the mechanical ones such as carpentry and cobbling, all explanation is of the kind "because it is better or worse," while mathematics takes no account of good and bad<sup>b</sup>

On the other hand if there are several sciences of the causes, and a different one for each different principle, which of them shall we consider to be the one which we are seeking, or whom of the masters of these sciences shall we consider to be most learned in the subject which we are investigating? For it is possible for all the kinds of cause to apply to the same object; *e g* in the case of a house the source of motion is the art and the architect; the final cause is the function; the matter is earth and stones, and the form is the definition. Now to judge from our discussion some time ago<sup>c</sup> as to which of the sciences should be called Wisdom, there is some case for applying the name to each of them. Inasmuch as Wisdom is the most sovereign and authoritative kind of knowledge, which the other sciences, like slaves may not contradict, the knowledge of the *end* and of the *Good* resembles Wisdom (since everything else is for the sake of the *end*); but inasmuch as it has been defined as knowledge of the first principles and of the most knowable, the knowledge of the essence will resemble Wisdom. For while there are many ways of understanding the same thing, we say that the man who recognizes a thing by its being something knows more than he who recognizes it by its not being something; and even in the former case one knows more than another, and most of all he who knows *what* it is, and not he who knows its size

πόσον ἢ ποῖον ἢ τί ποιεῖν ἢ πάσχειν πέφυκεν. ἔτι  
 δὲ καὶ ἐν τοῖς ἄλλοις τὸ εἰδέναι ἕκαστον, καὶ  
 20 ὧν ἀποδείξεις εἰσί, τότ' οἴομεθα ὑπάρχειν ὅταν  
 εἰδῶμεν τί ἐστίν (οἶον τί ἐστὶ τὸ τετραγωνίζειν,  
 ὅτι μέσης εὐρεσις ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων),  
 περὶ δὲ τὰς γενέσεις καὶ τὰς πράξεις καὶ περὶ  
 πᾶσαν<sup>1</sup> μεταβολὴν ὅταν εἰδῶμεν τὴν ἀρχὴν τῆς  
 κινήσεως τοῦτο δ' ἕτερον καὶ ἀντικείμενον τῷ  
 25 τέλει. ὥστ' ἄλλης ἂν δόξειεν ἐπιστήμης εἶναι τὸ  
 θεωρῆσαι τῶν αἰτίων τούτων ἕκαστον.

Ἄλλὰ μὴν καὶ περὶ τῶν ἀποδεικτικῶν ἀρχῶν,  
 πότερον μιᾶς ἐστὶν ἐπιστήμης ἢ πλειόνων, ἀμφισβη-  
 τήσιμόν ἐστι λέγω δὲ ἀποδεικτικὰς τὰς κοινὰς  
 δόξας ἐξ ὧν ἅπαντες δεικνύουσιν, οἶον ὅτι πᾶν  
 30 ἀναγκαῖον ἢ φάναι ἢ ἀποφάναι, καὶ ἀδύνατον ἅμα  
 εἶναι καὶ μὴ εἶναι, καὶ ὅσαι ἄλλαι τοιαῦται προτάσεις,  
 —πότερον μία τούτων ἐπιστήμη καὶ τῆς οὐσίας ἢ  
 ἕτερα, καὶ εἰ μὴ μία, ποτέραν χρὴ προσαγορεύειν  
 τὴν ζητουμένην νῦν. Μιᾶς μὲν οὖν οὐκ εὐλογον  
 εἶναι τί γὰρ μᾶλλον γεωμετρίας ἢ ὅποιασοῦν περὶ  
 35 τούτων ἐστὶν ἴδιον τὸ ἐπαίειν, εἶπερ οὖν ὁμοίως μὲν  
 997 a ὅποιασοῦν ἐστίν, ἀπασῶν δὲ μὴ ἐνδέχεται, ὥσπερ  
 οὐδὲ τῶν ἄλλων οὕτως οὐδὲ τῆς γνωρίζουσης τὰς  
 οὐσίας ἴδιόν ἐστι τὸ γινώσκειν περὶ αὐτῶν.  
 ἅμα δὲ καὶ τίνα τρόπον ἔσται αὐτῶν ἐπιστήμη;  
 5 γινώριζομεν (χρῶνται γοῦν ὡς γινωσκομένοις  
 αὐτοῖς καὶ ἄλλαι τέχναι). εἰ δὲ ἀποδεικτικὴ περὶ

<sup>1</sup> ἅπασαν E.J.

<sup>a</sup> See IV. 1.

<sup>b</sup> sc. the science which studies the four causes.

<sup>c</sup> Cf. i. 5.

<sup>d</sup> sc. and so there can be no science which defines them.

or quality or natural capacity for acting or being acted upon. Further, in all other cases too, even in such as admit of demonstration, we consider that we know a particular thing when we know *what* it is (*e g* what is the squaring of a rectangle? answer, the finding of a mean proportional to its sides; and similarly in other instances); but in the case of generations and actions and all kinds of change, when we know the source of motion. This is distinct from and opposite to the *end*. Hence it might be supposed that the study of each of these causes pertained to a different science.<sup>a</sup>

(11) Again, with respect to the demonstrative principles as well, it may be disputed whether they too are the objects of one science<sup>b</sup> or of several<sup>c</sup>. By demonstrative I mean the axioms from which all demonstration proceeds, *e g*. "everything must be either affirmed or denied," and "it is impossible at once to be and not to be," and all other such premisses. Is there one science both of these principles and of substance, or two distinct sciences? and if there is not one, which of the two should we consider to be the one which we are now seeking?

It is not probable that both subjects belong to one science; for why should the claim to understand these principles be peculiar to geometry rather than to any other science? Then if it pertains equally to any science, and yet cannot pertain to all, comprehension of these principles is no more peculiar to the science which investigates substances than to any other science. Besides, in what sense can there be a science of these principles? We know already just what each of them is; at any rate other sciences employ them as being known to us.<sup>d</sup> If, however,

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αὐτῶν ἐστί, δεήσει τι γένος εἶναι ὑποκείμενον, καὶ τὰ μὲν πάθη τὰ δ' ἀξιώματ' αὐτῶν (περὶ πάντων γὰρ ἀδύνατον ἀπόδειξιν εἶναι), ἀνάγκη γὰρ ἔκ τινων εἶναι καὶ περὶ τι καὶ τινων τὴν ἀπόδειξιν·  
 10 ὥστε συμβαίνει πάντων εἶναι γένος ἔν τι τῶν δεικνυμένων, πᾶσαι γὰρ αἱ ἀποδεικτικαὶ χρῶνται τοῖς ἀξιώμασιν. Ἄλλὰ μὴν εἰ ἐτέρα ἢ τῆς οὐσίας καὶ ἢ περὶ τούτων, ποτέρα κυριωτέρα καὶ προτέρα πέφυκεν αὐτῶν; καθόλου γὰρ μάλιστα καὶ πάντων ἀρχαὶ τὰ ἀξιώματά ἐστιν· εἰ τ'<sup>1</sup> ἐστὶ μὴ τοῦ φιλοσόφου, τίνος ἔσται περὶ αὐτῶν ἄλλου τὸ  
 15 θεωρῆσαι τὸ ἀληθές καὶ<sup>2</sup> ψεῦδος; Ὅλως τε τῶν οὐσιῶν πότερον μία πασῶν ἐστὶν ἢ πλείους ἐπιστήμαι, εἰ μὲν οὖν μὴ μία, ποίας οὐσίας θετέον τὴν ἐπιστήμην ταύτην; τὸ δὲ μίαν πασῶν οὐκ εὐλογον· καὶ γὰρ ἂν ἀποδεικτικὴ μία περὶ πάντων εἴη τῶν συμβεβηκότων, εἴπερ πᾶσα ἀποδεικτικὴ  
 20 περὶ τι ὑποκείμενον θεωρεῖ τὰ καθ' αὐτὰ συμβεβηκότα ἐκ τῶν κοινῶν δοξῶν περὶ οὖν τὸ αὐτὸ γένος τὰ συμβεβηκότα καθ' αὐτὰ τῆς αὐτῆς ἐστὶ θεωρῆσαι ἐκ τῶν αὐτῶν δοξῶν. περὶ τε γὰρ ὁ<sup>3</sup> μιᾶς, καὶ ἐξ ὧν μιᾶς, εἴτε τῆς αὐτῆς εἴτε ἄλλης· ὥστε καὶ τὰ συμβεβηκότα, εἴτ' <αὐταὶ> αὐταὶ<sup>4</sup>  
 25 θεωροῦσιν<sup>5</sup> εἴτ' ἐκ τούτων μία. Ἔτι δὲ πότερον περὶ τὰς οὐσίας μόνον ἢ θεωρία ἐστὶν ἢ καὶ περὶ

<sup>1</sup> εἰ τ' Γ: εἴτ'.<sup>2</sup> καὶ τὸ Αᵇ.<sup>3</sup> δ Αᵇ: τὸ ὅτι.<sup>4</sup> αὐταὶ αὐταὶ scripsi: αὐταὶ ΑᵇΓ Alexander Syrianus αὐταὶ EJ· αἱ αὐταὶ Asclepius γρ. Alexander.<sup>5</sup> θεωροῦσιν Αᵇ Alexander· θεωρήσουσιν.<sup>a</sup> For the answer see IV. iii.<sup>b</sup> Cf. I. 6.<sup>c</sup> For the answer see IV. ii. 9-10, VI. 1.

there is a demonstrative science of them, there will have to be some underlying genus, and some of the principles will be derived from axioms, and others will be unproved (for there cannot be demonstration of everything), since demonstration must proceed *from* something, and have some subject matter, and prove something. Thus it follows that there is some one genus of demonstrable things; for all the demonstrative sciences employ axioms

On the other hand, if the science of substance is distinct from the science of these principles, which is of its own nature the more authoritative and ultimate? The axioms are most universal, and are the first principles of everything. And whose province will it be, if not the philosopher's, to study truth and error with respect to them? <sup>a</sup>

(iii.) And in general, is there one science of all substances, or more than one? <sup>b</sup> if there is not one, with what sort of substance must we assume that this science is concerned? On the other hand, it is not probable that there is one science of all substances; for then there would be one demonstrative science of all attributes—assuming that every demonstrative science proceeds from accepted beliefs and studies the essential attributes concerned with some definite subject matter. Thus to study the essential attributes connected with the same genus is the province of the same science proceeding from the same beliefs. For the subject matter belongs to one science, and so do the axioms, whether to the same science or to a different one; hence so do the attributes, whether they are studied by these sciences themselves or by one derived from them <sup>c</sup>

(v.) Further, is this study concerned only with sub-

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τὰ συμβεβηκότα ταύταις; λέγω δ' οἶον, εἰ τὸ  
στερεὸν οὐσία τις ἔστι καὶ γραμμαὶ καὶ ἐπίπεδα,  
πότερον τῆς αὐτῆς ταῦτα γνωρίζειν ἔστιν<sup>1</sup> ἐπιστή-  
μης καὶ τὰ συμβεβηκότα περὶ ἕκαστον γένος περὶ  
30 ὧν αἱ μαθηματικαὶ δεικνύουσιν, ἢ ἄλλης; εἰ μὲν  
γὰρ τῆς αὐτῆς, ἀποδεικτικὴ τις ἂν εἴη καὶ ἡ τῆς  
οὐσίας· οὐ δοκεῖ δὲ τοῦ τί ἔστιν ἀπόδειξις εἶναι·  
εἰ δ' ἑτέρας, τίς ἔσται ἡ θεωροῦσα περὶ τὴν οὐσίαν  
τὰ συμβεβηκότα; τοῦτο γὰρ ἀποδοῦναι παγ-  
χάλεπον.

Ἔτι δὲ πότερον τὰς αἰσθητὰς οὐσίας μόνας εἶναι  
35 φατέον ἢ καὶ παρὰ ταύτας ἄλλας; καὶ πότερον  
997 b μοναχῶς ἢ πλείω γένη τετύχηκεν ὄντα τῶν οὐσιῶν,  
οἶον οἱ λέγοντες τά τε εἶδη καὶ τὰ μεταξύ, περὶ ἃ  
τὰς μαθηματικὰς εἶναι φασιν ἐπιστήμας; ὡς μὲν  
οὖν λέγομεν τὰ εἶδη αἰτιά τε καὶ οὐσίας εἶναι καθ'  
5 ἑαυτὰς εἴρηται ἐν τοῖς πρώτοις λόγοις περὶ αὐτῶν·  
πολλαχῆ δὲ ἔχόντων δυσκολίαν, οὐθενὸς ἦπτον  
ἄτοπον τὸ φάναι μὲν εἶναι τινὰς φύσεις παρὰ τὰς  
ἐν τῷ οὐρανῷ, ταύτας δὲ τὰς αὐτὰς φάναι τοῖς  
αἰσθητοῖς πλὴν ὅτι τὰ μὲν αἰδία τὰ δὲ φθαρτά.  
αὐτὸ γὰρ ἀνθρωπὸν φασιν εἶναι καὶ ἵππον καὶ  
10 ὑγίειαν, ἄλλο δ' οὐδέν, παραπλήσιον ποιοῦντες  
τοῖς θεοῦς μὲν εἶναι φάσκουσιν, ἀνθρωποειδεῖς δέ·

<sup>1</sup> om. EJ.

<sup>a</sup> Cf. I. 8-10.

<sup>b</sup> This problem, together with the appendix to it stated in I. 9-10, is answered in IV. II. 8-25.

<sup>c</sup> I. vi.



stances, or with their attributes as well? <sup>a</sup> I mean *e g*, if the solid is a kind of substance, and so too lines and planes, is it the province of the same science to investigate both these and their attributes, in every class of objects about which mathematics demonstrates anything, or of a different science? If of the same, then the science of substance too would be in some sense demonstrative; but it does not seem that there is any demonstration of the "what is it?" And if of a different science, what will be the science which studies the attributes of substance? This is a very difficult question to answer. <sup>b</sup>

(iv) Further, are we to say that only sensible substances exist, or that others do as well? and is there really only one kind of substance, or more than one (as they hold who speak of the Forms and the Intermediates, which they maintain to be the objects of the mathematical sciences)? In what sense we Platonists hold the Forms to be both causes and independent substances has been stated <sup>c</sup> in our original discussion on this subject. But while they involve difficulty in many respects, not the least absurdity is the doctrine that there are certain entities apart from those in the sensible universe, and that these are the same as sensible things except in that the former are eternal and the latter perishable. <sup>d</sup> For Platonists say nothing more or less than that there is an absolute Man, and Horse, and Health; in which they closely resemble those who state that there are Gods, but of human form; for

<sup>a</sup> As it stands this is a gross misrepresentation; but Aristotle's objection is probably directed against the conception of Ideas existing independently of their particulars. See *Introd.* pp. *xxi f.*

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οὔτε γὰρ ἐκεῖνοι οὐθὲν ἄλλο ἐποίουν ἢ ἀνθρώπους  
 αἰδίους, οὔθ' οὔτοι τὰ εἶδη ἄλλ'<sup>1</sup> ἢ αἰσθητὰ αἰδία.  
 "Ἐπι δὲ εἴ τις παρὰ τὰ εἶδη καὶ τὰ αἰσθητὰ τὰ μεταξὺ  
 θήσεται, πολλὰς ἀπορίας ἔξει. δῆλον γὰρ ὡς  
 15 ὁμοίως γραμμαί τε παρὰ τ' αὐτὰς<sup>2</sup> καὶ τὰς αἰ-  
 σθητὰς ἔσονται καὶ ἕκαστον τῶν ἄλλων γενῶν.  
 ὡστ' ἐπεὶπερ ἡ ἀστρολογία μία τούτων ἐστίν,  
 ἔσται τις καὶ οὐρανὸς παρὰ τὸν αἰσθητὸν οὐρανὸν  
 καὶ ἥλιός τε<sup>3</sup> καὶ σελήνη καὶ τᾶλλα ὁμοίως τὰ  
 κατὰ τὸν οὐρανόν. καίτοι πῶς δεῖ πιστεῦσαι  
 τούτοις; οὐδὲ γὰρ ἀκίνητον εὐλογον εἶναι, κινου-  
 20 μενον δὲ καὶ παντελῶς ἀδύνατον ὁμοίως δὲ καὶ  
 περὶ ὧν ἡ ὀπτική πραγματεύεται καὶ ἡ ἐν τοῖς  
 μαθήμασιν ἀρμονική καὶ γὰρ ταῦτα ἀδύνατον  
 εἶναι παρὰ τὰ αἰσθητὰ διὰ τὰς αὐτὰς αἰτίας· εἰ  
 γὰρ ἔστιν αἰσθητὰ μεταξὺ καὶ αἰσθήσεις, δῆλον  
 ὅτι καὶ ζῶα ἔσονται μεταξὺ αὐτῶν τε καὶ τῶν  
 φθαρτῶν.

25 Ἀπορήσειε δ' ἂν τις καὶ περὶ ποῖα τῶν ὄντων  
 δεῖ ζητεῖν ταύτας τὰς ἐπιστήμας. εἰ γὰρ τοῦτω  
 διοίσει τῆς γεωδαισίας ἢ γεωμετρία μόνον, ὅτι  
 ἡ μὲν τούτων ἐστίν ὧν αἰσθανόμεθα ἢ δ' οὐκ  
 αἰσθητῶν, δῆλον ὅτι καὶ παρ' ἰατρικὴν ἔσται τις  
 ἐπιστήμη (καὶ παρ' ἐκάστην τῶν ἄλλων) μεταξὺ  
 30 αὐτῆς τε ἰατρικῆς καὶ τῆσδε τῆς ἰατρικῆς· καίτοι

<sup>1</sup> Christ: ἀλλ' codd.: ἄλλο Alexander, ci. Bonitz

<sup>2</sup> τ' αὐτὰς ut uid Alexander: ταύτας A<sup>b</sup>: αὐτὰς EJ.

<sup>3</sup> om. J.

<sup>a</sup> sc. of objects of mathematical sciences

<sup>b</sup> The reference is to the supposed "intermediate" heaven A "heaven" (including heavenly bodies) without motion is unthinkable; but a non-sensible heaven can have no motion.

as the latter invented nothing more or less than eternal men, so the former simply make the Forms eternal sensibles

Again, if anyone posits Intermediates distinct from Forms and sensible things, he will have many difficulties, because obviously not only will there be lines apart from both Ideal and sensible lines, but it will be the same with each of the other classes.<sup>a</sup> Thus since astronomy is one of the mathematical sciences, there will have to be a heaven besides the sensible heaven, and a sun and moon, and all the other heavenly bodies. But how are we to believe this? Nor is it reasonable that the heaven should be immovable; but that it should move is utterly impossible.<sup>b</sup> It is the same with the objects of optics and the mathematical theory of harmony—these too, for the same reasons, cannot exist apart from sensible objects. Because if there are intermediate objects of sense and sensations, clearly there will also be animals intermediate between the Ideal animals and the perishable animals.<sup>c</sup>

One might also raise the question with respect to what kind of objects we are to look for these sciences. For if we are to take it that the only difference between mensuration and geometry is that the one is concerned with things which we can perceive and the other with things which we cannot, clearly there will be a science parallel to medicine (and to each of the other sciences), intermediate between Ideal medicine and the medicine which we know. Yet

<sup>a</sup> If there are "intermediate," *i.e.* non-sensible, sights and sounds, there must be "intermediate" faculties of sight and hearing, and "intermediate" animals to exercise these faculties, which is absurd.

997<sup>b</sup> πῶς τοῦτο δυνατόν; καὶ γὰρ ἂν ὑγιεῖν<sup>3</sup> ἅπτα εἶη  
 παρὰ τὰ αἰσθητὰ καὶ αὐτὸ τὸ ὑγιεινόν ἅμα δὲ  
 οὐδὲ τοῦτο ἀληθές, ὡς ἡ γεωδαισία τῶν αἰσθητῶν  
 ἐστὶ μεγεθῶν καὶ φθαρτῶν· ἐφθείρετο γὰρ ἂν  
 φθειρομένων. ἀλλὰ μὴν οὐδὲ τῶν αἰσθητῶν ἂν  
 35 εἶη μεγεθῶν οὐδὲ περὶ τὸν οὐρανὸν ἢ ἀστρολογία  
 998<sup>a</sup> τόνδε· οὔτε γὰρ αἱ αἰσθηταὶ γραμμαὶ τοιαῦταί  
 εἰσιν οἷας λέγει ὁ γεωμέτρης (οὐθὲν γὰρ εὐθὺ τῶν  
 αἰσθητῶν οὕτως οὐδὲ στρογγύλον ἄπτεται γὰρ  
 τοῦ κανόνος οὐ κατὰ στιγμήν ὁ κύκλος, ἀλλ'  
 ὥσπερ Πρωταγόρας ἔλεγεν ἐλέγχων τοὺς γεω-  
 5 μέτρας), οὔθ' αἱ κινήσεις καὶ ἑλικες τοῦ οὐρανοῦ  
 ὁμοιαί, περὶ ὧν ἡ ἀστρολογία ποιεῖται τοὺς  
 λόγους, οὔτε τὰ σημεῖα τοῖς ἀστροῖς τὴν αὐτὴν  
 ἔχει φύσιν. Εἰσὶ δὲ τινες οἳ φασιν εἶναι μὲν τὰ  
 μεταξὺ ταῦτα λεγόμενα τῶν τε εἰδῶν καὶ τῶν  
 αἰσθητῶν, οὐ μὴν χωρὶς γε τῶν αἰσθητῶν ἀλλ'  
 ἐν τούτοις· οἷς τὰ συμβαίνοντα ἀδύνατα πάντα  
 10 μὲν πλείονος λόγου διελθεῖν, ἱκανὸν δὲ καὶ τὰ  
 τοιαῦτα θεωρῆσαι. οὔτε γὰρ ἐπὶ τούτων εὐλογον  
 ἔχειν οὕτω μόνον, ἀλλὰ δῆλον ὅτι καὶ τὰ εἶδη  
 ἐνδέχονται<sup>4</sup> ἂν ἐν τοῖς αἰσθητοῖς εἶναι· τοῦ γὰρ  
 αὐτοῦ λόγου ἀμφοτέρα ταῦτά ἐστιν· ἔτι δὲ δύο  
 στερεὰ ἐν τῷ αὐτῷ ἀναγκαῖον εἶναι τόπῳ, καὶ μὴ  
 15 εἶναι ἀκίνητα ἐν κινουμένοις γε ὄντα τοῖς αἰσθητοῖς.  
 ὅλως δὲ τίνος ἕνεκ' ἂν τις θεῖη εἶναι μὲν αὐτά,  
 εἶναι δ' ἐν τοῖς αἰσθητοῖς; ταῦτά γὰρ συμβήσεται  
 ἄτοπα τοῖς προειρημένοις· ἔσται γὰρ οὐρανός τις

<sup>a</sup> i.e., the visible circle which we draw. Like the ruler,

how is this possible ? for then there would be a class of healthy things apart from those which are sensible and from the Ideally healthy. Nor, at the same time, is it true that mensuration is concerned with sensible and perishable magnitudes, for then it would perish as they do. Nor, again, can astronomy be concerned with sensible magnitudes or with this heaven of ours; for as sensible lines are not like those of which the geometrician speaks (since there is nothing sensible which is straight or curved in that sense 'the circle <sup>a</sup> touches the ruler not at a point, but <along a line> as Protagoras used to say in refuting the geometricians), so the paths and orbits of our heaven are not like those which astronomy discusses, nor have the symbols of the astronomer the same nature as the stars.

Some, however, say that these so-called Intermediates between Forms and sensibles do exist not indeed separately from the sensibles, but in them. It would take too long to consider in detail all the impossible consequences of this theory, but it will be sufficient to observe the following. On this view it is not logical that only this should be so; clearly it would be possible for the Forms also to be in sensible things; for the same argument applies to both. Further, it follows necessarily that two solids must occupy the same space; and that the Forms cannot be immovable, being present in sensible things, which move. And in general, what is the object of assuming that Intermediates exist, but only in sensible things? The same absurdities as before will result: there will be a heaven besides

it is geometrically imperfect, thus they touch at more than one point.

- 3 a παρὰ τὸν οὐρανόν, πλήν γ' οὐ χωρίς, ἀλλ' ἐν τῷ  
αὐτῷ τόπῳ· ὅπερ ἐστὶν ἀδυνατώτερον
- 20 III Περὶ τε τούτων οὖν ἀπορία πολλή πῶς δεῖ  
θέμενον τυχεῖν τῆς ἀληθείας, καὶ περὶ τῶν ἀρχῶν  
πότερον δεῖ τὰ γένη στοιχεῖα καὶ ἀρχὰς ὑπολαμ-  
βάνειν ἢ μᾶλλον ἐξ ὧν ἐνυπαρχόντων ἐστὶν ἕκαστον  
πρώτων,<sup>1</sup> οἷον φωνῆς στοιχεῖα καὶ ἀρχαὶ δοκοῦσιν  
25 εἶναι ταῦτ' ἐξ ὧν σύγκεινται αἱ φωναὶ πᾶσαι  
πρώτων, ἀλλ' οὐ τὸ κοινὸν ἢ φωνή· καὶ τῶν  
διαγραμμάτων ταῦτα στοιχεῖα λέγομεν, ὧν αἱ  
ἀποδείξεις ἐνυπάρχουσιν ἐν ταῖς τῶν ἄλλων<sup>2</sup>  
ἀποδείξεσιν ἢ πάντων ἢ τῶν πλείστων ἔτι δὲ  
τῶν σωμάτων καὶ οἱ πλείω λέγοντες εἶναι στοιχεῖα  
καὶ οἱ ἔν, ἐξ ὧν σύγκειται καὶ ἐξ ὧν συνέστηκεν  
30 ἀρχὰς λέγουσιν εἶναι, οἷον Ἐμπεδοκλῆς πῦρ καὶ  
ὔδωρ καὶ τὰ μετὰ τούτων στοιχεῖά φησιν εἶναι ἐξ  
ὧν ἐστὶ τὰ ὄντα ἐνυπαρχόντων, ἀλλ' οὐχ ὡς γένη  
b λέγει ταῦτα τῶν ὄντων. πρὸς δὲ τούτοις καὶ τῶν  
ἄλλων εἴ τις ἐθέλει τὴν φύσιν ἀθρεῖν, οἷον κλίνην  
ἐξ ὧν μορίων συνέστηκε καὶ πῶς συγκειμένων,  
τότε γνωρίζει τὴν φύσιν αὐτῆς ἐκ μὲν οὖν τού-  
των τῶν λόγων οὐκ ἂν εἴησαν αἱ ἀρχαὶ τὰ γένη  
5 τῶν ὄντων ἢ δ' ἕκαστον μὲν γνωρίζομεν διὰ τῶν  
ὀρισμῶν, ἀρχαὶ δὲ τὰ γένη τῶν ὀρισμῶν εἰσὶν,  
ἀνάγκη καὶ τῶν ὀριστῶν ἀρχὰς εἶναι τὰ γένη.  
κἂν εἰ ἔστι τὴν τῶν ὄντων λαβεῖν ἐπιστήμην τὸ

<sup>1</sup> πρώτων E<sup>2</sup>Γ Alexander. πρώτων.

<sup>2</sup> τῶν ἄλλων: τούτων A<sup>b</sup>.

<sup>a</sup> The problem is dealt with partly in XII vi.-x., where Aristotle describes the eternal moving principles, and partly in XIII. and XIV., where he argues against the Platonic non-sensible substances.

<sup>b</sup> Cf. V. iii. 3.

the sensible one, only not apart from it, but in the same place, which is still more impossible <sup>a</sup>

III. Thus it is very difficult to say, not only what view we should adopt in the foregoing questions in order to arrive at the truth, but also in the case of the first principles (vi) whether we should assume that the genera, or the simplest constituents of each particular thing, are more truly the elements and first principles of existing things. *E g*, it is generally agreed that the elements and first principles of speech are those things of which, in their simplest form, all speech is composed; and not the common term "speech", and in the case of geometrical propositions we call those the "elements" <sup>b</sup> whose proofs are embodied in the proofs of all or most of the rest. Again, in the case of bodies, both those who hold that there are several elements and those who hold that there is one call the things of which bodies are composed and constituted first principles. *E g*, Empedocles states that fire and water and the other things associated with them are the elements which are present in things and of which things are composed; he does not speak of them as genera of things. Moreover in the case of other things too, if a man wishes to examine their nature he observes, *e g*, of what parts a bed consists and how they are put together; and then he comprehends its nature. Thus to judge from these arguments the first principles will not be the genera of things

But from the point of view that it is through definitions that we get to know each particular thing, and that the genera are the first principles of definitions, the genera must also be the first principles of the things defined. And if to gain scientific know-

τῶν εἰδῶν λαβεῖν καθ' ἃ λέγονται τὰ ὄντα, τῶν γε εἰδῶν ἀρχαὶ<sup>1</sup> τὰ γένη εἰσὶ φαίνονται δέ τινες καὶ τῶν λεγόντων στοιχεῖα τῶν ὄντων τὸ ἐν ἢ τὸ ὄν ἢ τὸ μέγα καὶ<sup>2</sup> μικρὸν ὡς γένεσιν αὐτοῖς χρῆσθαι Ἄλλὰ μὴν οὐδὲ ἀμφοτέρως γε οἶόν τε λέγειν τὰς ἀρχάς ὁ μὲν γὰρ λόγος τῆς οὐσίας εἰς ἕτερος δ' ἔσται ὁ διὰ τῶν γενῶν ὀρισμὸς καὶ ὁ λέγων ἐξ ὧν ἔστιν ἐνυπαρχόντων. Πρὸς δὲ τοῦτοις εἰ καὶ ὅτι μάλιστα ἀρχαὶ τὰ γένη εἰσὶ, πότερον δεῖ νομίζειν τὰ πρῶτα τῶν γενῶν ἀρχὰς ἢ τὰ ἔσχατα κατηγορούμενα ἐπὶ τῶν ἀτόμων; καὶ γὰρ τοῦτο ἔχει ἀμφισβήτησιν. εἰ μὲν γὰρ ἀεὶ<sup>3</sup> τὰ καθόλου μᾶλλον ἀρχαί, φανερόν ὅτι τὰ ἀνωτάτω τῶν γενῶν ταῦτα γὰρ λέγεται κατὰ πάντων τοσαῦται οὖν ἔσονται ἀρχαὶ τῶν ὄντων ὅσαπερ τὰ πρῶτα γένη, ὥστ' ἔσται τό τε ὄν καὶ τὸ ἐν ἀρχαὶ καὶ οὐσίαι· ταῦτα γὰρ κατὰ πάντων μάλιστα λέγεται τῶν ὄντων. οὐχ οἶόν τε δὲ τῶν ὄντων ἐν εἶναι γένος<sup>4</sup> οὔτε τὸ ἐν οὔτε τὸ ὄν· ἀνάγκη μὲν γὰρ τὰς διαφορὰς ἐκάστου γένους καὶ εἶναι καὶ μίαν εἶναι ἐκάστην, ἀδύνατον δὲ κατηγορεῖσθαι ἢ τὰ εἶδη τοῦ γένους ἐπὶ τῶν οἰκείων διαφορῶν, ἢ τὸ γένος ἄνευ τῶν αὐτοῦ εἰδῶν ὥστε εἴπερ τὸ ἐν γένος ἢ τὸ ὄν, οὐδεμία διαφορὰ οὔτε ὄν οὔτε ἐν ἔσται ἀλλὰ μὴν εἰ μὴ γένη, οὐδ' ἀρχαὶ ἔσονται, εἴπερ ἀρχαὶ τὰ γένη ἔτι καὶ τὰ μεταξὺ συλλαμβανόμενα μετὰ

<sup>1</sup> ἀρχαὶ post τὰ γένη A<sup>b</sup>.

<sup>2</sup> καὶ τὸ recc.

<sup>3</sup> ἀεὶ Alexander: ὅτι.

<sup>4</sup> ἐν εἶναι γένος κτλ ] οὔτε τὸ ἐν οὔτε τὸ ὄν εἶναι γένος A<sup>b</sup>.

<sup>a</sup> The Pythagoreans and Plato.

<sup>b</sup> i.e., each differentia must have Being and Unity predicated of it.



ledge of things is to gain it of the species after which things are named, the genera are first principles of the species. And apparently some even of those <sup>a</sup> who call Unity or Being or the Great and Small elements of things treat them as genera.

Nor again is it possible to speak of the first principles in both senses. The formula of substance is one; but the definition by genera will be different from that which tells us of what *parts* a thing is composed.

Moreover, assuming that the genera are first principles in the truest sense, are we to consider the *primary* genera to be first principles, or the final terms predicated of individuals? This question too involves some dispute. For if universals are always more truly first principles, clearly the answer will be "the highest genera," since these are predicated of everything. Then there will be as many first principles of things as there are primary genera, and so both Unity and Being will be first principles and substances, since they are in the highest degree predicated of all things. But it is impossible for either Unity or Being to be one genus of existing things. For there must be *differentiae* of each genus, and each *differentia* must be *one* <sup>b</sup>; but it is impossible either for the species of the genus to be predicated of the specific *differentiae*, or for the genus to be predicated without its species. <sup>c</sup> Hence if Unity or Being is a genus, there will be no *differentia* Being or Unity. But if they are not genera, neither will they be first principles, assuming that it is the genera that are first principles. And further, the intermediate terms, taken together with the

<sup>c</sup> The reasons are given in *Topica*, 144 a 36-b 11.

## ARISTOTLE

98 b  
 30 τῶν διαφορῶν ἔσται γένη μέχρι τῶν ἀτόμων νῦν  
 δὲ τὰ μὲν δοκεῖ, τὰ δ' οὐ δοκεῖ. πρὸς δὲ τού-  
 τοις ἔτι μᾶλλον αἱ διαφοραὶ ἀρχαὶ ἢ τὰ γένη· εἰ δὲ  
 καὶ αὐταὶ ἀρχαί, ἄπειροι ὡς εἰπεῖν ἀρχαὶ γίνονται,  
 19 a ἄλλως τε καὶ τις τὸ πρῶτον γένος ἀρχὴν τιθῆ.

Ἄλλὰ μὴν καὶ εἰ μᾶλλον γε ἀρχοειδὲς τὸ ἔν  
 ἔστιν, ἔν δὲ τὸ ἀδιαίρετον, ἀδιαίρετον δὲ ἅπαν ἢ  
 κατὰ τὸ ποσὸν ἢ κατ'<sup>1</sup> εἶδος, πρότερον δὲ τὸ κατ'  
 εἶδος, τὰ δὲ γένη διαιρετὰ εἰς εἶδη, μᾶλλον ἂν ἔν  
 5 τὸ ἔσχατον εἴη κατηγορούμενον· οὐ γάρ ἐστι γένος  
 ὁ ἄνθρωπος τῶν τινῶν ἀνθρώπων. ἔτι ἔν οἷς τὸ  
 πρότερον καὶ ὕστερόν ἐστιν, οὐχ οἷον τε τὸ ἐπὶ  
 τούτων εἶναί τι παρὰ ταῦτα (οἷον εἰ πρώτη τῶν  
 ἀριθμῶν ἢ δυάς, οὐκ ἔσται τις ἀριθμὸς παρὰ τὰ  
 εἶδη τῶν ἀριθμῶν· ὁμοίως δὲ οὐδὲ σχῆμα παρὰ τὰ  
 10 εἶδη τῶν σχημάτων. εἰ δὲ μὴ τούτων, σχολῆ τῶν  
 γε ἄλλων ἔσται τὰ γένη παρὰ τὰ εἶδη· τούτων  
 γὰρ δοκεῖ μάλιστα εἶναι γένη). ἔν δὲ τοῖς ἀτόμοις  
 οὐκ ἔστι τὸ μὲν πρότερον τὸ δ' ὕστερον. ἔτι  
 ὅπου τὸ μὲν βέλτιον τὸ δὲ χεῖρον, αἰεὶ τὸ βέλτιον  
 πρότερον· ὥστ' οὐδὲ<sup>2</sup> τούτων ἂν εἴη γένος. Ἐκ μὲν  
 15 οὖν τούτων μᾶλλον φαίνεται τὰ ἐπὶ τῶν ἀτόμων  
 κατηγορούμενα ἀρχαὶ εἶναι τῶν γενῶν· πάλιν δὲ  
 πῶς αὖ δεῖ ταύτας ἀρχὰς ὑπολαβεῖν, οὐ ῥάδιον  
 εἰπεῖν. τὴν μὲν γὰρ ἀρχὴν δεῖ καὶ τὴν αἰτίαν

<sup>1</sup> κατ': κατὰ τὸ EJ.

<sup>2</sup> οὐδὲν recs.

<sup>a</sup> sc. but the species.

differentiae, will be genera, down to the individuals ; but in point of fact, although some are thought to be such, others are not. Moreover the differentiae are more truly principles than are the genera ; and if they also are principles, we get an almost infinite number of principles, especially if one makes the ultimate genus a principle.

Moreover, if Unity is really more of the nature of a principle, and the indivisible is a unity, and everything indivisible is such either in quantity or in kind, and the indivisible in kind is prior to the divisible, and the genera are divisible into species, then it is rather the lowest predicate that will be a unity (for "man" is not the genus <sup>a</sup> of individual men). Further, in the case of things which admit of priority and posteriority, that which is predicated of the things cannot exist apart from them. *Eg*, if 2 is the first number, there will be no Number apart from the species of number ; and similarly there will be no Figure apart from the species of figures. But if the genera do not exist apart from the species in these cases, they will scarcely do so in others ; because it is assumed that genera are most likely to exist in these cases. In individuals, however, there is no priority and posteriority. Further, where there is a question of better or worse, the better is always prior ; so there will be no genus in these cases either.

From these considerations it seems that it is the terms predicated of individuals, rather than the genera, that are the first principles. But again on the other hand it is not easy to say in what sense we are to understand these to be principles ; for the first principle and cause must be apart from the

999 a

εἶναι παρὰ τὰ πράγματα ὧν ἀρχή, καὶ δύνασθαι  
εἶναι χωριζομένην αὐτῶν τοιοῦτον δέ τι παρὰ τὸ  
20 καθ' ἕκαστον εἶναι διὰ τί ἂν τις ὑπολάβοι, πλὴν  
ὅτι καθόλου κατηγορεῖται καὶ κατὰ πάντων;  
ἀλλὰ μὴν εἰ διὰ τοῦτο, τὰ μᾶλλον καθόλου μᾶλλον  
θετέον ἀρχάς ὥστε ἀρχαὶ τὰ πρῶτ' ἂν εἴησαν  
γένη.

IV. "Ἐστι δ' ἐχομένη τε τούτων ἀπορία καὶ πασῶν  
25 χαλεπωτάτη καὶ ἀναγκαιοτάτη θεωρῆσαι, περὶ  
ἧς ὁ λόγος ἐφέστηκε νῦν εἴτε γὰρ μὴ ἔστι τι  
παρὰ τὰ καθ' ἕκαστα, τὰ δὲ καθ' ἕκαστα ἄπειρα,  
τῶν δ' ἀπειρῶν πῶς ἐνδέχεται λαβεῖν ἐπιστήμην;  
ἢ γὰρ ἔν τι καὶ ταυτόν, καὶ ἢ καθόλου τι ὑπάρχει,  
ταύτη ἅπαντα γνωρίζομεν. ἀλλὰ μὴν εἰ τοῦτο  
30 ἀναγκαῖόν ἐστι, καὶ δεῖ τι εἶναι παρὰ τὰ καθ'  
ἕκαστα, ἀναγκαῖον ἂν εἴη τὰ γένη εἶναι παρὰ τὰ  
καθ' ἕκαστα,<sup>1</sup> ἢτοι τὰ ἔσχατα ἢ τὰ πρῶτα τοῦτο  
δ' ὅτι ἀδύνατον ἄρτι διηπορήσαμεν. "Ἐτι εἰ ὅτι  
μάλιστα ἐστὶ τι παρὰ τὸ σύνολον ὅταν κατηγο-  
ρηθῇ τι τῆς ὕλης, πότερον, εἰ ἔστι,<sup>2</sup> παρὰ πάντα δεῖ  
εἶναί τι, ἢ παρὰ μὲν ἓνια εἶναι, παρὰ δ' ἓνια μὴ  
399 b εἶναι, ἢ παρ' οὐδέν; εἰ μὲν οὖν μῆθὲν ἔστι παρὰ  
τὰ καθ' ἕκαστα, οὐθέν ἂν εἴη νοητὸν ἀλλὰ πάντα  
αἰσθητὰ καὶ ἐπιστήμη οὐθενός, εἰ μὴ τις εἶναι  
λέγει τὴν αἰσθησιμὴν ἐπιστήμην ἔτι δ' οὐδ' αἰδίου  
οὐθέν οὐδὲ ἀκίνητον· τὰ γὰρ αἰσθητὰ πάντα φθει-  
5 ρεται καὶ ἐν κινήσει ἐστίν· ἀλλὰ μὴν, εἴ γε αἰδίου  
μῆθὲν<sup>3</sup> ἐστίν, οὐδὲ γένεσιν εἶναι δυνατόν· ἀνάγκη

<sup>1</sup> ἀναγκαῖον ἂν . . . τὰ καθ' ἕκαστα om. E, Bekker.

<sup>2</sup> εἰ ἔστι] εἰ ἔστιν εἰδός τι recc.

<sup>3</sup> οὐδέν A<sup>b</sup> Alexander.

<sup>a</sup> For partial solutions to the problem see VII x, xii.-xiii.

<sup>b</sup> In ch iii

things of which it is a principle, and must be able to exist when separated from them. But why should we assume that such a thing exists alongside of the individual, except in that it is predicated universally and of all the terms? And indeed if this is a sufficient reason, it is the more universal concepts that should rather be considered to be principles; and so the primary genera will be the principles.<sup>a</sup>

IV In this connexion there is a difficulty which is the hardest and yet the most necessary of all to investigate, and with which our inquiry is now concerned (vii) If nothing exists apart from individual things, and these are infinite in number, how is it possible to obtain knowledge of the numerically infinite? For we acquire our knowledge of all things only in so far as they contain something universal, some one and identical characteristic. But if this is essential, and there must be something apart from individual things, it must be the genera; either the lowest or the highest; but we have just concluded that this is impossible.<sup>b</sup>

Further, assuming that when something is predicated of matter there is in the fullest sense something apart from the concrete whole, if there is something, must it exist apart from *all* concrete wholes, or apart from some but not others, or apart from none? If nothing exists apart from individual things, nothing will be intelligible; everything will be sensible, and there will be no knowledge of anything—unless it be maintained that sense-perception is knowledge. Nor again will anything be eternal or immovable, since sensible things are all perishable and in motion. Again, if nothing is eternal, even generation is impossible; for there must be some-

399 b γὰρ εἶναι τι τὸ γιγνόμενον καὶ ἐξ οὗ γίγνεται  
καὶ τούτων τὸ ἔσχατον ἀγέννητον,<sup>1</sup> εἴπερ ἴσταται  
τε καὶ ἐκ μὴ ὄντος γενέσθαι ἀδύνατον ἔτι δὲ  
γενέσεως οὐσης καὶ κινήσεως ἀνάγκη καὶ πέρασ  
10 εἶναι· οὔτε γὰρ ἄπειρός ἐστιν οὐδεμία κίνησις  
ἀλλὰ πάσης ἔστι τέλος, γίγνεσθαι τε οὐχ οἶόν  
τε τὸ ἀδύνατον γενέσθαι· τὸ δὲ γεγονὸς ἀνάγκη  
εἶναι ὅτε πρῶτον γέγονεν. ἔτι δ' εἴπερ ἡ ὕλη  
ἔστι διὰ τὸ ἀγέννητος<sup>2</sup> εἶναι, πολὺ ἔτι μᾶλλον  
εὐλογον εἶναι τὴν οὐσίαν, ὃ ποτε<sup>3</sup> ἐκείνη γίγνεται·  
15 εἰ γὰρ μήτε τοῦτο ἔσται μήτε ἐκείνη, οὐθὲν  
ἔσται τὸ παράπαν. εἰ δὲ τοῦτο ἀδύνατον, ἀνάγκη  
τι εἶναι παρὰ τὸ σύνολον, τὴν μορφήν καὶ τὸ εἶδος.

Εἰ δ' αὖ τις τοῦτο θήσει, ἀπορία ἐπὶ τίνων τε  
θήσει τοῦτο καὶ ἐπὶ τίνων οὐ ὅτι μὲν γὰρ ἐπὶ  
πάντων οὐχ οἶόν τε, φανερόν οὐ γὰρ ἂν θείημεν  
20 εἶναι τινα οἰκίαν παρὰ τὰς τινὰς οἰκίας. πρὸς  
δὲ τούτοις πότερον ἡ οὐσία μία πάντων ἔσται,  
οἷον τῶν ἀνθρώπων; ἀλλ' ἄτοπον· ἐν γὰρ ἅπαντα  
ὦν ἡ οὐσία μία. ἀλλὰ πολλὰ καὶ διάφορα, ἀλλὰ  
καὶ τοῦτο ἄλογον ἅμα δὲ καὶ πῶς γίγνεται ἡ  
ὕλη τούτων ἐκάστον καὶ ἔστι τὸ σύνολον ἄμφω  
ταῦτα;

25 Ἔτι δὲ περὶ τῶν ἀρχῶν καὶ τόδε ἀπορήσειεν  
ἂν τις. εἰ μὲν γὰρ εἶδει εἰσὶν ἓν, οὐθὲν ἔσται  
ἀριθμῶ ἓν, οὐδ' αὐτὸ τὸ ἓν καὶ τὸ ὄν· καὶ τὸ

<sup>1</sup> ἀγέννητον A<sup>b</sup>

<sup>2</sup> ἀγέννητος recc.

<sup>3</sup> ὃ ποτε E comm.: ὁπότε.

thing which becomes something, *i.e.* out of which something is generated, and of this series the ultimate term must be ungenerated, that is if there is any end to the series and generation cannot take place out of nothing. Further, if there is generation and motion, there must be limit too. For (a) no motion is infinite, but every one has an end; (b) that which cannot be completely generated cannot begin to be generated, and that which has been generated must *be* as soon as it has been generated. Further, if matter exists apart in virtue of being ungenerated, it is still more probable that the substance, *i.e.* that which the matter is at any given time becoming, should exist. And if neither one nor the other exists, nothing will exist at all. But if this is impossible, there must be something, the shape or form, apart from the concrete whole.

But again, if we assume this, there is a difficulty: in what cases shall we, and in what shall we not, assume it? Clearly it cannot be done in all cases; for we should not assume that a particular house exists apart from particular houses. Moreover, are we to regard the essence of all things, *e.g.* of men, as one? This is absurd; for all things whose essence is one are one. Then is it many and diverse? This too is illogical. And besides, how does the matter become each individual one of these things, and how is the concrete whole both matter and form? <sup>a</sup>

(viii.) Further, the following difficulty might be raised about the first principles. If they are one in kind, none of them will be one in number, not even the Idea of Unity or of Being. And how can there

<sup>a</sup> For answers to these questions see VII. viii, xiii.-xiv.; XII. vi.-x.; XIII. x.

## ARISTOTLE

- 19 b ἐπίστασθαι πῶς ἔσται, εἰ μὴ τι ἔσται ἐν ἐπὶ πάντων; ἀλλὰ μὴν εἰ ἀριθμῶ ἐν καὶ μία ἐκάστη τῶν ἀρχῶν, καὶ μὴ ὥσπερ ἐπὶ τῶν αἰσθητῶν ἄλλαι  
 30 ἄλλων (οἷον τῆσδε τῆς συλλαβῆς τῷ εἶδει τῆς αὐτῆς οὔσης καὶ αἱ ἀρχαὶ εἶδει αἱ αὐταί· καὶ γὰρ αὐταὶ ὑπάρχουσιν ἀριθμῶ ἕτεροι),—εἰ δὲ μὴ οὕτως, ἀλλ' αἱ τῶν ὄντων ἀρχαὶ ἀριθμῶ ἐν εἰσιν, οὐκ ἔσται παρὰ τὰ στοιχεῖα οὐθέν ἕτερον· τὸ γὰρ ἀριθμῶ ἐν ἢ τὸ καθ' ἕκαστον λέγειν διαφέρει οὐθέν  
 10 a οὕτω γὰρ λέγομεν τὸ καθ' ἕκαστον, τὸ ἀριθμῶ ἐν, καθόλου δὲ τὸ ἐπὶ τούτων. ὥσπερ οὖν εἰ τὰ τῆς φωνῆς ἀριθμῶ ἦν στοιχεῖα ὠρισμένα, ἀναγκαῖον ἦν τοσαῦτα εἶναι τὰ πάντα γράμματα ὅσαπερ τὰ στοιχεῖα, μὴ ὄντων γε δύο τῶν αὐτῶν, μηδὲ πλειόνων.
- 5 Οὐθενὸς δ' ἐλάττων ἀπορία παραλέλειπται καὶ τοῖς νῦν καὶ τοῖς πρότερον, πότερον αἱ αὐταὶ τῶν φθαρτῶν καὶ τῶν ἀφθάρτων ἀρχαὶ εἰσιν ἢ ἕτεροι εἰ μὲν γὰρ αἱ αὐταί,<sup>1</sup> πῶς τὰ μὲν φθαρτὰ τὰ δὲ ἀφθαρτα, καὶ διὰ τίν' αἰτίαν; οἱ μὲν περὶ Ἡσίοδον καὶ πάντες  
 10 ὅσοι θεολόγοι μόνον ἐφρόντισαν τοῦ πιθανοῦ τοῦ πρὸς αὐτούς,<sup>2</sup> ἡμῶν δ' ὠλιγόρησαν· θεοὺς γὰρ ποιοῦντες τὰς ἀρχὰς καὶ ἐκ θεῶν γεγονέναι, τὰ μὴ γευσάμενα τοῦ νέκταρος καὶ τῆς ἀμβροσίας θνητὰ γενέσθαι φασίν, δῆλον ὡς ταῦτα τὰ ὀνόματα γνώριμα λέγοντες αὐτοῖς· καίτοι περὶ αὐτῆς τῆς

<sup>1</sup> αὐταὶ εἰσι EJ.<sup>2</sup> Christ: αὐτούς

<sup>a</sup> If the principles are one in *kind* only, particular things cannot be referred to the same principle but only to like principles, *i.e.*, there will be no universal terms, without which there can be no knowledge.

<sup>b</sup> Or "letters of the alphabet." Cf. I. ix. 36 n



be knowledge unless there is some universal term <sup>a</sup> On the other hand if they are numerically one, and each of the principles is one, and not, as in the case of sensible things, different in different instances (*e g* since a given syllable is always the same in kind, its first principles are always the same in kind, but only in kind, since they are essentially different in number)—if the first principles are one, not in this sense, but numerically, there will be nothing else apart from the elements, for “numerically one” and “individual” are identical in meaning. This is what we mean by “individual” the numerically one; but by “universal” we mean what is predicable of individuals. Hence just as, if the elements of language <sup>b</sup> were limited in number, the whole of literature would be no more than those elements—that is, if there were not two nor more than two of the same <so it would be in the case of existing things and their principles> <sup>c</sup>

(ix) There is a difficulty, as serious as any, which has been left out of account both by present thinkers and by their predecessors. whether the first principles of perishable and imperishable things are the same or different. For if they are the same, how is it that some things are perishable and others imperishable, and for what cause? The school of Hesiod, and all the cosmologists, considered only what was convincing to themselves, and gave no consideration to us. For they make the first principles Gods or generated from Gods, and say that whatever did not taste of the nectar and ambrosia became mortal—clearly using these terms in a sense significant to themselves; but as regards the actual

<sup>c</sup> For the answer to the problem see XII. iv.-v., XIII. x.

## ARISTOTLE

10 a

15 προσφορᾶς τῶν αἰτίων τούτων ὑπὲρ ἡμᾶς εἰρήκασιν·  
εἰ μὲν γὰρ χάριν ἠδονῆς αὐτῶν θιγγάνουσι, οὐθὲν  
αἷτια τοῦ εἶναι τὸ νέκταρ καὶ ἡ ἄμβροσία· εἰ δὲ  
τοῦ εἶναι, πῶς ἂν εἶεν αἰδιοὶ δεόμενοι τροφῆς;

Ἄλλὰ περὶ μὲν τῶν μυθικῶς σοφίζομένων οὐκ  
ἄξιον μετὰ σπουδῆς σκοπεῖν παρὰ δὲ τῶν δι'  
20 ἀποδείξεως λεγόντων δεῖ πυνθάνεσθαι διερωτῶν-  
τας τί δὴ ποτ' ἐκ τῶν αὐτῶν ὄντα τὰ μὲν αἰδία  
τῆν φύσιν ἐστὶ τὰ δὲ φθείρεται τῶν ὄντων ἐπεὶ  
δὲ οὔτε αἷτιαν λέγουσιν οὔτε εὐλογον οὔτως ἔχειν,  
δῆλον ὡς οὐχ αἰ αὐταὶ ἀρχαὶ οὐδὲ αἷτια αὐτῶν ἂν  
25 εἶεν. καὶ γὰρ ὄνπερ οἰηθείη λέγειν ἂν τις μάλιστα  
ὁμολογουμένως αὐτῷ, Ἐμπεδοκλῆς, καὶ οὗτος  
ταῦτὸν πέπονθεν τίθησι μὲν γὰρ ἀρχὴν τινα  
αἷτιαν τῆς φθορᾶς τὸ νεῖκος, δόξειε δ' ἂν οὐθὲν  
ἦττον καὶ τοῦτο γεννᾶν ἔξω τοῦ ἐνός· ἅπαντα γὰρ  
ἐκ τούτου τᾶλλά ἐστι πλὴν ὁ θεός λέγει γοῦν

30 ἐξ ὧν πάνθ' ὅσα τ' ἦν ὅσα τ' ἔσθ' ὅσα τ' ἔσται  
ὀπίσσω,  
δένδρεά τ' ἐβλάστησε καὶ ἀνέρες ἠδὲ γυναῖκες,  
θῆρῆς τ' οἰωνοὶ τε καὶ ὑδατοθρέμμοις ἰχθύς,  
καὶ τε θεοὶ δολιχαίωνες.

1000 b Καὶ χωρὶς δὲ τούτων δῆλον· εἰ γὰρ μὴ ἦν<sup>1</sup> ἐν  
τοῖς πράγμασιν, ἐν ἂν ἦν ἅπαντα, ὡς φησὶν·  
ὅταν γὰρ συνέλθῃ, “τότε δ' ἔσχατον ἴστατο νεῖκος”  
διὸ καὶ συμβαίνει αὐτῷ τὸν εὐδαιμονέστατον θεὸν  
5 ἦττον φρόνιμον εἶναι τῶν ἄλλων οὐ γὰρ γνωρίζει

<sup>1</sup> ἦν: ἦν τὸ νεῖκος A<sup>b2</sup>.

<sup>a</sup> The expressions “the One” and “God” refer to Empedocles' Sphere: the universe as ordered and united by Love. Cf. frs. 26-29 (Diels).

## METAPHYSICS, III. IV 13-17

application of these causes their statements are beyond our comprehension. For if it is for pleasure that the Gods partake of them, the nectar and ambrosia are in no sense causes of their existence; but if it is to support life, how can Gods who require nourishment be eternal?

However, it is not worth while to consider seriously the subtleties of mythologists; we must ascertain by cross-examining those who offer demonstration of their statements why exactly things which are derived from the same principles are some of an eternal nature and some perishable. And since these thinkers state no reason for this view, and it is unreasonable that things should be so, obviously the causes and principles of things cannot be the same. Even the thinker who might be supposed to speak most consistently, Empedocles, is in the same case; for he posits Strife as a kind of principle which is the cause of destruction, but none the less Strife would seem to produce everything except the One, for everything except God<sup>a</sup> proceeds from it. At any rate he says

From which grew all that was and is and shall be  
In time to come. the trees, and men and women,  
The beasts and birds and water-nurtured fish,  
And the long-living Gods<sup>b</sup>

And it is obvious even apart from this, for if there had not been Strife in things, all things would have been one, he says; for when they came together "then Strife came to stand outermost"<sup>c</sup>. Hence it follows on his theory that God, the most blessed being, is less wise than the others, since He does not

<sup>b</sup> Fr 21. 9-12.

<sup>c</sup> Fr. 36. 7.

00 b

ἅπαντα<sup>1</sup>. τὸ γὰρ νεῖκος οὐκ ἔχει, ἢ δὲ γνώσις τοῦ  
ὁμοίου τῶ ὁμοίῳ.

γαίη μὲν γὰρ (φησί) γαῖαν ὀπώπαμεν, ὕδατι  
δ' ὕδωρ,  
αἰθέρι δ' αἰθέρα διόν, ἀτὰρ πυρὶ πῦρ αἰδηλον,  
στοργῆν δὲ στοργῆν, νεῖκος δέ τε νεῖκει λυγρῶ.

Ἄλλ' ὅθεν δὴ ὁ λόγος, τοῦτό γε φανερόν, ὅτι  
10 συμβαίνει αὐτῶ τὸ νεῖκος μηθὲν μᾶλλον φθορᾶς  
ἢ τοῦ εἶναι αἴτιον. ὁμοίως δὲ οὐδ' ἢ φιλότης τοῦ  
εἶναι συνάγουσα γὰρ εἰς τὸ ἐν φθείρει τᾶλλα καὶ  
ἅμα δὲ αὐτῆς τῆς μεταβολῆς αἴτιον οὐθὲν λέγει ἄλλ'  
ἢ ὅτι οὕτως πέφυκεν.

ἄλλ' ὅτε δὴ μέγα νεῖκος ἐνὶ μελέεσσιν ἐθρέφθη,  
15 εἰς τιμάς τ' ἀνόρουσε τελειόμενοιο χρόνοιο,  
ὅς σφιν ἀμοιβαῖος πλατέος παρ' ἐλήλαται<sup>2</sup>  
ὄρκου,

ὡς ἀναγκαῖον μὲν ὄν μεταβάλλειν αἰτίαν δὲ τῆς  
ἀνάγκης οὐδεμίαν δηλοῖ ἄλλ' ὅμως τοσοῦτόν γε  
μόνον λέγει ὁμολογουμένως· οὐ γὰρ τὰ μὲν  
φθαρτὰ τὰ δὲ ἄφθαρτα ποιεῖ τῶν ὄντων, ἀλλὰ  
20 πάντα φθαρτὰ πλὴν τῶν στοιχείων ἢ δὲ νῦν  
λεγομένη ἀπορία ἐστὶ διὰ τί τὰ μὲν τὰ δ' οὐ, εἴπερ  
ἐκ τῶν αὐτῶν ἐστίν Ὅτι μὲν οὖν οὐκ ἂν  
εἶησαν αἱ αὐταὶ ἀρχαί, τοσαῦτα εἰρήσθω· εἰ δὲ  
ἕτεραι ἀρχαί, μία μὲν ἀπορία πότερον ἄφθαρτοι καὶ  
αὐταὶ<sup>3</sup> ἔσονται ἢ φθαρταί· εἰ μὲν γὰρ φθαρταί,  
25 δῆλον ὡς ἀναγκαῖον καὶ ταύτας ἐκ τινων εἶναι

<sup>1</sup> ἅπαντα : τὰ στοιχεῖα πάντα EJ.

<sup>2</sup> παρ' ἐλήλαται Sturz : παρελήλαται.

<sup>3</sup> αὐταὶ J Asc. : αἱ αὐταὶ A<sup>b</sup>.

know all the elements ; for He has no Stife in Him,  
and knowledge is of like by like .

By earth (he says) we earth perceive, by water water,  
By air bright air, by fire consuming fire,  
Love too by love, and strife by grievous strife <sup>a</sup>

But—and this is the point from which we started—  
thus much is clear that it follows on his theory that  
Stife is no more the cause of destruction than it  
is of Being Nor, similarly, is Love the cause of  
Being ; for in combining things into one it destroys  
everything else <sup>b</sup> Moreover, of the actual process  
of change he gives no explanation, except that it is  
so by nature .

But when Stife waxing great among the members <sup>c</sup>  
Sprang up to honour as the time came round  
Appointed them in turn by a mighty oath,<sup>d</sup>

as though change were a necessity ; but he exhibits  
no cause for the necessity However, thus much of  
his theory is consistent he does not represent some  
things to be perishable and others imperishable, but  
makes everything perishable except the elements  
But the difficulty now being stated is why some things  
are perishable and others not, assuming that they are  
derived from the same principles

The foregoing remarks may suffice to show that  
the principles cannot be the same If however they  
are different, one difficulty is whether they too are  
to be regarded as imperishable or as perishable For  
if they are perishable, it is clearly necessary that  
they too must be derived from something else, since

<sup>a</sup> Fr. 109.

<sup>c</sup> *i.e.*, of the Sphere.

<sup>b</sup> Cf. I. iv. 6.

<sup>d</sup> Fr 30

## ARISTOTLE

<sup>0 b</sup> (πάντα<sup>1</sup> γὰρ φθείρεται εἰς ταῦτ' ἐξ ὧν ἔστιν), ὥστε  
 συμβαίνει τῶν ἀρχῶν ἑτέρας ἀρχὰς εἶναι προτέρας·  
 τοῦτο δ' ἀδύνατον, καὶ εἰ ἴσταται καὶ εἰ βαδίζει  
 εἰς ἄπειρον ἔτι δὲ πῶς ἔσται τὰ φθαρτά, εἰ αἱ  
<sup>30</sup> ἀρχαὶ ἀναιρεθῆσονται, εἰ δὲ ἄφθαρτοι, διὰ τί  
 ἐκ μὲν τούτων ἀφθάρτων οὐσῶν φθαρτὰ ἔσται, ἐκ  
 δὲ τῶν ἑτέρων ἄφθαρτα, τοῦτο γὰρ οὐκ εὐλογον,  
 ἀλλ' ἢ ἀδύνατον ἢ πολλοῦ λόγου δεῖται ἔτι  
<sup>1 a</sup> δὲ οὐδ' ἐγκεχείρηκεν οὐδεὶς ἑτέρας,<sup>2</sup> ἀλλὰ τὰς  
 αὐτὰς ἀπάντων λέγουσιν ἀρχάς. ἀλλὰ τὸ πρῶτον  
 ἀπορηθὲν ἀποτρώγουσιν ὥσπερ τοῦτο μικρόν τι  
 λαμβάνοντες

Πάντων δὲ καὶ θεωρῆσαι χαλεπώτατον καὶ  
<sup>5</sup> πρὸς τὸ γινῶναι τάληθές ἀναγκαιότατον, πότερον  
 ποτε τὸ ὄν καὶ τὸ ἔν οὐσίαι τῶν ὄντων εἰσί, καὶ  
 ἑκάτερον αὐτῶν οὐχ ἕτερόν τι ὄν τὸ μὲν ἔν τὸ δὲ  
 ὄν ἔστιν, ἢ δεῖ ζητεῖν τί ποτ' ἔστι τὸ ὄν καὶ τὸ  
 ἔν ὡς ὑποκειμένης ἄλλης φύσεως. οἱ μὲν γὰρ  
 ἐκείνως, οἱ δ' οὕτως οἴονται τὴν φύσιν ἔχειν  
<sup>10</sup> Πλάτων μὲν γὰρ καὶ οἱ Πυθαγόρειοι οὐχ ἕτερόν  
 τι τὸ ὄν οὐδὲ τὸ ἔν, ἀλλὰ τοῦτο αὐτῶν τὴν φύσιν  
 εἶναι, ὡς οὔσης τῆς οὐσίας αὐτοῦ τοῦ ἐν εἶναι  
 καὶ ὄντι<sup>3</sup>. οἱ δὲ περὶ φύσεως, οἷον Ἐμπεδοκλῆς,  
 ὡς εἰς γνωριμώτερον ἀνάγων λέγει ὅ τι<sup>4</sup> τὸ ἔν<sup>5</sup>  
 ἔστιν δόξειε γὰρ ἂν λέγειν τοῦτο τὴν φιλίαν εἶναι·  
<sup>15</sup> αἰτία γοῦν ἔστιν αὕτη τοῦ ἐν εἶναι πᾶσιν ἕτεροι

<sup>1</sup> ἅπαντα E.J.

<sup>2</sup> ἑτέρας λέγειν A<sup>b</sup>.

<sup>3</sup> αὐτοῦ τοῦ ἐν εἶναι καὶ ὄντι Christ: αὐτοῦ (αὐτὸ Bekker) τὸ  
 ἐν εἶναι καὶ ὄν τι A<sup>b</sup>: ταῦτὸ ἐν εἶναι καὶ ὄντι F.J.

<sup>4</sup> Brandis· ὅτι.

<sup>5</sup> εν· εν εν I.J.

<sup>a</sup> i.e., whether all things have the same principles.

everything passes upon dissolution into that from which it is derived. Hence it follows that there are other principles prior to the first principles; but this is impossible, whether the series stops or proceeds to infinity. And further, how can perishable things exist if their principles are abolished? On the other hand if the principles are imperishable, why should some imperishable principles produce perishable things, and others imperishable things? This is not reasonable; either it is impossible or it requires much explanation. Further, no one has so much as attempted to maintain different principles; they maintain the same principles for everything. But they swallow down the difficulty which we raised first <sup>a</sup> as though they took it to be trifling <sup>b</sup>

(x.) But the hardest question of all to investigate, and also the most important with a view to the discovery of the truth, is whether after all Being and Unity are substances of existing things, and each of them is nothing else than Being and Unity respectively, or whether we should inquire what exactly Being and Unity are, there being some other nature underlying them. Some take the former, others the latter view of the nature of Being and Unity. Plato and the Pythagoreans hold that neither Being nor Unity is anything else than itself, and that this is their nature, their essence being simply Being and Unity. But the physicists, *e.g.* Empedocles, explain what Unity is by reducing it to something, as it were, more intelligible—for it would seem that by Love Empedocles means Unity; at any rate Love is the cause of Unity in all things. Others identify

<sup>b</sup> For Aristotle's views about the principles of perishable and imperishable things see VII. vii.-x., XII. 1.-vii.

## ARISTOTLE

<sup>a</sup> δὲ πῦρ, οἱ δ' ἀέρα φασὶν εἶναι τὸ ἐν τοῦτο καὶ τὸ ὄν, ἐξ οὗ τὰ ὄντα εἶναί τε καὶ γεγονέναι ὡς δ' αὐτως καὶ οἱ πλείω τὰ στοιχεῖα τιθέμενοι· ἀνάγκη γὰρ καὶ τούτοις τοσαῦτα λέγειν τὸ ἐν καὶ τὸ ὄν  
 20 ὅσας περ ἀρχὰς εἶναί φασιν. συμβαίνει δέ, εἰ μὲν τις μὴ θήσεται εἶναί τινα οὐσίαν τὸ ἐν καὶ τὸ ὄν, μηδὲ τῶν ἄλλων εἶναι τῶν καθόλου μηθέν ταῦτα γὰρ ἔστι καθόλου μάλιστα πάντων εἰ δὲ μὴ ἔστι τι ἐν αὐτὸ μηδ' αὐτὸ ὄν, σχολῇ τῶν γε ἄλλων τι ἂν εἴη παρὰ τὰ λεγόμενα καθ' ἕκαστα  
 25 ἔτι δὲ μὴ ὄντος τοῦ ἐνός οὐσίας, δηλὸν ὅτι οὐδ' ἂν ἀριθμὸς εἴη ὡς κεχωρισμένη τις φύσις τῶν ὄντων ὁ μὲν γὰρ ἀριθμὸς μονάδες, ἡ δὲ μονὰς ὅπερ ἐν τί ἐστιν. Εἰ δ' ἔστι τι αὐτὸ ἐν καὶ ὄν, ἀναγκαῖον οὐσίαν εἶναι τὸ ἐν καὶ τὸ ὄν οὐ γὰρ ἕτερόν τι καθόλου κατηγορεῖται, ἀλλὰ ταῦτα αὐτὰ  
 30 ἀλλὰ μὴν εἴ γ' ἔσται τι αὐτὸ ὄν καὶ αὐτὸ ἐν, πολλή ἀπορία πῶς ἔσται τι παρὰ ταῦτα ἕτερον, λέγω δὲ πῶς ἔσται πλείω ἐνός τὰ ὄντα τὸ γὰρ ἕτερον τοῦ ὄντος οὐκ ἔστιν, ὥστε κατὰ τὸν Παρμενίδου συμβαίνειν ἀνάγκη λόγον<sup>1</sup> ἐν ἅπαντα εἶναι τὰ ὄντα  
 1<sup>b</sup> καὶ τοῦτο εἶναι τὸ ὄν. Ἄμφοτέρως δὲ δύσκολον· ἂν τε γὰρ μὴ ᾗ τὸ ἐν οὐσία ἂν τε ᾗ τι αὐτὸ ἐν, ἀδύνατον τὸν ἀριθμὸν οὐσίαν εἶναι εἰ μὲν οὖν μὴ ᾗ, εἴρηται πρότερον δι' ὃ εἰάν δὲ ᾗ, ἡ αὐτὴ ἀπορία καὶ περὶ τοῦ ὄντος. ἐκ τίνος γὰρ  
 5 παρὰ τὸ ἐν ἔσται αὐτὸ ἄλλο ἐν; ἀνάγκη γὰρ

<sup>1</sup> συμβαίνειν ἀνάγκη λόγον λόγον συμβαίνειν ἀνάγκη G, Bekker.

<sup>a</sup> By τὸ ὄν Parmenides meant "what is," i.e. the real universe, which he proved to be one thing because anything else must be "what is not," or non-existent. The Platonists



fire and others air with this Unity and Being of which things consist and from which they have been generated. Those who posit more numerous elements also hold the same view, for they too must identify Unity and Being with all the principles which they recognize. And it follows that unless one assumes Unity and Being to be substance in some sense, no other universal term can be substance; for Unity and Being are the most universal of all terms, and if there is no absolute Unity or absolute Being, no other concept can well exist apart from the so-called particulars. Further, if Unity is not substance, clearly number cannot be a separate characteristic of things; for number is units, and the unit is simply a particular kind of one.

On the other hand, if there is absolute Unity and Being, their substance must be Unity and Being; for no other term is predicated universally of Unity and Being, but only these terms themselves. Again, if there is to be absolute Being and absolute Unity, it is very hard to see how there can be anything else besides these, I mean, how things can be more than one. For that which is other than what is, is not, and so by Parmenides' argument<sup>a</sup> it must follow that all things are one, *i. e.* Being.

In either case there is a difficulty; for whether Unity is not a substance or whether there is absolute Unity, number cannot be a substance. It has already been stated why this is so if Unity is not a substance; and if it is, there is the same difficulty as about Being. For whence, if not from the absolute One or Unity, can there be another one? It must be not-one; but

meant by it "being" in the abstract. Aristotle ignores this distinction

## ARISTOTLE

<sup>1 b</sup> μὴ ἔν εἶναι· ἅπαντα δὲ τὰ ὄντα ἢ ἔν ἢ πολλά,  
ὦν ἔν ἕκαστον. ἔτι εἰ ἀδιαίρετον αὐτὸ τὸ ἔν, κατὰ  
μὲν τὸ Ζήνωνος ἀξίωμα οὐθέν ἂν εἴη. ὁ γὰρ  
μήτε προστιθέμενον μήτε ἀφαιρούμενον ποιεῖ  
μείζον μηδὲ ἔλαττον, οὐ φησιν εἶναι τοῦτο τῶν  
<sup>10</sup> ὄντων, ὡς δηλονότι ὄντος μεγέθους τοῦ ὄντος·  
καὶ εἰ μέγεθος, σωματικόν τοῦτο γὰρ πάντη ὄν  
τὰ δὲ ἄλλα πῶς μὲν προστιθέμενα ποιήσει μείζον,  
πῶς δ' οὐθέν, οἷον ἐπίπεδον καὶ γραμμῆ· στιγμῆ  
δὲ καὶ μονὰς οὐδαμῶς ἀλλ' ἐπειδὴ οὗτος θεωρεῖ  
<sup>15</sup> φορτικῶς, καὶ ἐνδέχεται εἶναι ἀδιαίρετόν τι ὥστε  
[καὶ οὕτως]<sup>1</sup> καὶ πρὸς ἐκεῖνόν τιν' ἀπολογίαν ἔχει  
(μείζον μὲν γὰρ οὐ ποιήσει, πλείον δὲ προστιθέ-  
μενον τὸ τοιοῦτον) ἀλλὰ πῶς δὴ ἐξ ἑνὸς τοιού-  
του ἢ πλειόνων τοιούτων ἔσται μέγεθος; ὁμοιον  
γὰρ καὶ τὴν γραμμὴν ἐκ στιγμῶν εἶναι φάσκειν  
ἀλλὰ μὴν καὶ εἴ τις οὕτως ὑπολαμβάνει ὥστε  
<sup>20</sup> γένεσθαι (καθάπερ λέγουσί τινες) ἐκ τοῦ ἑνὸς  
αὐτοῦ καὶ ἄλλου μὴ ἑνός τινος τὸν ἀριθμόν, οὐθέν  
ἦττον ζητητέον διὰ τί καὶ πῶς ὅτε μὲν ἀριθμὸς  
ὅτε δὲ μέγεθος ἔσται τὸ γενόμενον, εἴπερ τὸ μὴ  
ἔν ἢ ἀνισότης καὶ ἢ αὐτὴ φύσις ἦν οὔτε γὰρ  
<sup>25</sup> ὅπως ἐξ ἑνὸς καὶ ταύτης, οὔτε ὅπως ἐξ ἀριθμοῦ  
τινὸς καὶ ταύτης γένοιτ' ἂν τὰ μεγέθη, δῆλον.

V Τούτων δ' ἐχομένη ἀπορία, πότερον οἱ ἀριθμοὶ  
καὶ τὰ σώματα καὶ τὰ ἐπίπεδα καὶ αἱ στιγμαὶ  
οὐσίαι τινές εἰσιν ἢ οὐ. εἰ μὲν<sup>2</sup> γὰρ μὴ εἰσιν,

<sup>1</sup> Ross.

<sup>2</sup> μὲν om. E.

<sup>a</sup> Cf fr. 2, and see Burnet, *E G P.* §§ 157 ff.

<sup>b</sup> e.g., a point is indivisible and has no magnitude, yet added to other points it increases their number.

<sup>c</sup> The reference is to the Platonists Cf. XIV. 1. 5, 6; ii 13, 14.

all things are either one, or many of which each is one. Further, if absolute Unity is indivisible, by Zeno's axiom it will be nothing. For that which neither when added makes a thing greater nor when subtracted makes it smaller is not an existent thing, he says <sup>a</sup>, clearly assuming that what exists is spatial magnitude. And if it is a spatial magnitude it is corporeal, since the corporeal exists in all dimensions, whereas the other magnitudes, *e.g.* the plane or line, when added to a thing in one way will increase it, but when added in another will not, and the point or unit will not increase a thing in any way whatever. But since Zeno's view is unsound, and it is possible for a thing to be indivisible in such a way that it can be defended even against his argument (for such a thing <sup>b</sup> when added will increase a thing in number though not in size)—still how can a *magnitude* be composed of one or more such indivisible things? It is like saying that the line is composed of points. Moreover, even if one supposes the case to be such that number is generated, as some say, from the One itself and from something else which is not one, we must none the less inquire why and how it is that the thing generated will be at one time number and at another magnitude, if the not-one was inequality and the same principle in both cases <sup>c</sup>. For it is not clear how magnitude can be generated either from One and this principle, or from a number and this principle <sup>d</sup>.

V. (xiii) Out of this arises the question whether numbers, bodies, planes and points are substances or not. If not, the question of what Being is, and

<sup>a</sup> For the answer to this problem see VII. xvi. 3, 4, X. ii.; and *cf.* XIII. viii.

31<sup>b</sup> διαφεύγει τί τὸ ὄν καὶ τίνες αἱ οὐσίαι τῶν ὄντων  
 30 τὰ μὲν γὰρ πάθη καὶ αἱ κινήσεις καὶ τὰ πρὸς τι  
 καὶ αἱ διαθέσεις καὶ οἱ λόγοι οὐθενὸς δοκοῦσιν  
 οὐσίαν σημαίνειν λέγονται γὰρ πάντα καθ' ὑπο-  
 κειμένου τινός, καὶ οὐθὲν τόδε τι ἂ δὲ μάλιστ' ἂν  
 δόξειε σημαίνειν οὐσίαν, ὕδωρ καὶ γῆ καὶ πῦρ  
 12<sup>a</sup> καὶ ἀήρ, ἐξ ὧν τὰ σύνθετα σώματα συνέστηκε,  
 τούτων θερμότητες μὲν καὶ ψυχρότητες καὶ τὰ  
 τοιαῦτα πάθη, οὐκ οὐσίαι, τὸ δὲ σῶμα τὸ ταῦτα  
 πεπονηθὸς μόνον ὑπομένει ὡς ὄν τι καὶ οὐσία τις  
 οὔσα ἀλλὰ μὴν τό γε σῶμα ἦττον οὐσία τῆς  
 5 ἐπιφανείας, καὶ αὕτη τῆς γραμμῆς, καὶ αὕτη<sup>1</sup> τῆς  
 μονάδος καὶ τῆς στιγμῆς τούτοις γὰρ ὠρισταί  
 τὸ σῶμα, καὶ τὰ μὲν ἄνευ σώματος ἐνδέχασθαι  
 δοκεῖ εἶναι, τὸ δὲ σῶμα ἄνευ τούτων<sup>2</sup> ἀδύνατον.  
 διόπερ οἱ μὲν πολλοὶ καὶ οἱ πρότερον τὴν οὐσίαν  
 10 καὶ τὸ ὄν ᾤοντο τὸ σῶμα εἶναι, τὰ δὲ ἄλλα τούτου  
 πάθη, ὥστε καὶ τὰς ἀρχὰς τὰς τῶν σωμάτων τῶν  
 ὄντων εἶναι ἀρχάς· οἱ δ' ὕστερον καὶ σοφώτεροι  
 τούτων εἶναι δόξαντες ἀριθμούς. Καθάπερ οὖν  
 εἶπομεν, εἰ μὴ ἔστιν οὐσία ταῦτα, ὅλως οὐδεμία  
 ἐστὶν οὐσία, οὐδὲ ὄν οὐθέν οὐ γὰρ δὴ τά γε  
 15 συμβεβηκότα τούτοις ἄξιον ὄντα καλεῖν ἀλλὰ  
 μὴν εἰ τοῦτο μὲν ὁμολογεῖται, ὅτι μᾶλλον οὐσία  
 τὰ μήκη τῶν σωμάτων καὶ αἱ στιγμαί, ταῦτα  
 δὲ μὴ ὀρώμεν ποίων ἂν εἶεν σωμάτων (ἐν γὰρ  
 τοῖς αἰσθητοῖς ἀδύνατον εἶναι), οὐκ ἂν εἶη  
 οὐσία οὐδεμία. ἔτι δὲ φαίνεται ταῦτα πάντα  
 20 διαιρέσεις ὄντα τοῦ σώματος, τὸ μὲν εἰς πλάτος  
 τὸ δ' εἰς βάθος τὸ δ' εἰς μῆκος πρὸς δὲ τούτοις

<sup>1</sup> αὕτη ἢ γραμμὴ A<sup>b</sup>.

<sup>2</sup> τούτων εἶναι recc.

what the substances of things are, baffles us; for modifications and motions and relations and dispositions and ratios do not seem to indicate the substance of anything; they are all predicated of a substrate, and none of them is a definite thing. As for those things which might be especially supposed to indicate substance—water, earth, fire and air, of which composite bodies are composed—their heat and cold and the like are modifications, not substances; and it is only the body which undergoes these modifications that persists as something real and a kind of substance. Again, the body is less truly substance than the plane, and the plane than the line, and the line than the unit or point; for it is by these that the body is defined, and it seems that they are possible without the body, but that the body cannot exist without them. This is why the vulgar and the earlier thinkers supposed that substance and Being are Body, and everything else the modifications of Body; and hence also that the first principles of bodies are the first principles of existing things, whereas later thinkers with a greater reputation for wisdom supposed that substance and Being are numbers

As we have said, then, if these things are not substance, there is no substance or Being at all; for the attributes of these things surely have no right to be called existent things. On the other hand, if it be agreed that lines and points are more truly substance than bodies are, yet unless we can see to what *kind* of bodies they belong (for they cannot be in sensible bodies) there will still be no substance. Further, it is apparent that all these lines are divisions of Body, either in breadth or in depth or in length.

<sup>02 a</sup> ὁμοίως ἔνεστιν<sup>1</sup> ἐν τῷ στερεῷ ὁποιοῦν σχῆμα<sup>2</sup>.  
 ὥστ' εἰ μὴδ' ἐν τῷ λίθῳ Ἑρμῆς, οὐδὲ τὸ ἡμισυ  
 τοῦ κύβου ἐν τῷ κύβῳ οὕτως ὡς ἀφωρισμένον.  
<sup>2 b</sup> οὐκ ἄρα οὐδ' ἐπιφάνεια εἰ γὰρ ὅποιαοῦν, καὶ  
 αὕτη ἂν ἦν ἡ ἀφορίζουσα τὸ ἡμισυ ὁ δ' αὐτὸς  
 λόγος καὶ ἐπὶ γραμμῆς καὶ στιγμῆς καὶ μονάδος.  
 ὥστ' εἰ μάλιστα μὲν οὐσία τὸ σῶμα, τούτου δὲ  
 μᾶλλον ταῦτα, μὴ ἔστι δὲ ταῦτα μηδὲ οὐσίαι τινές,  
 διαφεύγει τί τὸ ὄν καὶ τίς ἡ οὐσία τῶν ὄντων.  
 πρὸς γὰρ τοῖς εἰρημένοις καὶ τὰ περὶ τὴν γένεσιν  
<sup>30</sup> καὶ τὴν φθορὰν συμβαίνει ἄλογα. δοκεῖ μὲν γὰρ  
 ἡ οὐσία, εἴαν μὴ οὐσα πρότερον νῦν ἦ, ἢ πρότερον  
 οὐσα ὕστερον μὴ ἦ, μετὰ τοῦ γίγνεσθαι καὶ  
 φθίρεσθαι ταῦτα πάσχειν· τὰς δὲ στιγμὰς καὶ  
 τὰς γραμμὰς καὶ τὰς ἐπιφανείας οὐκ ἐνδέχεται  
 οὔτε γίγνεσθαι οὔτε φθίρεσθαι, ὅτε μὲν οὐσας  
<sup>2 b</sup> ὅτε δὲ οὐκ οὐσας· ὅταν γὰρ ἀπτηται ἢ διαιρηῆται  
 τὰ σώματα, ἅμα ὅτε μὲν μία ἀπτομένων, ὅτε δὲ  
 δύο διαιρουμένων γίνονται· ὥστ' οὔτε συγκει-  
 μένων ἔστιν ἀλλ' ἔφθαρται, διηρημένων τέ εἰσιν  
 αἱ πρότερον οὐκ οὐσαι (οὐ γὰρ δὴ ἦ γε ἀδιαί-  
 ρετος στιγμή διηρέθη εἰς δύο), εἴ τε γίνονται καὶ  
<sup>3</sup> φθίρονται, ἐκ τίνος<sup>3</sup> γίνονται; παραπλησίως δ'  
 ἔχει καὶ περὶ τὸ νῦν τὸ ἐν τῷ χρόνῳ· οὐδὲ γὰρ  
 τοῦτο ἐνδέχεται γίγνεσθαι καὶ φθίρεσθαι, ἀλλ'  
 ὁμῶς ἕτερον ἀεὶ δοκεῖ εἶναι, οὐκ οὐσία τις οὐσα.  
 ὁμοίως δὲ δῆλον ὅτι ἔχει καὶ περὶ τὰς στιγμὰς

<sup>1</sup> ἔνεστιν : ἐν ἔστιν recc.

<sup>2</sup> σχῆμα ἢ οὐδέν A<sup>b</sup>.

<sup>3</sup> Ross· τίνος.

<sup>a</sup> Apparently a proverbial expression.

Moreover every kind of shape is equally present in a solid, so that if "Hermes is not in the stone,"<sup>a</sup> neither is the half-cube in the cube as a determinate shape. Hence neither is the plane, for if any kind of plane were in it, so would that plane be which defines the half-cube. The same argument applies to the line and to the point or unit. Hence however true it may be that body is substance, if planes, lines and points are more truly substance than Body is, and these are not substance in any sense, the question of what Being is and what is the substance of things baffles us. Because, in addition to the above arguments, absurd results follow from a consideration of generation and destruction; for it seems that if substance, not having existed before, now exists, or having existed before, subsequently does not exist, it suffers these changes in the process of generation and destruction. But points, lines and planes, although they exist at one time and at another do not, cannot be in process of being either generated or destroyed; for whenever bodies are joined or divided, at one time, when they are joined, one surface is instantaneously produced, and at another, when they are divided, two. Thus when the bodies are combined the surface does not exist, but has perished; and when they are divided, surfaces exist which did not exist before. (The indivisible point is of course never divided into two.) And if they *are* generated and destroyed, from what are they generated? It is very much the same with "the present moment" in time. This too cannot be generated and destroyed; but nevertheless it seems always to be different, not being a substance. And obviously it is the same with points, lines and

02 b

10 καὶ τὰς γραμμάς καὶ τὰ ἐπίπεδα· ὁ γὰρ αὐτὸς λόγος· ἅπαντα γὰρ ὁμοίως ἢ πέρατα ἢ διαιρέσεις εἰσὶν

VI Ὅλως δ' ἀπορήσειεν ἄν τις διὰ τί καὶ δεῖ ζητεῖν ἄλλ' ἄττα παρά τε τὰ αἰσθητὰ καὶ τὰ μεταξύ, οἷον ἃ τίθεμεν εἶδη εἰ γὰρ διὰ τοῦτο, ὅτι τὰ  
 15 μὲν μαθηματικὰ τῶν δεῦρο ἄλλω μὲν τινι διαφέρει, τῷ δὲ πόλλ' ἄττα ὁμοειδῆ εἶναι οὐθὲν διαφέρει, ὥστ' οὐκ ἔσονται αὐτῶν αἱ ἀρχαὶ ἀριθμῷ ἀφωρισμένοι (ὥσπερ οὐδὲ τῶν ἐνταῦθα γραμμάτων ἀριθμῷ μὲν πάντων οὐκ εἰσὶν αἱ ἀρχαὶ ὠρισμένοι,  
 20 εἶδει δέ—ἐὰν μὴ λαμβάνη τις τησδὶ τῆς συλλαβῆς ἢ τησδὶ τῆς φωνῆς τούτων δ' ἔσονται καὶ ἀριθμῷ ὠρισμένοι—ὁμοίως δὲ καὶ ἐπὶ τῶν μεταξύ ἄπειρα γὰρ κακεῖ τὰ ὁμοειδῆ), ὥστ' εἰ μὴ ἔστι παρά τὰ αἰσθητὰ καὶ τὰ μαθηματικὰ ἕτερ' ἄττα οἷα λέγουσι τὰ εἶδη τινές, οὐκ ἔσται μία ἀριθμῷ καὶ  
 25 εἶδει οὐσία, οὐδ' αἱ ἀρχαὶ τῶν ὄντων ἀριθμῷ ἔσονται ποσαὶ τινες ἀλλὰ εἶδει. εἰ οὖν τοῦτο ἀναγκαῖον, καὶ τὰ εἶδη ἀναγκαῖον διὰ τοῦτο εἶναι τιθέναι. καὶ γὰρ εἰ μὴ καλῶς διαρθροῦσιν οἱ λέγοντες, ἀλλ' ἔστι γε τοῦθ' ὁ βούλονται, καὶ ἀνάγκη ταῦτα λέγειν αὐτοῖς, ὅτι τῶν εἰδῶν οὐσία  
 30 τις ἕκαστόν ἐστι, καὶ οὐθὲν κατὰ συμβεβηκός. ἀλλὰ μὴν εἴ γε θήσομεν τά τε εἶδη εἶναι, καὶ ἐν ἀριθμῷ τὰς ἀρχὰς ἀλλὰ μὴ εἶδει, εἰρήκαμεν ἃ συμβαίνειν ἀναγκαῖον ἀδύνατα. Σύνεγγυς δὲ τούτων ἐστὶ τὸ διαπορήσαι πότερον δυνάμει ἐστὶ

<sup>a</sup> For arguments against the substantiality of numbers and mathematical objects see XIII. 1.-III., VI-IX; XIV. 1.-III, v., VI.

<sup>b</sup> Cf. ch II 20 seqq.

<sup>c</sup> Ch. IV. 9, 10.

<sup>d</sup> This problem is not stated in ch. 1, but is akin to problems v. and viii., which see.



planes, for the argument is the same; they are all similarly either limits or divisions.<sup>a</sup>

VI In general one might wonder why we should seek for other entities apart from sensible things and the Intermediates <sup>b</sup> *e g.*, for the Forms which we Platonists assume. If it is for the reason that the objects of mathematics, while differing from the things in our world in another respect, resemble them in being a plurality of objects similar in form, so that their principles cannot be numerically determined (just as the principles of all language in this world of ours are determinate not in number but in kind—unless one takes such and such a particular syllable or sound, for the principles of these are determinate in number too—and similarly with the Intermediates, for in their case too there is an infinity of objects similar in form), then if there is not another set of objects apart from sensible and mathematical objects, such as the Forms are said to be, there will be no substance which is one both in kind and in number, nor will the principles of things be determinate in number, but in kind only. Thus if this is necessarily so, it is necessary for this reason to posit the Forms also. For even if their exponents do not articulate their theory properly, still this is what they are trying to express, and it must be that they maintain the Forms on the ground that each of them is a substance, and none of them exists by accident. On the other hand, if we are to assume that the Forms exist, and that the first principles are one in number but not in kind, we have already stated <sup>c</sup> the impossible consequences which must follow.<sup>d</sup>

(xii.) Closely connected with these questions is the problem whether the elements exist potentially

002 b

τὰ στοιχεῖα ἢ τιν<sup>1</sup> ἕτερον τρόπον εἰ μὲν γὰρ  
 103 a ἄλλως πως,<sup>2</sup> πρότερόν τι ἔσται τῶν ἀρχῶν ἄλλο  
 πρότερον γὰρ ἢ δύναμις ἐκείνης τῆς αἰτίας, τὸ  
 δὲ δυνατόν οὐκ ἀναγκαῖον ἐκείνως πᾶν ἔχειν. εἰ  
 δ' ἔστι δυνάμει τὰ στοιχεῖα, ἐνδέχεται μὴθὲν εἶναι  
 τῶν ὄντων· δυνατόν γὰρ εἶναι καὶ τὸ μῆπω ὄν  
 5 γίνεσθαι μὲν γὰρ τὸ μῆ ὄν, οὐθὲν δὲ γίνεσθαι τῶν  
 εἶναι ἀδυνάτων. Ταύτας τε οὖν τὰς ἀπορίας  
 ἀναγκαῖον ἀπορῆσαι περὶ τῶν ἀρχῶν, καὶ πότερον  
 καθόλου εἰσὶν ἢ ὡς λέγομεν τὰ καθ' ἕκαστα. εἰ  
 μὲν γὰρ καθόλου, οὐκ ἔσονται οὐσίαι· οὐθὲν γὰρ  
 τῶν κοινῶν τόδε τι σημαίνει, ἀλλὰ τοιόνδε, ἢ δ'  
 10 οὐσία τόδε τι. εἰ δ' ἔσται τόδε τι καὶ ἐν θέσθαι<sup>3</sup>  
 τὸ κοινῇ κατηγορούμενον, πολλὰ ἔσται ζῶα ὁ  
 Σωκράτης, αὐτός τε καὶ ὁ ἄνθρωπος καὶ τὸ ζῶον,  
 εἴπερ σημαίνει ἕκαστον τόδε τι καὶ ἐν εἰ μὲν  
 οὖν καθόλου αἱ ἀρχαί, ταῦτα συμβαίνει· εἰ δὲ μὴ  
 καθόλου, ἀλλ' ὡς τὰ καθ' ἕκαστα, οὐκ ἔσονται  
 15 ἐπιστηταί καθόλου γὰρ ἢ ἐπιστήμη<sup>4</sup> πάντων.  
 ὥστ' ἔσονται ἀρχαὶ ἕτεραι πρότεραι τῶν ἀρχῶν  
 αἱ καθόλου κατηγορούμεναι, ἄνπερ μέλλη ἔσεσθαι  
 αὐτῶν ἐπιστήμη

<sup>1</sup> τιν recc.<sup>2</sup> πῶς EA<sup>b</sup>.<sup>3</sup> ἐν θέσθαι Richards· εἰ θέσθαι.<sup>4</sup> αἱ ἐπιστήμαι EJ.<sup>a</sup> For the relation of potentiality to actuality see IX. 1.-1X

or in some other sense. If in some other sense, there will be something else prior to the first principles. For the potentiality is prior to the actual cause, and the potential need not necessarily always become actual. On the other hand, if the elements exist potentially, it is possible for nothing to exist; for even that which does not yet exist is capable of existing. That which does not exist may come to be, but nothing which cannot exist comes to be.<sup>a</sup>

(x1) Besides the foregoing problems about the first principles we must also raise the question whether they are universal or such as we describe the particulars to be. For if they are universal, there will be no substances, for no common term denotes an individual thing, but a type, and substance is an individual thing. But if the common predicate be hypostatized as an individual thing, Socrates will be several beings, himself, and Man, and Animal—that is, if each predicate denotes one particular thing. These then are the consequences if the principles are universal. If on the other hand they are not universal but like particulars, they will not be knowable; for the knowledge of everything is universal. Hence there will have to be other universally predicated principles prior to the first principles, if there is to be any knowledge of them.<sup>b</sup>

The second point raised in this connexion in ch. 1. is not discussed here, for actuality and motion see XII vi, vii.

<sup>b</sup> For the answer to this problem see VII xiii-xv, XIII x.

## Γ

13 a

I. Ἔστιν ἐπιστήμη τις ἣ θεωρεῖ τὸ ὄν ἢ ὄν καὶ τὰ τούτῳ ὑπάρχοντα καθ' αὐτό· αὕτη δ' ἐστὶν οὐδεμιᾶ τῶν ἐν μέρει λεγομένων ἢ αὐτῆ· οὐδεμία γὰρ τῶν ἄλλων ἐπισκοπεῖ καθόλου περὶ τοῦ ὄντος  
 25 ἢ ὄν, ἀλλὰ μέρος αὐτοῦ τι ἀποτεμόμεναι περὶ τούτου θεωροῦσι τὸ συμβεβηκός, οἷον αἱ μαθηματικαὶ τῶν ἐπιστημῶν· ἐπεὶ δὲ τὰς ἀρχὰς καὶ τὰς ἀκροτάτας αἰτίας ζητοῦμεν, δῆλον ὡς φύσεώς τινος αὐτὰς ἀναγκαῖον εἶναι καθ' αὐτήν· εἰ οὖν καὶ οἱ τὰ στοιχεῖα τῶν ὄντων ζητοῦντες ταύτας  
 30 τὰς ἀρχὰς ἐζήτουν, ἀνάγκη καὶ τὰ στοιχεῖα τοῦ ὄντος εἶναι μὴ κατὰ συμβεβηκός, ἀλλ' ἢ ὄν<sup>1</sup>. διὸ καὶ ἡμῖν τοῦ ὄντος ἢ ὄν τὰς πρώτας αἰτίας ληπτέον.

II Τὸ δὲ ὄν λέγεται μὲν πολλαχῶς, ἀλλὰ πρὸς ἓν καὶ μίαν τινὰ φύσιν, καὶ οὐχ ὁμωνύμως ἀλλ'  
 35 ὡσπερ καὶ τὸ ὑγιεινὸν ἅπαν πρὸς ὑγίειαν, τὸ μὲν τῷ φυλάττειν, τὸ δὲ τῷ ποιεῖν, τὸ δὲ τῷ σημείον  
 38 b εἶναι τῆς ὑγείας, τὸ δ' ὅτι δεκτικὸν αὐτῆς· καὶ τὸ ἰατρικὸν πρὸς ἰατρικὴν (τὸ μὲν γὰρ τῷ ἔχειν τὴν ἰατρικὴν λέγεται ἰατρικόν, τὸ δὲ τῷ εὐφύες εἶναι πρὸς αὐτήν, τὸ δὲ τῷ ἔργον εἶναι τῆς ἰατρικῆς), ὁμοιοτρόπως δὲ καὶ ἄλλα ληψόμεθα λεγόμενα  
 5 τούτοις. οὕτω δὲ καὶ τὸ ὄν λέγεται πολλαχῶς

<sup>1</sup> ὄν: ὄντα EJ.

## BOOK IV

I There is a science which studies Being *qua* Being, and the properties inherent in it in virtue of its own nature. This science is not the same as any of the so-called particular sciences, for none of the others contemplates Being generally *qua* Being; they divide off some portion of it and study the attribute of this portion, as do for example the mathematical sciences. But since it is for the first principles and the most ultimate causes that we are searching, clearly they must belong to something in virtue of its own nature. Hence if these principles were investigated by those also who investigated the elements of existing things, the elements must be elements of Being not incidentally, but *qua* Being. Therefore it is of Being *qua* Being that we too must grasp the first causes.

II. The term "being" is used in various senses, but with reference to one central idea and one definite characteristic, and not as merely a common epithet. Thus as the term "healthy" always relates to health (either as preserving it or as producing it or as indicating it or as receptive of it), and as "medical" relates to the art of medicine (either as possessing it or as naturally adapted for it or as being a function of medicine)—and we shall find other terms used similarly to these—so "being" is used in various senses,

<sup>8 b</sup> μέν, ἀλλ' ἅπαν πρὸς μίαν ἀρχήν τὰ μὲν γὰρ  
 ὅτι οὐσίαι ὄντα λέγεται, τὰ δ' ὅτι πάθη οὐσίας, τὰ  
 δ' ὅτι ὁδὸς εἰς οὐσίαν, ἢ φθοραὶ ἢ στερησεις ἢ  
 ποιότητες ἢ ποιητικὰ ἢ γεννητικὰ οὐσίας, ἢ τῶν  
 πρὸς τὴν οὐσίαν λεγομένων, ἢ τούτων τινὸς  
<sup>10</sup> ἀποφάσεις ἢ οὐσίας διὸ καὶ τὸ μὴ ὄν εἶναι μὴ  
 ὄν φαμέν. καθάπερ οὖν καὶ τῶν ὑγεινῶν ἀπάν-  
 των μία ἐπιστήμη ἐστίν, ὁμοίως τοῦτο καὶ ἐπὶ  
 τῶν ἄλλων οὐ γὰρ μόνον τῶν καθ' ἓν λεγομένων  
 ἐπιστήμης ἐστὶ θεωρῆσαι μιᾶς, ἀλλὰ καὶ τῶν  
 πρὸς μίαν λεγομένων φύσιν καὶ γὰρ ταῦτα τρόπον  
<sup>15</sup> τινὰ λέγονται<sup>1</sup> καθ' ἓν δῆλον οὖν ὅτι καὶ τὰ  
 ὄντα μιᾶς θεωρῆσαι ἢ ὄντα πανταχοῦ δὲ κυρίως  
 τοῦ πρώτου ἢ ἐπιστήμη, καὶ ἐξ οὗ τὰ ἄλλα  
 ἤρτηται, καὶ δι' ὃ λέγονται εἰ οὖν τοῦτ' ἐστὶν ἡ  
 οὐσία, τῶν οὐσιῶν ἂν δέοι τὰς ἀρχὰς καὶ τὰς  
 αἰτίας ἔχειν τὸν φιλόσοφον. Ἐπαντος δὲ γένους  
<sup>20</sup> καὶ αἰσθησις μία ἐνὸς καὶ ἐπιστήμη, οἷον<sup>2</sup> γραμ-  
 ματικὴ μία οὔσα πάσας θεωρεῖ τὰς φωνάς. διὸ  
 καὶ τοῦ ὄντος ἢ ὄν<sup>3</sup> ὅσα εἶδη θεωρῆσαι μιᾶς ἐστὶν  
 ἐπιστήμης τῷ γένει, τὰ τε εἶδη τῶν εἰδῶν.

Εἰ δὴ τὸ ὄν καὶ τὸ ἐν<sup>4</sup> ταῦτόν καὶ μία φύσις, τῷ  
 ἀκολουθεῖν ἀλλήλοις ὡσπερ ἀρχὴ καὶ αἷτιον, ἀλλ'  
<sup>25</sup> οὐχ ὡς ἐνὶ λόγῳ δηλούμενα (διαφέρει δὲ οὐθὲν

<sup>1</sup> λέγεται EJ

<sup>2</sup> οἷον: οἷον ἢ A<sup>b</sup>

<sup>3</sup> ἢ ὄν A<sup>b</sup> J<sup>2</sup> om. EJ<sup>1</sup>

<sup>4</sup> τὸ ὄν καὶ τὸ ἐν: τὸ ἐν καὶ τὸ ὄν A<sup>b</sup>.

but always with reference to one principle. For some things are said to "be" because they are substances; others because they are modifications of substance, others because they are a process towards substance, or destructions or privations or qualities of substance, or productive or generative of substance or of terms relating to substance, or negations of certain of these terms or of substance. (Hence we even say that not-being *is* not-being.) And so, just as there is one science of all healthy things, so it is true of everything else. For it is not only in the case of terms which express one common notion that the investigation belongs to one science, but also in the case of terms which relate to one particular characteristic: for the latter too, in a sense, express one common notion. Clearly then the study of things which *are, qua* being, also belongs to one science. Now in every case knowledge is principally concerned with that which is primary, *i e* that upon which all other things depend, and from which they get their names. If, then, substance is this primary thing, it is of substances that the philosopher must grasp the first principles and causes.

Now of every single class of things, as there is one perception, so there is one science: *e g*, grammar, which is one science, studies all articulate sounds. Hence the study of all the species of Being *qua* Being belongs to a science which is generically one, and the study of the several species of Being belongs to the specific parts of that science.

Now if Being and Unity are the same, *i e* a single nature, in the sense that they are associated as principle and cause are, and not as being denoted by the same definition (although it makes no difference

38 b οὐδ' ἂν ὁμοίως ὑπολάβωμεν, ἀλλὰ καὶ πρὸ ἔργου  
 μᾶλλον) ταὐτὸ γὰρ εἰς ἄνθρωπος καὶ ἄνθρωπος<sup>1</sup>  
 καὶ ὦν ἄνθρωπος καὶ ἄνθρωπος, καὶ οὐχ ἕτερόν  
 τι δηλοῖ κατὰ τὴν λέξιν ἐπαναδιπλούμενον τὸ  
 εἰς ἄνθρωπος καὶ εἰς ὦν<sup>2</sup> ἄνθρωπος (δηλὸν δ'  
 30 ὅτι οὐ χωρίζεται οὗτ' ἐπὶ γενέσεως οὗτ' ἐπὶ  
 φθορᾶς), ὁμοίως δὲ καὶ ἐπὶ τοῦ ἑνός, ὥστε φανερόν  
 ὅτι ἢ πρόσθεσις ἐν τούτοις ταὐτὸ δηλοῖ, καὶ οὐδὲν  
 ἕτερον τὸ ἐν παρὰ τὸ ὄν, ἔτι δ' ἢ ἐκάστου οὐσία  
 ἐν ἔστιν οὐ κατὰ συμβεβηκός, ὁμοίως δὲ καὶ  
 ὅπερ ὄν τι—ὥσθ' ὅσα περ τοῦ ἑνός εἶδη, τοσαῦτα  
 35 καὶ τοῦ ὄντος,<sup>3</sup> περὶ ὦν τὸ τί ἐστι τῆς αὐτῆς  
 ἐπιστήμης τῷ γένει θεωρῆσαι, λέγω δ' οἶον περὶ  
 ταυτοῦ καὶ ὁμοίου καὶ τῶν ἄλλων τῶν τοιούτων·  
 1 a σχεδὸν δὲ πάντα ἀνάγεται τὰναντία εἰς τὴν  
 ἀρχὴν ταύτην· τεθεωρήσθω δ' ἡμῖν ταῦτα ἐν τῇ  
 ἐκλογῇ τῶν ἐναντίων. Καὶ τοσαῦτα μέρη φιλο-  
 σοφίας ἐστὶν ὅσαι περ αἱ οὐσῖαι ὥστε ἀναγκαῖον  
 5 εἶναί τινα πρώτην<sup>4</sup> καὶ ἐχομένην αὐτῶν ὑπάρχει  
 γὰρ εὐθὺς γένη ἔχοντα τὸ ὄν καὶ τὸ ἐν<sup>5</sup> διὸ καὶ  
 αἱ ἐπιστήμαι ἀκολουθήσουσι τούτοις ἔστι γὰρ  
 ὁ φιλόσοφος ὥσπερ ὁ μαθηματικὸς λεγόμενος  
 καὶ γὰρ αὕτη ἔχει μέρη, καὶ πρώτη τις καὶ δευτέρα  
 ἐστὶν ἐπιστήμη καὶ ἄλλαι ἐφεξῆς ἐν τοῖς μαθή-  
 μασιν.

10 Ἐπεὶ δὲ μιᾶς τάντικείμενα θεωρῆσαι, τῷ δ'

<sup>1</sup> καὶ ἄνθρωπος A<sup>b</sup> Al · om EJ.

<sup>2</sup> εἰς ἄνθρωπος καὶ εἰς ὦν Ross : εἰς ἐστὶν ἄνθρωπος καὶ ἔστιν A<sup>b</sup>.

<sup>3</sup> ὄντος ἐστὶν EJ

<sup>4</sup> πρώτην τινὰ A<sup>b</sup>.

<sup>5</sup> τὸ ὄν καὶ τὸ ἐν : τὸ ἐν καὶ τὸ ὄν A<sup>b</sup> : καὶ τὸ ἐν incl. Natorp.



but rather helps our argument if we understand them in the same sense), since "one man" and "man" and "existent man" and "man" are the same thing, *i.e.* the duplication in the statement "he is a man and an *existent* man" gives no fresh meaning (clearly the concepts of humanity and existence are not dissociated in respect of either coming to be or ceasing to be), and similarly in the case of the term "one," so that obviously the additional term in these phrases has the same significance, and Unity is nothing distinct from Being; and further if the substance of each thing is one in no accidental sense, and similarly is of its very nature something which *is*—then there are just as many species of Being as of Unity. And to study the essence of these species (I mean, *e.g.*, the study of Same and Other and all the other similar concepts—nearly all the "contraries" are reducible to this first principle; but we may consider that they have been sufficiently studied in the "Selection of Contraries" <sup>a</sup>) is the province of a science which is generically one.

And there are just as many divisions of philosophy as there are kinds of substance; so that there must be among them a First Philosophy and one which follows upon it. For Being and Unity at once entail genera, and so the sciences will correspond to these genera. The term "philosopher" is like the term "mathematician" in its uses; for mathematics too has divisions,—there is a primary and a secondary science, and others successively, in the realm of mathematics.

Now since it is the province of one science to study

<sup>a</sup> It is uncertain to what treatise Aristotle refers; in any case it is not extant.

<sup>4 a</sup> ἐνὶ ἀντίκειται πλήθος, ἀπόφασιν δὲ καὶ στέρησιν  
 μιᾶς ἐστὶ θεωρῆσαι διὰ τὸ ἀμφοτέρως θεωρεῖσθαι  
 τὸ ἔν, οὐ ἢ ἀπόφασιν (ἢ ἢ στέρησιν) ἢ<sup>1</sup> ἀπλῶς  
 λεγομένη ὅτι οὐχ ὑπάρχει ἐκεῖνο,<sup>2</sup> ἢ τινὶ γένει  
 ἔνθα μὲν οὖν τῷ ἐνὶ ἢ διαφορὰ πρόσσεστι παρὰ  
<sup>15</sup> τὸ ἐν τῇ ἀποφάσει (ἀπουσία γὰρ ἢ ἀπόφασιν  
 ἐκείνου ἐστίν), ἐν δὲ τῇ στερήσει καὶ ὑποκειμένη  
 τις φύσις γίνυται, καθ' ἣς λέγεται ἢ στέρησις.  
 τῷ δ' ἐνὶ πλήθος ἀντίκειται, ὥστε καὶ τάντικεί-  
 μενα τοῖς εἰρημένοις, τό τε ἕτερον καὶ ἀνόμοιον  
 καὶ ἄνισον, καὶ ὅσα ἄλλα λέγεται ἢ κατὰ ταῦτα  
<sup>10</sup> ἢ κατὰ πλήθος καὶ τὸ ἔν, τῆς εἰρημένης γνωρίζειν  
 ἐπιστήμης ὧν ἐστὶ καὶ ἢ ἐναντιότης· διαφορὰ  
 γάρ τις ἢ ἐναντιότης, ἢ δὲ διαφορὰ ἐτερότης.  
 ὥστ' ἐπειδὴ πολλαχῶς τὸ ἔν λέγεται, καὶ ταῦτα  
 πολλαχῶς μὲν λεχθήσεται, ὅμως δὲ μιᾶς ἅπαντά  
 ἐστὶ γνωρίζειν οὐ γὰρ εἰ πολλαχῶς, ἐτέρας, ἀλλ'  
<sup>5</sup> εἰ μήτε καθ' ἔν μήτε πρὸς ἔν οἱ λόγοι ἀνα-  
 φέρονται ἐπεὶ δὲ πάντα πρὸς τὸ πρῶτον ἀνα-  
 φέρεται, οἷον ὅσα ἐν λέγεται πρὸς τὸ πρῶτον ἔν,  
 ὡσαύτως φατέον καὶ περὶ ταυτοῦ καὶ ἐτέρου καὶ  
 τῶν ἐναντίων ἔχειν· ὥστε διελόμενον ποσαχῶς  
 λέγεται ἕκαστον οὕτως ἀποδοτέον πρὸς τὸ πρῶτον  
<sup>1</sup> ἐν ἐκάστη κατηγορία, πῶς πρὸς ἐκεῖνο λέγεται·  
 τὰ μὲν γὰρ τῷ ἔχειν ἐκεῖνο,<sup>3</sup> τὰ δὲ τῷ ποιεῖν, τὰ δὲ  
 κατ' ἄλλους λεχθήσεται τοιούτους τρόπους.

<sup>1</sup> ἢ Γ ἢ ἢ E<sup>2</sup>J ἢ E<sup>1</sup>A<sup>b</sup> Asclepius: ἢ γὰρ ἀ λέγομεν ex Alexandro Schwegler.

<sup>2</sup> ἐκεῖνο E<sup>1</sup> Alexander. ἐκεῖνω A<sup>b</sup>J et fecit E.

<sup>3</sup> ἐκεῖνα rec.

opposites, and the opposite of unity is plurality, and it is the province of one science to study the negation and privation of Unity, because in both cases we are studying Unity, to which the negation (or privation) refers, stated either in the simple form that Unity is not present, or in the form that it is not present in a particular class ; in the latter case Unity is modified by the differentia, apart from the content of the negation (for the negation of Unity is its absence) ; but in privation there is a substrate of which the privation is predicated —The opposite of Unity, then, is Plurality, and so the opposites of the above-mentioned concepts—Otherness, Dissimilarity, Inequality and everything else which is derived from these or from Plurality or Unity—fall under the cognizance of the aforesaid science. And one of them is Oppositeness ; for this is a form of Difference, and Difference is a form of Otherness. Hence since the term “one” is used in various senses, so too will these terms be used, yet it pertains to one science to take cognizance of them all. For terms fall under different sciences, not if they are used in various senses, but if their definitions are neither identical nor referable to a common notion. And since everything is referred to that which is primary, *e g* all things which are called “one” are referred to the primary “One,” we must admit that this is also true of Identity and Otherness and the Contraries. Thus we must first distinguish all the senses in which each term is used, and then attribute them to the primary in the case of each predicate, and see how they are related to it ; for some will derive their name from possessing and others from producing it, and others for similar reasons.

04 a Φανερόν οὖν [ὅπερ ἐν ταῖς ἀπορίαις ἐλέχθη]<sup>1</sup> ὅτι  
 μιᾶς περὶ τούτων καὶ τῆς οὐσίας ἐστὶ λόγον ἔχειν  
 (τοῦτο δ' ἦν ἐν τῶν ἐν τοῖς ἀπορήμασιν), καὶ  
 14 b ἐστὶ τοῦ φιλοσόφου περὶ πάντων δύνασθαι θεωρεῖν.  
 εἰ γὰρ μὴ τοῦ φιλοσόφου, τίς ἔσται ὁ ἐπισκε-  
 ψόμενος εἰ ταῦτὸ Σωκράτης καὶ Σωκράτης καθ-  
 ἦμενος, ἢ εἰ ἐν ἐνὶ ἐναντίον, ἢ τί ἐστὶ τὸ ἐναντίον,  
 ἢ ποσαχῶς λέγεται; ὁμοίως δὲ καὶ περὶ τῶν  
 5 ἄλλων τῶν τοιούτων ἐπεὶ οὖν τοῦ ἐνὸς ἢ ἐν καὶ  
 τοῦ ὄντος ἢ ὄν ταῦτα καθ' αὐτά ἐστὶ πάθη, ἀλλ'  
 οὐχ' ἢ ἀριθμοὶ ἢ γραμμαὶ ἢ πῦρ, δηλὸν ὡς ἐκείνης  
 τῆς ἐπιστήμης καὶ τί ἐστὶ γνωρίσαι καὶ τὰ συμ-  
 βεβηκότ' αὐτοῖς. καὶ οὐ ταύτη ἀμαρτάνουσιν οἱ  
 περὶ αὐτῶν σκοπούμενοι ὡς οὐ φιλοσοφοῦντες, ἀλλ'  
 10 ὅτι πρότερον ἢ οὐσία, περὶ ἧς οὐθέν ἐπαίουσιν,  
 ἐπεὶ ὡσπερ ἐστὶ καὶ ἀριθμοῦ ἢ ἀριθμὸς ἴδια πάθη,  
 οἶον περιπτότης ἀρτιότης, συμμετρία ἰσότης,  
 ὑπεροχὴ ἔλλειψις, καὶ ταῦτα καὶ καθ' αὐτοὺς καὶ  
 πρὸς ἀλλήλους ὑπάρχει τοῖς ἀριθμοῖς ὁμοίως δὲ  
 καὶ στερεῶ καὶ ἀκινήτῳ καὶ κινουμένῳ ἀβαρεῖ τε  
 15 καὶ βάρος ἔχοντι ἔστιν ἕτερα ἴδια οὕτω καὶ τῶ  
 ὄντι ἢ ὄν ἐστὶ τινὰ ἴδια, καὶ ταῦτ' ἐστὶ περὶ ὧν  
 τοῦ φιλοσόφου ἐπισκέψασθαι τὸ ἀληθές. σημεῖον  
 δέ· οἱ γὰρ διαλεκτικοὶ καὶ σοφισταὶ τὸ αὐτὸ μὲν  
 ὑποδύονται σχῆμα τῶ φιλοσόφῳ· ἢ γὰρ σοφιστικὴ  
 φαινομένη μόνον σοφία ἐστί, καὶ οἱ διαλεκτικοὶ  
 20 διαλέγονται περὶ ἀπάντων, κοινὸν δὲ πᾶσι τὸ ὄν  
 ἐστὶ· διαλέγονται δὲ περὶ τούτων δηλὸν ὅτι διὰ

<sup>1</sup> ὅπερ . . . ἐλέχθη E<sup>1</sup>J: om. E<sup>2</sup>A<sup>b</sup>.

Thus clearly it pertains to one science to give an account both of these concepts and of substance (this was one of the questions raised in the "Difficulties"<sup>a</sup>), and it is the function of the philosopher to be able to study all subjects. If this is not so, who is it who will investigate whether "Socrates" and "Socrates seated" are the same thing; or whether one thing has one contrary, or what the contrary is, or how many meanings it has<sup>b</sup> and similarly with all other such questions. Thus since these are the essential modifications of Unity *qua* Unity and of Being *qua* Being, and not *qua* numbers or lines or fire, clearly it pertains to that science<sup>c</sup> to discover both the essence and the attributes of these concepts. And those who investigate them err, not in being unphilosophical, but because the substance, of which they have no real knowledge, is prior. For just as number *qua* number has its peculiar modifications, *e g* oddness and evenness, commensurability and equality, excess and defect, and these things are inherent in numbers both considered independently and in relation to other numbers; and as similarly other peculiar modifications are inherent in the solid and the immovable and the moving and the weightless and that which has weight; so Being *qua* Being has certain peculiar modifications, and it is about these that it is the philosopher's function to discover the truth. And here is evidence of this fact. Dialecticians and sophists wear the same appearance as the philosopher, for sophistry is Wisdom in appearance only, and dialecticians discuss all subjects, and Being is a subject common to them all but clearly they discuss

<sup>a</sup> See III 1 8-10, II. 18, 19.

<sup>b</sup> Cf. X. iv.

<sup>c</sup> *i e.*, Philosophy or Metaphysics.

<sup>14</sup> b τὸ τῆς φιλοσοφίας ταῦτα εἶναι<sup>1</sup> οἰκεῖα περὶ μὲν  
 γὰρ τὸ αὐτὸ γένος στρέφεται ἢ σοφιστικὴ καὶ ἢ  
 διαλεκτικὴ τῇ φιλοσοφίᾳ, ἀλλὰ διαφέρει τῆς μὲν  
<sup>25</sup> τῷ τρόπῳ τῆς δυνάμεως, τῆς δὲ τοῦ βίου τῇ  
 προαιρέσει ἔστι δὲ ἢ διαλεκτικὴ πειραστικὴ περὶ  
 ὧν ἢ φιλοσοφία γνωριστικὴ, ἢ δὲ σοφιστικὴ  
 φαινομένη, οὔσα δ' οὐ "Ἐτι τῶν ἐναντίων ἢ  
 ἑτέρα συστοιχία στέρησις, καὶ πάντα ἀνάγεται εἰς  
 τὸ ὄν καὶ τὸ μὴ ὄν, καὶ εἰς<sup>2</sup> ἓν καὶ πλῆθος, οἷον  
 στάσις τοῦ ἑνός, κίνησις δὲ τοῦ πλῆθους τὰ  
<sup>30</sup> δ' ὄντα καὶ τὴν οὐσίαν ὁμολογοῦσιν ἐξ ἐναντίων  
 σχεδόν ἅπαντες συγκεῖσθαι· πάντες γοῦν τὰς  
 ἀρχὰς ἐναντίας λέγουσιν οἱ μὲν γὰρ περιττὸν  
 καὶ ἄρτιον, οἱ δὲ θερμὸν καὶ ψυχρὸν, οἱ δὲ πέρασ  
 καὶ ἄπειρον, οἱ δὲ φιλίαν καὶ νεῖκος. πάντα δὲ καὶ  
 τᾶλλα ἀναγόμενα φαίνεται εἰς τὸ ἓν καὶ πλῆθος  
<sup>5</sup> a (εἰλήφθω γὰρ ἢ ἀναγωγὴ ἡμῖν), αἱ δ' ἀρχαὶ καὶ  
 παντελῶς αἱ παρὰ τῶν ἄλλων ὡς εἰς γένη ταῦτα  
 πίπτουσιν φανερόν οὖν καὶ ἐκ τούτων ὅτι μιᾶς  
 ἐπιστήμης τὸ ὄν ἢ ὄν θεωρῆσαι πάντα γὰρ ἢ  
 ἐναντία ἢ ἐξ ἐναντίων, ἀρχαὶ δὲ τῶν ἐναντίων τὸ  
<sup>5</sup> ἓν καὶ πλῆθος ταῦτα δὲ μιᾶς ἐπιστήμης, εἴτε  
 καθ' ἓν λέγεται εἴτε μὴ, ὥσπερ ἴσως ἔχει καὶ τάλη-  
 θές· ἀλλ' ὅμως εἰ καὶ πολλαχῶς λέγεται τὸ ἓν,  
 πρὸς τὸ πρῶτον τᾶλλα λεχθήσεται καὶ τὰ ἐναντία  
 ὁμοίως, [καὶ διὰ τοῦτο]<sup>3</sup> καὶ εἰ μὴ ἔστι τὸ ὄν ἢ  
<sup>10</sup> τὸ ἓν καθόλου καὶ ταυτὸ ἐπὶ πάντων ἢ χωριστόν,  
 ὥσπερ ἴσως οὐκ ἔστιν, ἀλλὰ τὰ μὲν πρὸς ἓν τὰ

<sup>1</sup> ταῦτα εἶναι· εἶναι αὐτὰ EJ.

<sup>2</sup> εἰς EJ: om. A<sup>b</sup>.

<sup>3</sup> καὶ διὰ τοῦτο om. A<sup>b</sup>.

<sup>a</sup> The Pythagoreans.

<sup>b</sup> Perhaps Parmenides.

<sup>c</sup> The Platonists.

<sup>d</sup> Empedocles.

these concepts because they appertain to philosophy. For sophistry and dialectic are concerned with the same class of subjects as philosophy, but philosophy differs from the former in the nature of its capability and from the latter in its outlook on life. Dialectic treats empirically what philosophy tries to understand, and sophistry seems to be philosophy, but is not.

Further, the second column of contraries is privative, and everything is reducible to Being and Not-being, and Unity and Plurality; *e g* Rest falls under Unity and Motion under Plurality. And nearly everyone agrees that substance and existing things are composed of contraries, at any rate all speak of the first principles as contraries—some as Odd and Even,<sup>a</sup> some as Hot and Cold,<sup>b</sup> some as Limit and Unlimited,<sup>c</sup> some as Love and Strife.<sup>d</sup> And it is apparent that all other things also are reducible to Unity and Plurality (we may assume this reduction), and the principles adduced by other thinkers fall entirely under these as genera. It is clear, then, from these considerations also, that it pertains to a single science to study Being *qua* Being; for all things are either contraries or derived from contraries, and the first principles of the contraries are Unity and Plurality. And these belong to one science, whether they have reference to one common notion or not. Probably the truth is that they have not; but nevertheless even if the term “one” is used in various senses, the others will be related to the primary sense (and similarly with the contraries)—even if Being or Unity is not a universal and the same in all cases, or is not separable from particulars (as it presumably is not; the unity is in some cases one

05 a δὲ τῷ ἐφεξῆς· καὶ διὰ τοῦτο οὐ τοῦ γεωμέτρου  
 θεωρηῆσαι τί τὸ ἐναντίον ἢ τέλειον ἢ ἓν ἢ ὄν<sup>1</sup> ἢ  
 ταῦτόν ἢ ἕτερον, ἀλλ' ἢ ἐξ ὑποθέσεως. Ὅτι μὲν  
 οὖν μιᾶς ἐπιστήμης τὸ ὄν ἢ ὄν θεωρηῆσαι, καὶ τὰ  
 15 ὑπάρχοντα αὐτῷ ἢ ὄν, δῆλον, καὶ ὅτι οὐ μόνον  
 τῶν οὐσιῶν ἀλλὰ καὶ τῶν ὑπαρχόντων ἢ αὐτῇ  
 θεωρητική, τῶν τε εἰρημένων καὶ περὶ προτέρου  
 καὶ ὑστέρου, καὶ γένους καὶ εἴδους, καὶ ὄλου  
 καὶ μέρους καὶ τῶν ἄλλων τῶν τοιούτων

III Λεκτέον δὲ πότερον μιᾶς ἢ ἑτέρας ἐπιστήμης  
 20 περὶ τε τῶν ἐν τοῖς μαθήμασι καλουμένων ἀξιω-  
 μάτων καὶ περὶ τῆς οὐσίας. φανερόν δὴ ὅτι μιᾶς  
 τε καὶ τῆς τοῦ φιλοσόφου καὶ ἢ περὶ τούτων ἐστὶ  
 σκέψις ἅπασιν γὰρ ὑπάρχει τοῖς οὐσίαι, ἀλλ' οὐ  
 γένοι τινὶ χωρὶς ἰδίᾳ τῶν ἄλλων καὶ χρῶνται  
 μὲν πάντες, ὅτι τοῦ ὄντος ἐστὶν ἢ ὄν, ἕκαστον δὲ  
 25 τὸ γένος ὄν. ἐπὶ τοσοῦτον δὲ χρῶνται, ἐφ' ὅσον  
 αὐτοῖς ἰκανόν· τοῦτο δ' ἐστὶν ὅσον ἐπέχει τὸ γένος  
 περὶ οὗ φέρουσι τὰς ἀποδείξεις. ὥστ' ἐπεὶ δῆλον  
 ὅτι ἢ ὄντα ὑπάρχει πᾶσι (τοῦτο γὰρ αὐτοῖς τὸ  
 κοινόν), τοῦ περὶ τὸ ὄν ἢ ὄν γνωρίζοντος καὶ περὶ  
 τούτων ἐστὶν ἢ θεωρία. διόπερ οὐθεὶς τῶν κατὰ  
 30 μέρος ἐπισκοπούντων ἐγχειρεῖ λέγειν τι περὶ  
 αὐτῶν, εἰ ἀληθῆ ἢ μή, οὔτε γεωμέτρης οὔτ'  
 ἀριθμητικός, ἀλλὰ τῶν φυσικῶν ἔνιοι, εἰκότως  
 τοῦτο δρῶντες μόνοι γὰρ ᾤοντο περὶ τε τῆς  
 ὄλης φύσεως σκοπεῖν καὶ περὶ τοῦ ὄντος. ἐπεὶ  
 δ' ἐστὶν ἔτι τοῦ φυσικοῦ τις ἀνωτέρω (ἐν γάρ τι

<sup>1</sup> ἐν ἢ ὄν EJ: ὄν ἢ ἐν A<sup>b</sup>.



of reference and in others one of succession) For this very reason it is not the function of the geometrician to inquire what is Contrariety or Completeness or Being or Unity or Identity or Otherness, but to proceed from the assumption of them

Clearly, then, it pertains to one science to study Being *qua* Being, and the attributes inherent in it *qua* Being; and the same science investigates, besides the concepts mentioned above, Priority and Posteriority, Genus and Species, Whole and Part, and all other such concepts

III We must pronounce whether it pertains to the same science to study both the so-called axioms in mathematics and substance, or to different sciences It is obvious that the investigation of these axioms too pertains to one science, namely the science of the philosopher, for they apply to all existing things, and not to a particular class separate and distinct from the rest Moreover all thinkers employ them—because they are axioms of Being *qua* Being, and every genus possesses Being—but employ them only in so far as their purposes require; *i e*, so far as the genus extends about which they are carrying out their proofs Hence since these axioms apply to all things *qua* Being (for this is what is common to them), it is the function of him who studies Being *qua* Being to investigate them as well. For this reason no one who is pursuing a particular inquiry—neither a geometrician nor an arithmetician—attempts to state whether they are true or false; but some of the physicists did so, quite naturally; for they alone professed to investigate nature as a whole, and Being But inasmuch as there is a more ultimate type of thinker than the natural

105 a  
 35 γένος τοῦ ὄντος ἢ φύσις), τοῦ καθόλου καὶ τοῦ  
 05 b περὶ τὴν πρώτην οὐσίαν θεωρητικοῦ καὶ ἢ περὶ  
 τούτων ἂν εἶη σκέψις ἔστι δὲ σοφία τις καὶ ἢ  
 φυσική, ἀλλ' οὐ πρώτη ὅσα δ' ἐγχειροῦσι τῶν  
 λεγόντων τινὲς περὶ τῆς ἀληθείας, ὃν τρόπον δεῖ  
 ἀποδέχεσθαι, δι' ἀπαιδευσίαν τῶν ἀναλυτικῶν  
 5 τοῦτο δρῶσιν δεῖ γὰρ περὶ τούτων ἦκειν προεπι-  
 σταμένους, ἀλλὰ μὴ ἀκούοντας ζητεῖν ὅτι μὲν  
 οὖν τοῦ φιλοσόφου καὶ τοῦ περὶ πάσης τῆς οὐ-  
 σίας θεωροῦντος ἢ πέφυκεν, καὶ περὶ τῶν συλλογι-  
 στικῶν ἀρχῶν ἐστὶν ἐπισκέψασθαι, δῆλον. προσ-  
 ἦκει δὲ τὸν μάλιστα γνωρίζοντα περὶ ἕκαστον  
 10 γένος ἔχειν λέγειν τὰς βεβαιοτάτας ἀρχὰς τοῦ  
 πράγματος, ὥστε καὶ τὸν περὶ τῶν ὄντων ἢ  
 ὄντα τὰς πάντων βεβαιοτάτας ἔστι δ' οὗτος ὁ  
 φιλόσοφος βεβαιοτάτη δ' ἀρχὴ πασῶν περὶ ἣν  
 διαψευσθῆναι ἀδύνατον· γνωριμωτάτην τε γὰρ  
 ἀναγκαῖον εἶναι τὴν τοιαύτην (περὶ γὰρ ἃ μὴ  
 γνωρίζουσιν ἀπατῶνται πάντες) καὶ ἀνυπόθετον  
 15 ἣν γὰρ ἀναγκαῖον ἔχειν τὸν ὀτιοῦν ξυνηέντα τῶν  
 ὄντων, τοῦτο οὐχ ὑπόθεσις ὁ δὲ γνωρίζειν ἀναγ-  
 καῖον τῷ ὀτιοῦν γνωρίζοντι, καὶ ἦκειν ἔχοντα  
 ἀναγκαῖον.

Ὅτι μὲν οὖν ἢ τοιαύτη πασῶν βεβαιοτάτη  
 ἀρχή, δῆλον· τίς δ' ἔστιν αὕτη, μετὰ ταῦτα  
 λέγωμεν<sup>1</sup> τὸ γὰρ αὐτὸ ἅμα ὑπάρχειν τε καὶ μὴ  
 20 ὑπάρχειν ἀδύνατον τῷ αὐτῷ καὶ κατὰ τὸ αὐτὸ  
 (καὶ ὅσα ἄλλα προσδιορισαίμεθ' ἂν, ἔστω προσ-  
 διωρισμένα πρὸς τὰς λογικὰς δυσχερείας) αὕτη  
 δὴ πασῶν ἐστὶ βεβαιοτάτη τῶν ἀρχῶν· ἔχει γὰρ

<sup>1</sup> λέγωμεν J recs. Γ: λέγομεν EA<sup>b</sup>

philosopher (for nature is only a genus of Being), the investigation of these axioms too will belong to the universal thinker who studies the primary reality. Natural philosophy is a kind of Wisdom, but not the primary kind. As for the attempts of some of those who discuss how the truth should be received, they are due to lack of training in logic; for they should understand these things before they approach their task, and not investigate while they are still learning. Clearly then it is the function of the philosopher, *ie* the student of the whole of reality in its essential nature, to investigate also the principles of syllogistic reasoning. And it is proper for him who best understands each class of subject to be able to state the most certain principles of that subject; so that he who understands the modes of Being *qua* Being should be able to state the most certain principles of all things. Now this person is the philosopher, and the most certain principle of all is that about which one cannot be mistaken; for such a principle must be both the most familiar (for it is about the unfamiliar that errors are always made), and not based on hypothesis. For the principle which the student of any form of Being must grasp is no hypothesis; and that which a man must know if he knows anything he must bring with him to his task.

Clearly, then, it is a principle of this kind that is the most certain of all principles. Let us next state *what* this principle is. "It is impossible for the same attribute at once to belong and not to belong to the same thing and in the same relation"; and we must add any further qualifications that may be necessary to meet logical objections. This is the most certain of all principles, since it possesses the required de-

1005 b

τὸν εἰρημένον διορισμόν. ἀδύνατον γὰρ ὄντινον  
 ταῦτὸν ὑπολαμβάνειν εἶναι καὶ μὴ εἶναι, καθάπερ  
 25 τινὲς οἴονται λέγειν Ἡράκλειτον οὐκ ἔστι γὰρ  
 ἀναγκαῖον, ἃ τις λέγει, ταῦτα καὶ ὑπολαμβάνειν.  
 εἰ δὲ μὴ ἐνδέχεται ἅμα ὑπάρχειν τῷ αὐτῷ  
 τὰναντία (προσδιωρίσθω δ' ἡμῖν καὶ ταύτη τῇ  
 προτάσει τὰ εἰωθότα), ἐναντία δ' ἔστι δόξα δόξῃ ἢ  
 30 τῆς ἀντιφάσεως, φανερόν ὅτι ἀδύνατον ἅμα ὑπο-  
 λαμβάνειν τὸν αὐτὸν εἶναι καὶ μὴ εἶναι τὸ αὐτό  
 ἅμα γὰρ ἂν ἔχοι τὰς ἐναντίας δόξας ὁ διεψευ-  
 σμένος περὶ τούτου. διὸ πάντες οἱ ἀποδεικνύντες  
 εἰς ταύτην ἀνάγουσιν ἐσχάτην δόξαν φύσει γὰρ  
 ἀρχὴ καὶ τῶν ἄλλων ἀξιωμαίων αὕτη πάντων

35 IV Εἰσὶ δὲ τινες οἱ, καθάπερ εἶπομεν, αὐτοὶ τε  
 006 a ἐνδέχεσθαι φασι τὸ αὐτὸ εἶναι καὶ μὴ εἶναι, καὶ  
 ὑπολαμβάνειν οὕτως χρῶνται δὲ τῷ λόγῳ τούτῳ  
 πολλοὶ καὶ τῶν περὶ φύσεως ἡμεῖς δὲ νῦν  
 εἰλήφαμεν ὡς ἀδυνάτου ὄντος ἅμα εἶναι καὶ μὴ  
 5 εἶναι, καὶ διὰ τούτου ἐδείξαμεν ὅτι βεβαιοτάτη  
 αὕτη τῶν ἀρχῶν πασῶν ἀξιούσι δὴ καὶ τούτο  
 ἀποδεικνύειν τινὲς δι' ἀπαιδευσίαν ἔστι γὰρ  
 ἀπαιδευσία τὸ μὴ γινώσκειν τίνων δεῖ ζητεῖν  
 ἀπόδειξιν καὶ τίνων οὐ δεῖ ὅλως μὲν γὰρ ἀπάν-  
 των ἀδύνατον ἀπόδειξιν εἶναι εἰς ἀπειρον γὰρ ἂν  
 10 βαδίζοι, ὥστε μηδ' οὕτως εἶναι ἀπόδειξιν· εἰ δὲ  
 τινων μὴ δεῖ ζητεῖν ἀπόδειξιν, τίνα ἀξιούσιν  
 εἶναι μᾶλλον τοιαύτην ἀρχὴν οὐκ ἂν ἔχοιεν εἰπεῖν  
 ἔστι δ' ἀποδείξαι ἐλεγκτικῶς καὶ περὶ τούτου ὅτι

<sup>a</sup> For examples of Heraclitus's paradoxes cf frs 36, 57, 59 (Bywater), and for their meaning see Burnet, *E.G.P.* § 80.  
<sup>b</sup> sc., in logic.

<sup>c</sup> Every proof is based upon some hypothesis, to prove

finition ; for it is impossible for anyone to suppose that the same thing is and is not, as some imagine that Heraclitus says <sup>a</sup>—for what a man says does not necessarily represent what he believes. And if it is impossible for contrary attributes to belong at the same time to the same subject (the usual qualifications must be added to this premiss also), and an opinion which contradicts another is contrary to it, then clearly it is impossible for the same man to suppose at the same time that the same thing is and is not ; for the man who made this error would entertain two contrary opinions at the same time. Hence all men who are demonstrating anything refer back to this as an ultimate belief ; for it is by nature the starting-point of all the other axioms as well.

IV. There are some, however, as we have said, who both state themselves that the same thing can be and not be, and say that it is possible to hold this view. Many even of the physicists adopt this theory. But we have just assumed that it is impossible at once to be and not to be, and by this means we have proved that this is the most certain of all principles. Some, indeed, demand to have the law proved, but this is because they lack education <sup>b</sup> ; for it shows lack of education not to know of what we should require proof, and of what we should not. For it is quite impossible that everything should have a proof ; the process would go on to infinity, so that even so there would be no proof <sup>c</sup>. If on the other hand there are some things of which no proof need be sought, they cannot say what principle they think to be more self-evident. Even in the case of this law, however,

which another hypothesis must be assumed, and so on *ad infinitum*.

<sup>06 a</sup> ἀδύνατον, ἂν μόνον τι λέγῃ ὁ ἀμφισβητῶν· ἂν δὲ  
 μηθέν, γελοῖον τὸ ζητεῖν λόγον πρὸς τὸν μηθενὸς  
 1, ἔχοντα λόγον, ἢ μὴ ἔχει· ὁμοῖος γὰρ φυτῷ ὁ  
 τοιοῦτος ἢ τοιοῦτος ἤδη τὸ δ' ἐλεγκτικῶς  
 ἀποδείξαι λέγω διαφέρειν καὶ τὸ ἀποδείξαι, ὅτι  
 ὁ ἀποδεικνύων μὲν ἂν δόξειεν αἰτεῖσθαι τὸ ἐν  
 ἀρχῇ, ἄλλου δὲ τοῦ τοιοῦτου αἰτίου ὄντος ἔλεγχος  
 ἂν εἶη καὶ οὐκ ἀπόδειξις. ἀρχὴ δὲ πρὸς ἅπαντα  
 20 τὰ τοιαῦτα οὐ τὸ ἀξιοῦν ἢ εἶναι τι λέγειν ἢ μὴ  
 εἶναι (τοῦτο μὲν γὰρ τάχ' ἂν τις ὑπολάβοι τὸ ἐξ  
 ἀρχῆς αἰτεῖν), ἀλλὰ τὸ σημαίνειν γέ τι καὶ αὐτῷ  
 καὶ ἄλλω (τοῦτο γὰρ ἀνάγκη, εἶπερ λέγοι τι· εἰ  
 γὰρ μὴ, οὐκ ἂν εἶη τῷ τοιοῦτῷ λόγος, οὔτ' αὐτῷ  
 πρὸς αὐτὸν οὔτε πρὸς ἄλλον) ἂν δέ τις τοῦτο διδῶ,  
 2, ἔσται ἀπόδειξις· ἤδη γάρ τι ἔσται ὠρισμένον.  
 ἀλλ' αἴτιος οὐχ ὁ ἀποδεικνύς ἀλλ' ὁ ὑπομένων·  
 ἀναιρῶν γὰρ λόγον ὑπομένει λόγον. ἔτι δὲ ὁ τοῦτο  
 συγχωρήσας συγκεχώρηκέ τι ἀληθές εἶναι χωρὶς  
 ἀποδείξεως [ὥστε οὐκ ἂν πᾶν οὕτως καὶ οὐχ  
 οὕτως ἔχοι]<sup>1</sup>

Πρῶτον μὲν οὖν δηλον ὡς τοῦτό γ' αὐτὸ ἀληθές,  
 30 ὅτι σημαίνει τὸ ὄνομα τὸ εἶναι ἢ μὴ εἶναι τοδί  
 ὥστ' οὐκ ἂν πᾶν οὕτως καὶ οὐχ οὕτως ἔχοι. ἔτι  
 εἰ τὸ ἄνθρωπος σημαίνει ἔν, ἔστω τοῦτο τὸ  
 ζῶον δίπουν. λέγω δὲ τὸ ἐν σημαίνειν τοῦτο εἰ  
 τοῦτ' ἔστιν ἄνθρωπος, ἂν ἢ τι ὁ ἄνθρωπος, τοῦτ'

<sup>1</sup> ὥστε . . . ἔχοι A<sup>b</sup>: om. E.J.

we can demonstrate the impossibility by refutation, if only our opponent makes some statement. If he makes none, it is absurd to seek for an argument against one who has no arguments of his own about anything, in so far as he has none; for such a person, in so far as he is such, is really no better than a vegetable. And I say that proof by refutation differs from simple proof in that he who attempts to prove might seem to beg the fundamental question, whereas if the discussion is provoked thus by someone else, refutation and not proof will result. The starting-point for all such discussions is not the claim that he should state that something is or is not so (because this might be supposed to be a begging of the question), but that he should say something significant both to himself and to another (this is essential if any argument is to follow, for otherwise such a person cannot reason either with himself or with another); and if this is granted, demonstration will be possible, for there will be something already defined. But the person responsible is not he who demonstrates but he who acquiesces; for though he disowns reason he acquiesces to reason. Moreover, he who makes such an admission as this has admitted the truth of something apart from demonstration [so that not everything will be "so and not so"].

Thus in the first place it is obvious that this at any rate is true · that the term "to be" or "not to be" has a definite meaning; so that not everything can be "so and not so." Again, if "man" has one meaning, let this be "two-footed animal." By "has one meaning" I mean this. if X means "man," then if anything is a man, its humanity will

ἔσται τὸ ἀνθρώπῳ εἶναι διαφέρει δ' οὐθὲν οὐδ  
εἰ πλείω τις φαίη σημαίνειν, μόνον δὲ ὠρισμένα·  
τεθείη γὰρ ἂν ἐφ' ἐκάστῳ λόγῳ<sup>1</sup> ἕτερον ὄνομα.  
λέγω δ' οἶον, εἰ μὴ φαίη τὸ ἀνθρώπος ἔν σημαίνειν,  
πολλὰ δέ, ὧν ἑνὸς μὲν εἰς λόγος τὸ ζῶον δίπουν,  
εἶεν<sup>2</sup> δὲ καὶ ἕτεροι πλείους, ὠρισμένοι δὲ τὸν  
ἀριθμὸν τεθείη γὰρ ἂν ἴδιον ὄνομα καθ' ἕκαστον  
τὸν λόγον<sup>3</sup> εἰ δὲ μὴ [τεθείη]<sup>4</sup> ἀλλ' ἄπειρα σημαίνειν  
φαίη, φανερόν ὅτι οὐκ ἂν εἴη λόγος· τὸ γὰρ μὴ ἔν<sup>5</sup>  
σημαίνειν οὐθὲν σημαίνειν ἐστίν, μὴ σημαίνοντων  
δὲ τῶν ὀνομάτων ἀνήρηται τὸ διαλέγεσθαι πρὸς  
ἀλλήλους, κατὰ δὲ τὴν ἀλήθειαν καὶ πρὸς αὐτόν<sup>6</sup>.  
οὐθὲν γὰρ ἐνδέχεται νοεῖν μὴ νοοῦντα ἔν, εἰ δ'  
ἐνδέχεται, τεθείη ἂν ὄνομα τούτῳ τῷ πράγματι ἔν.  
ἔστω δὴ, ὡσπερ ἐλέχθη κατ' ἀρχάς, σημαίνον τι  
τὸ ὄνομα καὶ σημαῖνον ἔν· οὐ δὴ ἐνδέχεται τὸ  
ἀνθρώπῳ εἶναι σημαίνειν ὅπερ μὴ εἶναι ἀνθρώπῳ,  
εἰ τὸ ἀνθρώπος σημαίνει μὴ μόνον καθ' ἑνὸς ἀλλὰ  
καὶ ἔν (οὐ γὰρ τοῦτο ἀξιούμεν τὸ ἔν σημαίνειν, τὸ  
καθ' ἑνός, ἐπεὶ οὕτω γε κἂν τὸ μουσικὸν καὶ τὸ  
λευκὸν καὶ τὸ ἀνθρώπος ἔν ἐσήμαινεν, ὥστε ἔν  
ἅπαντα ἔσται· συνώνυμα γάρ) καὶ οὐκ ἔσται  
εἶναι καὶ μὴ εἶναι τὸ αὐτὸ ἀλλ' ἢ καθ' ὁμωνυμίαν,  
ὡσπερ ἂν εἰ ὄν ἡμεῖς ἀνθρώπον καλοῦμεν ἄλλοι  
μὴ ἀνθρώπον καλοῦεν τὸ δ' ἀπορούμενον οὐ  
τοῦτό ἐστιν, εἰ ἐνδέχεται τὸ αὐτὸ ἅμα εἶναι καὶ  
μὴ εἶναι ἀνθρώπον τὸ ὄνομα, ἀλλὰ τὸ πρᾶγμα.  
ἰ δὲ μὴ σημαίνει ἕτερον τὸ ἀνθρώπος καὶ τὸ μὴ

<sup>1</sup> λόγῳ] τῷ λόγῳ A<sup>b</sup>.

<sup>2</sup> εἶεν A<sup>b</sup> εἰσι E<sup>J</sup>.

<sup>3</sup> τῶν λόγων E.

<sup>4</sup> Gomperz.

<sup>5</sup> ἔν τι recc.

<sup>6</sup> αὐτόν Γ Asclepius, Bessarion: αὐτόν codd.



consist in being X. And it makes no difference even if it be said that "man" has several meanings, provided that they are limited in number: for one could assign a different name to each formula. For instance, it might be said that "man" has not one meaning but several, one of which has the formula "two-footed animal," and there might be many other formulae as well, if they were limited in number; for a particular name could be assigned to each formula. If on the other hand it be said that "man" has an infinite number of meanings, obviously there can be no discourse; for not to have one meaning is to have no meaning, and if words have no meaning there is an end of discourse with others, and even, strictly speaking, with oneself, because it is impossible to think of anything if we do not think of one thing, and even if this were possible, one name might be assigned to that of which we think. Now let this name, as we said at the beginning, have a meaning, and let it have *one* meaning. Now it is impossible that "being man" should have the same meaning as "not being man," that is, if "man" is not merely predicable of one subject but has one meaning (for we do not identify "having one meaning" with "being predicable of one subject," since in this case "cultured" and "white" and "man" would have one meaning, and so all things would be one; for they would all have the same meaning). And it will be impossible for the same thing to be and not to be, except by equivocation, as *e.g.* one whom we call "man" others might call "not-man"; but the problem is whether the same thing can at once be and not be "man," not in *name*, but in *fact*. If "man" and "not-man" have not different mean-

<sup>1</sup> ἄνθρωπος, δῆλον ὅτι καὶ τὸ μὴ εἶναι ἄνθρώπῳ τοῦ εἶναι ἄνθρώπῳ ὡστ' ἔσται τὸ ἄνθρώπῳ εἶναι μὴ ἄνθρώπῳ εἶναι ἔν γὰρ ἔσται. τοῦτο γὰρ σημαίνει τὸ εἶναι ἔν, ὡς λῶπιον καὶ ἱμάτιον, εἰ ὁ λόγος εἰς. εἰ δὲ ἔσται ἔν, ἔν σημανεῖ<sup>1</sup> τὸ ἄνθρώπῳ εἶναι καὶ μὴ ἄνθρώπῳ ἀλλ' ἐδέδεικτο ὅτι ἕτερον σημαίνει. ἀνάγκη τοίνυν, εἴ τί ἐστιν ἀληθὲς εἰπεῖν ὅτι ἄνθρωπος, ζῶον εἶναι δίπουν τοῦτο γὰρ ἦν ὁ ἐσήμαινε τὸ ἄνθρωπος. εἰ δ' ἀνάγκη τοῦτο, οὐκ ἐνδέχεται μὴ εἶναι τότε τὸ<sup>2</sup> αὐτὸ ζῶον δίπουν τοῦτο γὰρ σημαίνει τὸ ἀνάγκη εἶναι, τὸ ἀδύνατον εἶναι μὴ εἶναι [ἄνθρωπον]<sup>3</sup> οὐκ ἄρα ἐνδέχεται ἅμα ἀληθὲς εἶναι εἰπεῖν τὸ αὐτὸ ἄνθρωπον εἶναι καὶ μὴ εἶναι ἄνθρωπον. ὁ δ' αὐτὸς λόγος καὶ ἐπὶ τοῦ μὴ εἶναι ἄνθρωπον· τὸ γὰρ ἄνθρώπῳ εἶναι καὶ τὸ μὴ ἄνθρώπῳ εἶναι ἕτερον σημαίνει, εἴπερ καὶ τὸ λευκὸν εἶναι καὶ τὸ ἄνθρωπον εἶναι ἕτερον· πολὺ γὰρ ἀντικεῖται ἐκείνο μᾶλλον, ὥστε σημαίνειν ἕτερον εἰ δὲ καὶ τὸ λευκὸν φήσει τὸ αὐτὸ καὶ ἔν σημαίνειν, πάλιν τὸ αὐτὸ ἐροῦμεν ὅπερ καὶ πρότερον ἐλέχθη, ὅτι ἔν πάντα ἔσται,<sup>4</sup> καὶ οὐ μόνον τὰ ἀντικείμενα. εἰ δὲ μὴ ἐνδέχεται τοῦτο, συμβαίνει τὸ λεχθέν, ἂν ἱποκρίνηται τὸ ἐρωτώμενον εἰ δὲ προστιθῆ ἔρωτωντος ἀπλῶς καὶ τὰς ἀποφάσεις, οὐκ ἀποκρίνεται τὸ ἐρωτώμενον. οὐθὲν γὰρ κωλύει εἶναι τὸ αὐτὸ καὶ ἄνθρωπον καὶ λευκὸν καὶ ἄλλα μυρία τὸ πλῆθος· ἀλλ' ὅμως ἐρομένου εἰ ἀληθὲς εἰπεῖν ἄνθρωπον τοῦτο εἶναι ἢ οὐ, ἀποκριτέον τὸ ἔν

<sup>1</sup> σημανεῖ ex Alexandro Ross· σημαίνει

<sup>2</sup> τότε τὸ Alexander (?), Bonitz: τότε EJ Asclepius: τὸ A<sup>b</sup>.

<sup>3</sup> Christ. <sup>4</sup> ἔσται Alexander, Bonitz· ἐστὶ

<sup>a</sup> i.e. the same as "man."

<sup>b</sup> § 12.

ings, clearly "not being a man" will mean nothing different from "being a man"; and so "being a man" will be "not being a man"; they will be one. For "to be one" means, as in the case of "garment" 14 and "coat," that the formula is one. And if "being man" and "being not-man" are to be one, they will have the same meaning; but it has been proved above that they have different meanings. If then anything can be truly said to be "man," it must be "two-footed animal"; for this is what "man" was intended to mean. And if this is necessarily so, 15 it is impossible that at the same time the same thing should *not* be "two-footed animal." For "to be necessarily so" means this: that it is impossible not to be so. Thus it cannot be true to say at the same time that the same thing is and is not man. And the 16 same argument holds also in the case of not being man; because "being man" and "being not-man" have different meanings if "being white" and "being man" have different meanings (for the opposition is much stronger in the former case so as to produce different meanings). And if we are told that 17 "white" too means one and the same thing,<sup>a</sup> we shall say again just what we said before,<sup>b</sup> that in that case all things, and not merely the opposites, will be one. But if this is impossible, what we have stated follows; that is, if our opponent answers our question; but if when asked the simple question he includes in his answer the negations, he is not answering our question. There is nothing to prevent 18 the same thing from being "man" and "white" and a multitude of other things; but nevertheless when asked whether it is true to say that X is man, or not, one should return an answer that means one

Thus i  
oppon  
answe  
questi  
have p  
our pc

If he s  
"A is  
not B,  
not an  
ing th  
questi

σημαίνον, καὶ οὐ προσθετέον ὅτι καὶ λευκὸν καὶ  
 1 μέγα καὶ γὰρ ἀδύνατον ἄπειρά γ' ὄντα τὰ συμ-  
 βεβηκότα διελθεῖν ἢ οὖν ἅπαντα διελθέτω ἢ μηθέν.  
 ὁμοίως τοίνυν εἰ καὶ μυριάκις ἐστὶ τὸ αὐτὸ ἄνθρω-  
 πος καὶ οὐκ ἄνθρωπος, οὐ προσαποκριτέον τῷ  
 ἐρομένῳ εἰ ἔστιν ἄνθρωπος, ὅτι ἐστὶν ἅμα καὶ οὐκ  
 20 ἄνθρωπος, εἰ μὴ καὶ τὰλλα ὅσα συμβέβηκε προσ-  
 αποκριτέον, ὅσα ἐστὶν ἢ μὴ ἐστίν· εἰ δὲ τοῦτο  
 ποιῆ, οὐ διαλέγεται

Ὅλως δ' ἀναιροῦσιν οἱ τοῦτο λέγοντες οὐσίαν  
 καὶ τὸ τί ἦν εἶναι. πάντα γὰρ ἀνάγκη συμβε-  
 βηκείαι φάσκων αὐτοῖς, καὶ τὸ ὅπερ ἀνθρώπῳ  
 εἶναι ἢ ζῶν εἶναι μὴ εἶναι. εἰ γὰρ ἔσται τι  
 ὅπερ ἀνθρώπῳ εἶναι, τοῦτο οὐκ ἔσται μὴ ἀν-  
 25 θρώπῳ εἶναι ἢ μὴ εἶναι ἀνθρώπῳ (καίτοι αὐταὶ  
 ἀποφάσεις τούτου). ἐν γὰρ ἦν ὁ ἐσήμαινε,<sup>1</sup> καὶ ἦν  
 τοῦτο τινὸς οὐσία τὸ δ' οὐσίαν σημαίνειν ἐστὶν  
 ὅτι οὐκ ἄλλο τι τὸ εἶναι αὐτῷ. εἰ δ' ἔσται αὐτῷ  
 τὸ ὅπερ ἀνθρώπῳ εἶναι ἢ ὅπερ μὴ ἀνθρώπῳ εἶναι  
 ἢ ὅπερ μὴ εἶναι ἀνθρώπῳ, ἄλλο<sup>2</sup> ἔσται ὥστ'  
 30 ἀναγκαῖον αὐτοῖς λέγειν ὅτι οὐθενὸς ἔσται τοιοῦτος  
 λόγος, ἀλλὰ πάντα κατὰ συμβεβηκός τούτῳ γὰρ  
 διώριστα οὐσία καὶ τὸ συμβεβηκός· τὸ γὰρ λευκὸν  
 τῷ ἀνθρώπῳ συμβέβηκεν, ὅτι ἔστι μὲν λευκὸς ἀλλ'  
 οὐχ ὅπερ λευκόν. εἰ δὲ πάντα κατὰ συμβεβηκός  
 35 λέγεται, οὐθέν ἔσται πρῶτον τὸ καθ' οὗ,<sup>3</sup> εἰ αἰεὶ τὸ  
 συμβεβηκός καθ' ὑποκειμένου τινὸς σημαίνει τὴν  
 1 b κατηγορίαν. ἀνάγκη ἄρα εἰς ἄπειρον ἰέναι. ἀλλ'

<sup>1</sup> ἐσήμαινε· ἐσήμηνε E.J. Bekker.

<sup>2</sup> ἄλλο· ἄλλο τι A<sup>b</sup>.

<sup>3</sup> καθ' οὗ ci. Alexander: καθόλου.

thing, and not add that X is white and large. It is indeed impossible to enumerate all the infinity of accidents, and so let him enumerate either all or none. Similarly therefore, even if the same thing 1 is ten thousand times "man" and "not-man," one should not include in one's answer to the question whether it is "man" that it is at the same time also "not-man," unless one is also bound to include in one's answer all the other accidental things that the subject is or is not. And if one does this, he is not arguing properly

In general those who talk like this do away with substance and essence, for they are compelled to assert 20 that all things are accidents, and that there is no such thing as "being essentially man" or "animal." For if there is to be such a thing as "being essentially man," this will not be "being not-man," nor "not-being man" (and yet these are negations of it); for it was intended to have one meaning, *i. e.* the substance of something. But to denote a substance 21 means that the essence is that and nothing else, and if for it "being essentially man" is the same as either "being essentially not-man" or "essentially not-being man," the essence will be something else. Thus they are compelled to say 22 that nothing can have such a definition as this, but that all things are accidental; for this is the distinction between substance and accident: "white" is an accident of "man," because although he is white, he is not white in essence. And since the accidental 23 always implies a predication about some subject, if all statements are accidental, there will be nothing primary about which they are made; so the predication must proceed to infinity. But this is impossible.

7<sup>b</sup> ἀδύνατον· οὐδὲ γὰρ πλείω συμπλέκεται δυοῖν τὸ  
 γὰρ συμβεβηκὸς οὐ συμβεβηκότι συμβεβηκός,  
 εἰ μὴ ὅτι ἄμφω συμβέβηκε ταύτῳ. λέγω δ' οἶον  
 τὸ λευκὸν μουσικόν, καὶ τοῦτο λευκόν, ὅτι ἄμφω  
 τῷ ἀνθρώπῳ συμβέβηκεν. ἀλλ' οὐχ ὁ Σωκράτης  
 μουσικὸς οὕτως, ὅτι ἄμφω συμβέβηκεν ἑτέρῳ τινί  
 ἐπεὶ τοίνυν τὰ μὲν οὕτως τὰ δ' ἐκείνως λέγεται  
 συμβεβηκότα, ὅσα οὕτως λέγεται ὡς τὸ λευκὸν  
 τῷ Σωκράτει, οὐκ ἐνδέχεται ἄπειρα εἶναι ἐπὶ τὸ  
 10 ἄνω, οἶον τῷ Σωκράτει τῷ λευκῷ ἕτερόν τι συμ-  
 βεβηκός οὐ γὰρ γίνεταί τι ἐν ἐξ ἀπάντων. οὐδὲ  
 δὴ τῷ λευκῷ ἕτερόν τι ἔσται συμβεβηκός, οἶον τὸ  
 μουσικόν· οὐθέν τε γὰρ μᾶλλον τοῦτο ἐκείνῳ ἢ  
 ἐκείνῳ τούτῳ συμβέβηκεν, καὶ ἅμα διώριστα ὅτι  
 τὰ μὲν οὕτω συμβέβηκε, τὰ δ' ὡς τὸ μουσικόν  
 15 Σωκράτει ὅσα δ' οὕτως, οὐ συμβεβηκότι συμ-  
 βέβηκε τὸ συμβεβηκός, ἀλλ' ὅσα ἐκείνως, ὥστ'  
 οὐ πάντα κατὰ συμβεβηκός λεχθήσεται. ἔσται  
 ἄρα τι καὶ ὡς<sup>1</sup> οὐσίαν σημαῖνον. εἰ δὲ τοῦτο,  
 δέδεικται ὅτι ἀδύνατον ἅμα κατηγορεῖσθαι τὰς  
 ἀντιφάσεις.

Ἔτι εἰ ἀληθεῖς αἱ ἀντιφάσεις ἅμα κατὰ  
 20 τοῦ αὐτοῦ πᾶσαι, δῆλον ὡς ἅπαντα ἔσται ἔν.  
 ἔσται γὰρ τὸ αὐτὸ καὶ τριήρης καὶ τοῖχος καὶ  
 ἄνθρωπος, εἰ κατὰ παντός τι ἢ καταφῆσαι ἢ  
 ἀποφῆσαι ἐνδέχεται, καθάπερ ἀνάγκη τοῖς τὸν  
 Πρωταγόρου λέγουσι λόγον. εἰ γὰρ τῷ δοκεῖ μὴ

<sup>1</sup> ὡς Ross: ὡς.

<sup>a</sup> i.e., that all appearances and opinions are true.

for not even more than two accidents can be combined in predication. An accident cannot be an accident of an accident unless both are accidents of the same thing. I mean, *e.g.*, that "white" is "cultured" and "cultured" "white" merely because both are accidents of a man. But it is not in this sense—that both terms are accidents of something else—that Socrates is cultured. Therefore since some accidents are predicated in the latter and some in the former sense, such as are predicated in the way that "white" is of Socrates cannot be an infinite series in the upper direction: *e.g.* there cannot be another accident of "white Socrates," for the sum of these predications does not make a single statement. Nor can "white" have a further accident, such as "cultured"; for the former is no more an accident of the latter than *vice versa*; and besides we have distinguished that although some predicates are accidental in this sense, others are accidental in the sense that "cultured" is to Socrates; and whereas in the former case the accident is an accident of an accident, it is not so in the latter; and thus not all predications will be of accidents. Therefore even so there will be something which denotes substance. And if this is so, we have proved that contradictory statements cannot be predicated at the same time.

Again, if all contradictory predications of the same subject at the same time are true, clearly all things will be one. For if it is equally possible either to affirm or deny anything of anything, the same thing will be a trireme and a wall and a man; which is what necessarily follows for those who hold the theory of Protagoras.<sup>a</sup> For if anyone thinks that a man is

<sup>b</sup> εἶναι τριήρης ὁ ἄνθρωπος, δῆλον ὅτι οὐκ ἔστι  
 τριήρης· ὥστε καὶ ἔστιν, εἴπερ ἢ ἀντίφασις ἀληθής.  
 καὶ γίνεταί δὴ τὸ τοῦ Ἀναξαγόρου, ὁμοῦ πάντα  
 χρήματα· ὥστε μὴτὲν ἀληθῶς ὑπάρχειν τὸ ἀόρι-  
 στον οὖν εἰκόασι λέγειν, καὶ οἰόμενοι τὸ ὄν λέγειν  
 περὶ τοῦ μὴ ὄντος λέγουσιν τὸ γὰρ δυνάμει ὄν καὶ  
 μὴ ἐντελεχείᾳ τὸ ἀόριστόν ἐστιν. ἀλλὰ μὴν λεκ-  
<sup>o</sup>τέον γ' αὐτοῖς κατὰ παντός <παντός><sup>1</sup> τὴν κατά-  
 φασιν ἢ τὴν ἀπόφασιν ἄτοπον γὰρ εἰ ἐκάστῳ ἢ  
 μὲν αὐτοῦ ἀπόφασις ὑπάρξει, ἢ δ' ἑτέρου ὃ μὴ  
 ὑπάρχει αὐτῷ οὐχ ὑπάρξει· λέγω δ' οἷον εἰ ἀληθὲς  
 εἰπεῖν τὸν ἄνθρωπον ὅτι οὐκ ἄνθρωπος, δῆλον ὅτι  
 καὶ ἢ τριήρης ἢ<sup>2</sup> οὐ τριήρης. εἰ μὲν οὖν ἢ κατά-  
 φασις, ἀνάγκη καὶ τὴν ἀπόφασιν· εἰ δὲ μὴ ὑπάρχει  
<sup>a</sup> ἢ κατάφασις, ἢ γε ἀπόφασις ὑπάρξει μᾶλλον ἢ ἢ<sup>3</sup>  
 αὐτοῦ. εἰ οὖν κακείνη ὑπάρχει, ὑπάρξει καὶ ἢ τῆς  
 τριήρους· εἰ δ' αὕτη, καὶ ἢ κατάφασις. Ταυ-  
 τά τε οὖν συμβαίνει τοῖς λέγουσι τὸν λόγον τοῦτον,  
 καὶ ὅτι οὐκ ἀνάγκη ἢ φάναι ἢ ἀποφάναι. εἰ γὰρ  
<sup>5</sup> ἀληθὲς ὅτι<sup>4</sup> ἄνθρωπος καὶ οὐκ ἄνθρωπος, δῆλον  
 ὅτι καὶ οὐτ' ἄνθρωπος οὐτ' οὐκ ἄνθρωπος ἔσται·  
 τοῖν γὰρ δυοῖν δύο ἀποφάσεις. εἰ δὲ μία ἐξ ἀμφοῖν  
 ἐκείνη, καὶ αὕτη μία ἂν εἴη ἀντικειμένη Ἐτι  
 ἦτοι περὶ ἅπαντα οὕτως ἔχει, καὶ ἔστι καὶ λευκὸν  
 καὶ οὐ λευκὸν καὶ ὄν καὶ οὐκ ὄν, καὶ περὶ τὰς ἄλλας

<sup>1</sup> ex Alexandro Bonitz.

<sup>2</sup> ἢ τριήρης ἢ A<sup>b</sup>: om. cet.

<sup>3</sup> ἢ ἢ EJ: om. A<sup>b</sup>: ἢ Bekker.

<sup>4</sup> ὅτι· ἔστιν ὅτι A<sup>b</sup>.



not a trireme. he is clearly not a trireme, and so he also is a trireme if the contradictory statement is true. And the result is the dictum of Anaxagoras, 28 "all things mixed together"<sup>a</sup>; so that nothing truly exists. It seems, then, that they are speaking of the Indeterminate; and while they think that they are speaking of what exists, they are really speaking of what does not; for the Indeterminate is that which exists potentially but not actually. But indeed they must admit the affirmation or negation 29 of any predicate of any subject, for it is absurd that in the case of each term its own negation should be true, and the negation of some other term which is not true of it should not be true. I mean *e.g.*, that if it is true to say that a man is not a man, it is obviously also true to say that he is or is not a trireme. Then if the affirmation is true, so must the negation 30 be true; but if the affirmation is not true the negation will be even truer than the negation of the original term itself. Therefore if the latter negation is true, the negation of "trireme" will also be true, and if this is true, the affirmation will be true too.

And not only does this follow for those who hold this theory, but also that it is not necessary either to affirm or to deny a statement. For if it is true 31 that X is both man and not-man, clearly he will be neither man nor not-man; for to the two statements there correspond two negations, and if the former is taken as a single statement compounded out of two, the latter is also a single statement and opposite to it.

Again, either this applies to all terms, and the 32 same thing is both white and not-white, and existent and non-existent, and similarly with all other asser-

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10 φάσεις καὶ ἀποφάσεις ὁμοιοτρόπως, ἢ οὐ ἀλλὰ  
 περὶ μὲν τινας, περὶ τινας δ' οὐ. καὶ εἰ μὲν μὴ  
 περὶ πάσας, αὐταὶ ἂν εἶεν ὁμολογούμεναι· εἰ δέ  
 περὶ πάσας, πάλιν ἦτοι καθ' ὅσων τὸ φῆσαι καὶ  
 ἀποφῆσαι καὶ καθ' ὅσων ἀποφῆσαι καὶ φῆσαι, ἢ  
 15 ἀποφῆσαι οὐ πάντων φῆσαι. καὶ εἰ μὲν οὕτως,  
 εἴη ἂν τι παγίως οὐκ ὄν, καὶ αὕτη βεβαία δόξα·  
 καὶ εἰ τὸ μὴ εἶναι βέβαιόν τι καὶ γνώριμον, γνωρι-  
 μωτέρα ἂν<sup>1</sup> εἴη ἢ φάσις ἢ ἀντικειμένη· εἰ δέ  
 ὁμοίως καὶ ὅσα<sup>2</sup> ἀποφῆσαι φάναι,<sup>3</sup> ἀνάγκη ἦτοι  
 20 ἀληθὲς διαιροῦντα λέγειν, οἷον ὅτι λευκὸν καὶ  
 πάλιν ὅτι οὐ λευκὸν, ἢ οὐ. καὶ εἰ μὲν μὴ ἀληθὲς  
 διαιροῦντα λέγειν, οὐ λέγει τε ταῦτα, καὶ οὐκ  
 ἔστιν οὐθέν (τὰ δὲ μὴ ὄντα πῶς ἂν φθέγγαιτο ἢ  
 βαδίσειεν<sup>4</sup>); καὶ πάντα δ' ἂν εἴη ἓν, ὥσπερ καὶ  
 25 πρότερον εἴρηται, καὶ ταῦτόν ἔσται καὶ ἄνθρωπος  
 καὶ θεὸς καὶ τριήρης καὶ αἱ ἀντιφάσεις αὐτῶν. εἰ  
 γὰρ ὁμοίως καθ' ἕκαστου, οὐδὲν διοίσει ἕτερον  
 ἑτέρου· εἰ γὰρ διοίσει, τοῦτ' ἔσται ἀληθὲς καὶ  
 ἴδιον. ὁμοίως δὲ καὶ εἰ διαιροῦντα ἐνδέχεται ἀλη-  
 θεύειν, συμβαίνει τὸ λεχθέν· πρὸς δὲ τούτῳ ὅτι  
 πάντες ἂν ἀληθεύοιεν καὶ πάντες ἂν ψεύδοιντο, καὶ  
 30 αὐτὸς αὐτὸν ὁμολογεῖ ψεύδεσθαι ἅμα δὲ φανερόν  
 ὅτι περὶ οὐθενός ἐστι πρὸς τοῦτον ἢ σκέψις· οὐθέν

<sup>1</sup> ἂν: γὰρ ἂν A<sup>b</sup>.<sup>2</sup> ὅσα: ὧν ἔστιν A<sup>b</sup>.<sup>3</sup> φάναι: κατὰ τούτων ἔστι φάναι A<sup>b</sup>.<sup>4</sup> βαδίσειεν νοήσειεν A<sup>b</sup>.

<sup>a</sup> i e., it will be admitted that in certain cases where an attribute is true of a subject, the negation is not true, and therefore some propositions are indisputable.

<sup>b</sup> If our opponent holds that you can only say "A is B and not B," (1) he contradicts every statement that he makes, (2) he must say that what exists does not exist. Therefore

tions and negations ; or it does not apply to all, but only to some and not to others And if it does not apply to all, the exceptions will be admitted <sup>a</sup>, but if it does apply to all, again either (a) the negation will be true wherever the affirmation is true, and the affirmation will be true wherever the negation is true, or (b) the negation will be true wherever the assertion is true, but the assertion will not always be true where the negation is true And in the latter case there will be something which definitely is not, and this will be a certain belief, and if that it is not is certain and knowable, the opposite assertion will be still more knowable But if what is denied can be equally truly asserted, it must be either true or false to state the predicates separately and say, *e g*, that a thing is white, and again that it is not-white And if it is not-true to state them separately, our opponent does not say what he professes to say, and nothing exists ; and how can that which does not exist speak or walk ? <sup>b</sup> And again all things will be one, as we said before,<sup>c</sup> and the same thing will be " man " and " God " and " trireme " and the negations of these terms For if it is equally possible to assert or deny anything of anything, one thing will not differ from another ; for if anything does differ, it will be true and unique. And similarly even if it is possible to make a true statement while separating the predicates, what we have stated follows. Moreover it follows that all statements would be true and all false ; and that our opponent himself admits that what he says is false. Besides, it is obvious that discussion with him is pointless, because

nothing exists, and so he himself does not exist, but how can he speak or walk if he does not exist ? <sup>c</sup> § 27.

<sup>a</sup> γὰρ λέγει οὔτε γὰρ οὕτως οὔτ' οὐχ οὕτως λέγει, ἀλλ' οὕτως τε καὶ οὐχ οὕτως καὶ πάλιν γε ταῦτα ἀπόφησιν ἄμφω, ὅτι οὔθ' οὕτως οὔτε οὐχ οὕτως εἰ γὰρ μῆ, ἤδη ἂν τι εἶη ὠρισμένον Ἔτι εἰ  
 5 ὅταν ἢ φάσις ἀληθῆς ἢ, ἢ ἀπόφασις ψευδῆς, καὶ αὕτη ἀληθῆς ἢ, ἢ κατάφασις ψευδῆς, οὐκ ἂν εἶη τὸ  
 ἅμα φάναι καὶ ἀποφάναι ἀληθῶς. ἀλλ' ἴσως αὐτὸ φαῖεν ἂν τοῦτ' εἶναι τὸ ἐξ ἀρχῆς κείμενον. Ἔτι ἄρα ὁ μὲν ἢ ἔχειν πως ὑπολαμβάνων ἢ μῆ ἔχειν διέψευσται, ὁ δὲ ἄμφω ἀληθεύει, εἰ γὰρ ἀληθεύει, τί ἂν εἶη τὸ λεγόμενον ὅτι τοιαύτη τῶν ὄντων ἢ  
 5 φύσις, εἰ δὲ μῆ ἀληθεύει, ἀλλὰ μᾶλλον ἀληθεύει ἢ<sup>1</sup> ὁ ἐκείνως ὑπολαμβάνων, ἤδη πῶς ἔχοι ἂν τὰ ὄντα, καὶ τοῦτ' ἀληθές ἂν εἶη, καὶ οὐχ ἅμα καὶ οὐκ ἀληθές εἰ δὲ ὁμοίως ἅπαντες καὶ ψεύδονται καὶ ἀληθῆ λέγουσιν, οὔτε φθέγγασθαι οὔτ' εἰπεῖν  
 10 τῷ τοιούτῳ ἔστιν· ἅμα γὰρ ταῦτά τε καὶ οὐ ταῦτα λέγει. εἰ δὲ μῆθὲν ὑπολαμβάνει ἀλλ' ὁμοίως οἶεται καὶ οὐκ οἶεται, τί ἂν διαφερόντως ἔχοι τῶν γε φυτῶν<sup>2</sup>,

Ὅθεν καὶ μάλιστα φανερόν ἐστιν ὅτι οὐθεὶς οὕτω διάκειται οὔτε τῶν ἄλλων οὔτε τῶν λεγόντων τὸν λόγον τοῦτον. διὰ τί γὰρ βαδίζει Μεγάρα-  
 15 δε ἀλλ' οὐχ ἡσυχάζει, οἰόμενος βαδίζειν δεῖν<sup>3</sup>; οὐδ' εὐθὲως ἔωθεν πορεύεται εἰς φρέαρ ἢ εἰς φάραγγα, ἐὰν τύχη, ἀλλὰ φαίνεται εὐλαβού-  
 μενος, ὡς οὐχ ὁμοίως οἰόμενος μῆ ἀγαθὸν εἶναι τὸ ἐμπεσεῖν καὶ ἀγαθόν; δηλον ἄρα ὅτι τὸ μὲν

<sup>1</sup> ἢ A<sup>b</sup> Alexander: om. cet.

<sup>2</sup> γε φυτῶν Bonitz πεφυκότων E<sup>1</sup>JA<sup>b</sup>: φυτῶν E<sup>2</sup>T.

<sup>3</sup> δεῖν A<sup>b</sup> Alexander, Ross. om. cet.

he makes no real statement For he says neither **37**  
 "yes" nor "no," but "yes and no", and again he  
 denies both of these and says "neither yes nor no",  
 otherwise there would be already some definite  
 statement

Again, if when the assertion is true the negation <sup>Inter</sup>  
 is false, and when the latter is true the affirmation  
 is false, it will be impossible to assert and deny with  
 truth the same thing at the same time But perhaps **38**  
 it will be said that this is the point at issue

Again, is the man wrong who supposes that a thing <sup>Sixt</sup>  
 is so or not so, and he who supposes both right? If  
 he is right, what is the meaning of saying that "such  
 is the nature of reality"?<sup>a</sup> And if he is not right,  
 but is more right than the holder of the first view,  
 reality will at once have a definite nature, and this  
 will be true, and not at the same time not-true. And **39**  
 if all men are equally right and wrong, an exponent  
 of this view can neither speak nor mean anything,  
 since at the same time he says both "yes" and "no"  
 And if he forms no judgement, but "thinks" and  
 "thinks not" indifferently, what difference will there  
 be between him and the vegetables?

Hence it is quite evident that no one, either of <sup>Expt</sup>  
 those who profess this theory or of any other school, <sup>show</sup>  
 is really in this position Otherwise, why does a **40**  
 man walk to Megara and not stay at home, when <sup>at le</sup>  
 he thinks he ought to make the journey? Why <sup>most</sup>  
 does he not walk early one morning into a well or <sup>judg</sup>  
 ravine, if he comes to it, instead of clearly guarding  
 against doing so, thus showing that he does *not* think  
 that it is equally good and not good to fall in?

<sup>a</sup> If everything is both so and not so, nothing has any  
 definite nature.

<sup>b</sup> βέλτιον ὑπολαμβάνει τὸ δ' οὐ βέλτιον. εἰ δὲ τοῦτο,  
<sup>10</sup> καὶ τὸ μὲν ἄνθρωπον τὸ δ' οὐκ ἄνθρωπον καὶ τὸ  
 μὲν γλυκὺ τὸ δ' οὐ γλυκὺ ἀνάγκη ὑπολαμβάνειν  
 οὐ γὰρ ἐξ ἴσου ἅπαντα ζητεῖ καὶ ὑπολαμβάνει,  
 ὅταν οἰηθεῖς βέλτιον εἶναι τὸ πιεῖν ὕδωρ καὶ ἰδεῖν  
 ἄνθρωπον εἶτα ζητῆ αὐτά καίτοι ἔδει γε,<sup>1</sup> εἰ ταῦτόν  
 ἦν ὁμοίως καὶ ἄνθρωπος καὶ οὐκ ἄνθρωπος ἀλλ'  
<sup>20</sup> ὅπερ ἐλέχθη, οὐθεὶς ὅς οὐ φαίνεται τὰ μὲν εὐλα-  
 βούμενος τὰ δ' οὐ ὥστε, ὡς ἔοικε, πάντες ὑπολαμ-  
 βάνουσιν ἔχειν ἀπλῶς, εἰ μὴ περὶ ἅπαντα, ἀλλὰ περὶ  
 τὸ ἄμεινον καὶ χειρόν· εἰ δὲ μὴ ἐπιστάμενοι ἀλλὰ  
 δοξάζοντες, πολὺ μᾶλλον ἐπιμελητέον ἂν εἴη τῆς  
 ἀληθείας, ὥσπερ καὶ νοσῶδει ὄντι ἢ ὑγιεινῶ τῆς  
<sup>30</sup> ὑγιείας· καὶ γὰρ ὁ δοξάζων πρὸς τὸν ἐπιστάμενον  
 οὐχ ὑγιεινῶς διάκειται πρὸς τὴν ἀλήθειαν. Ἔτι  
 εἰ ὅτι μάλιστα πάντα οὕτως ἔχει καὶ οὐχ οὕτως,  
 ἀλλὰ τό γε μᾶλλον καὶ ἥττον ἔνεστιν ἐν τῇ φύσει  
 τῶν ὄντων οὐ γὰρ ἂν ὁμοίως φήσαιμεν εἶναι τὰ  
 δύο ἄρτια καὶ τὰ τρία, οὐδ' ὁμοίως διέψευσται ὁ  
<sup>35</sup> τὰ τέτταρα πέντε οἰόμενος καὶ ὁ χίλια εἰ οὖν  
 μὴ ὁμοίως, δῆλον ὅτι ἄτερος ἥττον, ὥστε μᾶλλον  
<sup>40</sup> ἀληθεύει. εἰ οὖν τὸ μᾶλλον ἐγγύτερον, εἴη γε ἂν  
 τι ἀληθές οὐ ἐγγύτερον τὸ μᾶλλον ἀληθές. κἂν  
 εἰ μὴ ἔστιν, ἀλλ' ἤδη γέ τί ἐστι βεβαιότερον καὶ  
 ἀληθινώτερον, καὶ τοῦ λόγου ἀπηλλαγμένοι ἂν  
 εἴημεν τοῦ ἀκράτου καὶ κωλύοντός τι τῇ διανοίᾳ  
<sup>5</sup> ὀρίσαι.

V Ἔστι δ' ἀπὸ τῆς αὐτῆς δόξης καὶ ὁ Πρωταγόρου  
 λόγος, καὶ ἀνάγκη ὁμοίως ἄμφω αὐτοὺς ἢ εἶναι ἢ

<sup>1</sup> ἔδει γε: γ' ἔδει A<sup>b</sup>.

Obviously then he judges that the one course is better and the other worse. And if this is so, he <sup>41</sup> must judge that one thing is man and another not man, and that one thing is sweet and another not sweet. For when, thinking that it is desirable to drink water and see a man, he goes to look for them, he does not look for and judge all things indifferently; and yet he should, if the same thing were equally man and not-man. But as we have said, there is no <sup>42</sup> one who does not evidently avoid some things and not others. Hence, as it seems, all men form unqualified judgements, if not about all things, at least about what is better or worse. And if they do this <sup>43</sup> by guesswork and without knowledge, they should be all the more eager for truth; just as a sick man should be more eager for health than a healthy man; for indeed the man who guesses, as contrasted with him who knows, is not in a healthy relation to the truth.

Again, however much things may be “so and not <sup>44</sup> so,” yet differences of degree are inherent in the <sup>Sever</sup> nature of things. For we should not say that 2 and <sup>proof</sup> 3 are equally even; nor are he who thinks that 4 is 5, and he who thinks it is 1000, equally wrong. Hence if they are not equally wrong, the one is clearly less wrong, and so more right. If then that which has <sup>45</sup> more the nature of something is nearer to that something, there will be some truth to which the more true is nearer. And even if there is not, still there is now something more certain and true, and we shall be freed from the undiluted doctrine which precludes any mental determination.

V. From the same view proceeds the theory of <sup>Dem</sup> Protagoras, and both alike must be either true or <sup>law</sup> <sup>trad</sup>

9<sup>a</sup> μὴ εἶναι εἴτε γὰρ τὰ δοκοῦντα πάντα ἐστὶν  
 ἀληθῆ καὶ τὰ φαινόμενα, ἀνάγκη πάντα ἅμα  
 11 ἀληθῆ καὶ ψευδῆ εἶναι πολλοὶ γὰρ τὰναντία  
 ὑπολαμβάνουσιν ἀλλήλοις, καὶ τοὺς μὴ ταῦτὰ  
 δοξάζοντας ἑαυτοῖς διεψεῦσθαι νομίζουσιν ὥστ'  
 ἀνάγκη τὸ αὐτὸ εἶναί τε καὶ μὴ εἶναι καὶ εἰ τοῦτ'  
 ἔστιν, ἀνάγκη τὰ δοκοῦντα εἶναι πάντ' ἀληθῆ· τὰ  
 17 ἀντικείμενα γὰρ δοξάζουσιν ἀλλήλοις οἱ διεψευ-  
 σμένοι καὶ ἀληθεύοντες. εἰ οὖν ἔχει τὰ ὄντα οὕτως,  
 ἀληθεύσουσι πάντες Ὅτι μὲν οὖν ἀπὸ τῆς  
 αὐτῆς εἰσὶ διανοίας ἀμφότεροι οἱ λόγοι, δῆλον· ἔστι  
 δ' οὐχ ὁ αὐτὸς τρόπος πρὸς ἅπαντας<sup>1</sup> τῆς ἐντεύξεως·  
 οἱ μὲν γὰρ πειθοῦς δέονται, οἱ δὲ βίας ὅσοι μὲν  
 γὰρ ἐκ τοῦ ἀπορηῆσαι ὑπέλαβον οὕτως, τούτων  
 20 εὐΐατος ἢ ἄγνοια· οὐ γὰρ πρὸς τὸν λόγον ἀλλὰ  
 πρὸς τὴν διάνοιαν ἢ ἀπάντησις αὐτῶν· ὅσοι δὲ  
 λόγου χάριν λέγουσι, τούτων δ' ἔλεγχος ἴασις τοῦ  
 τ' ἐν τῇ φωνῇ λόγου καὶ τοῦ ἐν τοῖς ὀνόμασι.

Ἐλήλυθε δὲ τοῖς διαποροῦσιν αὕτη ἡ δόξα ἐκ  
 τῶν αἰσθητῶν, ἡ μὲν τοῦ ἅμα τὰς ἀντιφάσεις καὶ  
 5 τὰναντία ὑπάρχειν ὁρῶσιν ἐκ ταυτοῦ γιγνόμενα  
 τὰναντία· εἰ οὖν μὴ ἐνδέχεται γενέσθαι τὸ μὴ ὄν,  
 προσηύρηθεν ὁμοίως τὸ πρᾶγμα ἅμφω ὄν, ὥσπερ  
 καὶ Ἀναξαγόρας μεμίχθαι πᾶν ἐν παντί φησι καὶ  
 Δημόκριτος· καὶ γὰρ οὗτος τὸ κενὸν καὶ τὸ πλήρες  
 ὁμοίως καθ' ὅτι οὖν ὑπάρχειν μέρος, καίτοι τὸ μὲν  
 30 ὄν τούτων εἶναι, τὸ δὲ μὴ ὄν πρὸς μὲν οὖν τοὺς  
 ἐκ τούτων ὑπολαμβάνοντας ἐροῦμεν ὅτι τρόπον μὲν  
 τινα ὀρθῶς λέγουσι, τρόπον δέ τινα ἀγνοοῦσιν· τὸ  
 γὰρ ὄν λέγεται διχῶς, ὥστ' ἔστιν ὄν τρόπον ἐν-

<sup>1</sup> *απαντας πάντας* A<sup>b</sup>.

<sup>a</sup> Cf. iv. 28.

<sup>b</sup> Cf. I iv. 9.



false For if all opinions and appearances are true,<sup>be</sup> everything must be at once true and false . for many<sup>w</sup> people form judgements which are opposite to those<sup>of</sup> of others, and imagine that those who do not think<sup>ar</sup> the same as themselves are wrong . hence the same thing must both be and not be And if this is so, all<sup>2</sup> opinions must be true ; for those who are wrong and those who are right think contrarily to each other So if reality is of this nature, everyone will be right

Clearly then both these theories proceed from the same mental outlook But the method of approach is not the same for all cases ; for some require persuasion and others compulsion. The ignorance of<sup>3</sup> those who have formed this judgement through perplexity is easily remedied, because we are dealing not with the theory but with their mental outlook , but those who hold the theory for its own sake can only be cured by refuting the theory as expressed in their own speech and words

This view comes to those who are perplexed from<sup>4</sup> their observation of sensible things (1) The belief<sup>H</sup> that contradictions and contraries can be true at the<sup>cc</sup> same time comes to them from seeing the contraries<sup>de</sup> generated from the same thing. Then if what is not<sup>la</sup> cannot be generated, the thing must have existed<sup>5</sup> before as both contraries equally—just as Anaxagoras says<sup>a</sup> that everything is mixed in everything ; and also Democritus, for he too says<sup>b</sup> that Void and Plenum are present equally in any part, and yet the latter *is*, and the former *is not*. To those, then, who<sup>6</sup> base their judgement on these considerations, we shall say that although in one sense their theory is<sup>7</sup> correct, in another they are mistaken. For “ being ”<sup>of</sup> has two meanings, so that there is a sense in which<sup>ci</sup>

δέχεται γίνεσθαι τι ἐκ τοῦ μὴ ὄντος, ἔστι δ' ὄν οὐ, καὶ ἅμα τὸ αὐτὸ εἶναι καὶ ὄν καὶ μὴ ὄν, ἀλλ' οὐ κατὰ ταῦτό [ὄν]<sup>1</sup>. δυνάμει μὲν γὰρ ἐνδέχεται ἅμα ταῦτό εἶναι τὰ ἐναντία, ἐντελεχείᾳ δ' οὐ. ἔτι δ' ἀξιώσομεν αὐτοὺς ὑπολαμβάνειν καὶ ἄλλην τινὰ οὐσίαν εἶναι τῶν ὄντων, ἣ οὔτε κίνησις ὑπάρχει οὔτε φθορὰ οὔτε γένεσις τὸ παράπαν. Ὅμοίως δὲ καὶ ἡ περὶ τὰ φαινόμενα ἀλήθεια ἐνίοις ἐκ τῶν αἰσθητῶν ἐλήλυθεν. τὸ μὲν γὰρ ἀληθὲς οὐ πλήθει κρίνεσθαι οἴονται προσήκειν οὐδὲ ὀλιγότητι, τὸ δ' αὐτὸ τοῖς μὲν γλυκὺ γενομένοις δοκεῖν εἶναι, τοῖς δὲ πικρὸν ὥστ' εἰ πάντες ἕκαμνον ἢ πάντες παρεφρόνουν, δύο δ' ἢ τρεῖς ὑγίαινον ἢ νοῦν εἶχον, δοκεῖν ἂν τούτους κάμνειν καὶ παραφρονεῖν, τοὺς δ' ἄλλους οὐ. ἔτι δὲ πολλοῖς τῶν ἄλλων ζώων τὰναντία [περὶ τῶν αὐτῶν]<sup>2</sup> φαίνεσθαι καὶ ἡμῖν, καὶ αὐτῷ δὲ ἐκάστῳ πρὸς αὐτὸν<sup>3</sup> οὐ ταῦτὰ κατὰ τὴν αἴσθησιν αἰεὶ δοκεῖν. ποῖα οὖν τούτων ἀληθῆ ἢ ψευδῆ, ἄδηλον· οὐθὲν γὰρ μᾶλλον τάδε ἢ τάδε ἀληθῆ, ἀλλ' ὁμοίως. διὸ Δημόκριτός γέ φησιν ἦτοι οὐθὲν εἶναι ἀληθὲς ἢ ἡμῖν γ' ἄδηλον. Ὅλως δὲ διὰ τὸ ὑπολαμβάνειν φρόνησιν μὲν τὴν αἴσθησιν, ταύτην δ' εἶναι ἀλλοίωσιν, τὸ φαινόμενον κατὰ τὴν αἴσθησιν ἐξ ἀνάγκης ἀληθὲς εἶναι φασιν ἐκ τούτων γὰρ καὶ Ἐμπεδοκλῆς καὶ Δημόκριτος καὶ τῶν ἄλλων ὡς ἔπος εἰπεῖν ἕκαστος τοιαύταις δόξαις γεγένηνται ἔνοχοι. καὶ γὰρ Ἐμπεδοκλῆς μετα-

<sup>1</sup> Christ.<sup>2</sup> om. EJ.<sup>3</sup> αὐτὸν: αὐτὸν A<sup>b</sup>J.<sup>a</sup> Cf. Ritter and Preller, 204.

something can be generated from "not-being," and a sense in which it cannot; and a sense in which the same thing can at once be and not be, but not in the same respect. For the same thing can "be" contraries at the same time potentially, but not actually. And further, we shall request them to 7 conceive another kind also of substance of existing things, in which there is absolutely no motion or destruction or generation.

And (11) similarly the theory that there is truth in appearances has come to some people from an obser-<sup>How</sup> vation of sensible things. They think that the truth <sup>come</sup> 8 should not be judged by the number or fewness of its upholders; and they say that the same thing <sup>think</sup> seems sweet to some who taste it, and bitter to others; <sup>there</sup> so that if all men were diseased or all insane, except <sup>truth</sup> two or three who were healthy or sane, the latter <sup>para</sup> would seem to be diseased or insane, and not the others. And further they say that many of the 9 animals as well get from the same things impressions which are contrary to ours, and that the individual himself does not always think the same in matters of sense-perception. Thus it is uncertain which of these impressions are true or false; for one kind is no more true than another, but equally so. And hence Democritus says <sup>a</sup> that either there is no truth or we cannot discover it.

And in general it is because they suppose that 10 thought is sense-perception, and sense-perception physical alteration, that they say that the impression given through sense-perception is necessarily true; for it is on these grounds that both Empedocles and Democritus and practically all the rest have become obsessed by such opinions as these. For Empedocles 11

<sup>3</sup><sub>b</sub> βάλλοντας τὴν ἕξιν μεταβάλλειν φησὶ τὴν φρόνησιν

πρὸς παρεὸν γὰρ μῆτις ἐναύξεται ἀνθρώποισιν.

20 καὶ ἐν ἑτέροις δὲ λέγει ὅτι

ὅσον <δ' ><sup>1</sup> ἀλλοίοι μετέφυν, τόσον ἄρ σφίσι αἰεὶ  
καὶ τὸ φρονεῖν ἀλλοῖα παρίστατο

καὶ Παρμενίδης δὲ ἀποφαίνεται τὸν αὐτὸν τρόπον·

ὡς γὰρ ἐκάστοτ'<sup>2</sup> ἔχει κρᾶσιν μελέων πολυκάμπτων,<sup>3</sup>

τῶς νόος ἀνθρώποισι παρίσταται· τὸ γὰρ αὐτὸ ἔστιν ὅπερ φρονέει, μελέων φύσις ἀνθρώποισιν,

25 καὶ πᾶσιν καὶ παντί τὸ γὰρ πλεον ἔστι νόημα.

<sup>3</sup>Αναξαγόρου δὲ καὶ ἀπόφθεγμα μνημονεύεται πρὸς τῶν ἐταίρων τινάς, ὅτι τοιαῦτ' αὐτοῖς ἔσται τὰ ὄντα οἷα ἂν ὑπολάβωσι φασὶ δὲ καὶ τὸν Ὅμηρον ταύτην ἔχοντα φαίνεσθαι τὴν δόξαν, ὅτι ἐποίησε  
30 τὸν Ἐκτορα, ὡς ἐξέστη ὑπὸ τῆς πληγῆς, κείσθαι ἀλλοφρονέοντα, ὡς φρονούντας μὲν καὶ τοὺς παραφρονούντας ἀλλ' οὐ ταυτὰ δῆλον οὖν ὅτι, εἰ ἀμφοτέραι φρονήσεις, καὶ τὰ ὄντα ἅμα οὕτω τε καὶ οὐχ οὕτως ἔχει ἢ καὶ χαλεπώτατον τὸ συμβαῖνόν ἐστιν εἰ γὰρ οἱ μάλιστα τὸ ἐνδεχόμενον  
35 ἀληθὲς ἑωρακότες (οὗτοι δ' εἰσὶν οἱ μάλιστα ζητοῦντες αὐτὸ καὶ φιλοῦντες), οὗτοι τοιαύτας ἔχουσι τὰς δόξας καὶ ταῦτα ἀποφαίνονται περὶ τῆς ἀληθείας, πῶς οὐκ ἄξιον ἀθυμῆσαι τοὺς φιλοσοφεῖν

<sup>1</sup> Boissonade.

<sup>2</sup> ἐκάστοτ' E<sup>1</sup>J Theophrastus. ἐκάστῳ A<sup>b</sup> Alexander: ἑλαστος E<sup>2</sup> Bekker.

<sup>3</sup> πολυπλάγκτων Theophrastus.

says that those who change their bodily condition change their thought .

For according to that which is present to them doth thought increase in men <sup>a</sup>

And in another passage he says :

And as they change into a different nature, so it ever comes to them to think differently. <sup>b</sup>

And Parmenides too declares in the same way :

For as each at any time hath the temperament of his many-jointed limbs, so thought comes to men For for each and every man the substance of his limbs is that very thing which thinks , for thought is that which preponderates <sup>c</sup>

There is also recorded a saying of Anaxagoras to some of his disciples, that things would be for them as they judged them to be And they say that Homer too clearly held this view, because he made Hector, <sup>d</sup> when he was stunned by the blow, lie with thoughts deranged—thus implying that even those who are “ out of their minds ” still think, although not the same thoughts Clearly then, if both are kinds of thought, reality also will be “ both so and not so.” It is along this path that the consequences are most difficult ; for if those who have the clearest vision of such truth as is possible (and these are they who seek and love it most) hold such opinions and make these pronouncements about the truth, surely those who are trying to be philosophers may well

<sup>a</sup> Fr 106

<sup>b</sup> Fr. 108.

<sup>c</sup> Fr. 16 , quoted also (in a slightly different form, see critical notes) by Theophrastus, *De Sensu* 3

<sup>d</sup> The only passage in our text of Homer to which this reference could apply is *Iliad* ΔΜΙΙ. 698, but there the subject is Euryalus, not Hector.

<sup>1</sup><sub>b</sub> ἐγχειροῦντας; τὸ γὰρ τὰ πετόμενα διώκειν τὸ  
<sup>1</sup><sub>a</sub> ζητεῖν ἂν εἶη τὴν ἀλήθειαν. Αἴτιον δὲ τῆς  
 δόξης τούτοις ὅτι περὶ τῶν ὄντων μὲν τὴν ἀλήθειαν  
 ἐσκόπουν, τὰ δ' ὄντα ὑπέλαβον εἶναι τὰ αἰσθητὰ  
 μόνον ἐν δὲ τούτοις πολλὴ ἡ τοῦ ἀορίστου φύσις  
 ἐνυπάρχει, καὶ ἡ τοῦ ὄντος οὕτως ὥσπερ εἶπομεν.  
 διὸ εἰκότως μὲν λέγουσιν, οὐκ ἀληθῆ δὲ λέγουσιν·  
 οὕτω γὰρ ἀρμόττει μᾶλλον εἰπεῖν ἢ ὥσπερ Ἐπί-  
 χαρμος εἰς Ξενοφάνην. ἔτι δὲ πᾶσαν ὁρῶντες  
 ταύτην κινουμένην τὴν φύσιν, κατὰ δὲ τοῦ μετα-  
 βάλλοντος οὐθὲν ἀληθεύομενον, περὶ γε τὸ πάντη  
 πάντως μεταβάλλον οὐκ ἐνδέχεσθαι ἀληθεύειν.  
<sup>10</sup> ἐκ γὰρ ταύτης τῆς ὑπολήψεως ἐξήνθησεν ἡ ἀκρο-  
 τάτη δόξα τῶν εἰρημένων, ἡ τῶν φασκόντων  
 ἠρακλειτίζειν, καὶ οἷαν Κρατύλος εἶχεν, ὃς τὸ  
 τελευταῖον οὐθὲν ᾤετο δεῖν λέγειν ἀλλὰ τὸν δάκτυ-  
 λον ἐκίνει μόνον, καὶ Ἡρακλείτῳ ἐπετίμα εἰπόντι  
 ὅτι δις τῷ αὐτῷ ποταμῷ οὐκ ἔστιν ἐμβῆναι  
<sup>15</sup> αὐτὸς γὰρ ᾤετο οὐδ' ἄπαξ Ἡμεῖς δὲ καὶ  
 πρὸς τοῦτον τὸν λόγον ἐροῦμεν ὅτι τὸ μὲν μετα-  
 βάλλον ὅτε μεταβάλλει ἔχει τινὰ αὐτοῖς ἀληθῆ λόγον  
 μὴ οἶεσθαι εἶναι, καίτοι ἔστι γε ἀμφισβητήσιμον·  
 τό τε γὰρ ἀποβάλλον ἔχει τι τοῦ ἀποβαλλομένου,  
 καὶ τοῦ γιγνομένου ἤδη ἀνάγκη τι εἶναι ὅλως  
<sup>20</sup> τε εἰ φθείρεται, ὑπάρξει τι ὄν· καὶ εἰ γίγνεται, ἐξ

<sup>a</sup> Cf. Leutsch and Schneidewin, *Paroemiographi Graeci*,  
 ii. 677.

<sup>b</sup> Ch iv. 28

<sup>c</sup> Fl early 5th century; held views partly Pythagorean,  
 partly Heraclitean.

<sup>d</sup> Fr. 41 (Bywater).

despair ; for the pursuit of truth will be " chasing birds in the air." <sup>a</sup>

But the reason why these men hold this view is that although they studied the truth about reality, they supposed that reality is confined to sensible things, in which the nature of the Indeterminate, *i. e.* of Being in the sense which we have explained, <sup>b</sup> is abundantly present (Thus their statements, though plausible, are not true ; this form of the criticism is more suitable than that which Epicharmus <sup>c</sup> applied to Xenophanes ) And further, observing that all this indeterminate substance is in motion, and that no true predication can be made of that which changes, they supposed that it is impossible to make any true statement about that which is in all ways and entirely changeable For it was from this supposition that there blossomed forth the most extreme view of those which we have mentioned, that of the professed followers of Heraclitus, and such as Cratylus held, who ended by thinking that one need not say anything, and only moved his finger ; and who criticized Heraclitus for saying that one cannot enter the same river twice, <sup>d</sup> for he himself held that it cannot be done even once.

But we shall reply to this theory also that although that which is changeable supplies them, when it changes, with some real ground for supposing that it " is not," yet there is something debatable in this ; for that which is shedding any quality retains something of that which is being shed, and something of that which is coming to be must already exist. And in general if a thing is ceasing to be, there will be something there which *is* ; and if a thing is

1010 a

οὐ γίνεταί καὶ ὑφ' οὐ γεννᾶται ἀναγκαῖον εἶναι,  
καὶ τοῦτο μὴ ἰέναι εἰς ἄπειρον ἀλλὰ ταῦτα  
παρέντες ἐκεῖνα λέγωμεν, ὅτι οὐ ταυτό ἐστι τὸ  
μεταβάλλειν κατὰ τὸ ποσὸν καὶ κατὰ τὸ ποιόν  
κατὰ μὲν οὖν τὸ ποσὸν ἔστω μὴ μένον, ἀλλὰ κατὰ  
τὸ εἶδος ἅπαντα γινώσκουμεν ἔτι δ' ἄξιον ἐπι-  
τιμῆσαι τοῖς οὕτως ὑπολαμβάνουσιν, ὅτι καὶ αὐτῶν  
τῶν αἰσθητῶν ἐπὶ τῶν ἐλαττόνων τὸν ἀριθμὸν  
ἰδόντες οὕτως ἔχοντα περὶ ὅλου τοῦ οὐρανοῦ  
ὁμοίως ἀπεφῆναντο ὁ γὰρ περὶ ἡμᾶς τοῦ αἰσθη-  
του τοῦ τόπος ἐν φθορᾷ καὶ γενέσει διατελεῖ μόνος ὢν·  
ἀλλ' οὗτος οὐθὲν ὡς εἰπεῖν μόριον τοῦ παντός  
ἐστίν, ὥστε δικαιότερον ἂν δι' ἐκεῖνα τούτων ἀπ-  
εφηφίσαντο ἢ διὰ ταῦτα ἐκείνων κατεφηφίσαντο

Ἔτι δὲ δῆλον ὅτι καὶ πρὸς τούτους ταῦτα τοῖς  
πάσαι λεχθεῖσιν ἐροῦμεν ὅτι γὰρ ἔστιν ἀκίνητός τις  
φύσις δεικτέον αὐτοῖς καὶ πειστέον αὐτούς· καίτοι  
γε συμβαίνει<sup>1</sup> τοῖς ἅμα φάσκουσιν εἶναι καὶ μὴ  
εἶναι ἡρεμεῖν μᾶλλον φάναι πάντα ἢ κινεῖσθαι οὐ  
γὰρ ἔστιν εἰς ὃ τι μεταβαλεῖ<sup>2</sup>· ἅπαντα γὰρ ὑπάρχει

1010 b πᾶσιν.

Περὶ δὲ τῆς ἀληθείας, ὡς οὐ πᾶν τὸ φαι-  
νόμενον ἀληθές, πρῶτον μὲν ὅτι οὐ δῆ<sup>3</sup> ἢ  
αἰσθησις ψευδῆς τοῦ γε<sup>4</sup> ἰδίου ἐστίν, ἀλλ' ἢ  
φαντασία οὐ ταυτόν τῇ αἰσθήσει εἶτ' ἄξιον  
θαυμάσαι εἰ τοῦτ' ἀποροῦσι, πότερον τηλικαυτὰ  
ἐστὶ τὰ μεγέθη καὶ τὰ χρώματα τοιαῦτα οἷα τοῖς

<sup>1</sup> γε συμβαίνει συμβαίνει γε A<sup>b</sup><sup>2</sup> μεταβαλεῖ Richards· μεταβάλλει EJ Alexander· μετα-  
βάλλειν A<sup>b</sup>.<sup>3</sup> οὐ δῆ scripsi οὐδ'.<sup>4</sup> γε om. EJΓ comm.



coming to be, that from which it comes and by which it is generated must *be*, and this cannot go on to infinity. But let us leave this line of argument and remark that quantitative and qualitative magnitudes are not the same. Let it be granted that there is nothing permanent in respect of quantity; but it is by the *form* that we recognize everything. And again those who hold the theory that we are attacking deserve censure in that they have maintained about the whole material universe what they have observed in the case of a mere minority of sensible things. For it is only the realm of sense around us which continues subject to destruction and generation, but this is a practically negligible part of the whole, so that it would have been fairer for them to acquit the former on the ground of the latter than to condemn the latter on account of the former.

Further, we shall obviously say to these thinkers too the same as we said some time ago<sup>a</sup>, for we must prove to them and convince them that there is a kind of nature that is not moved (and yet those who claim that things can at once be and not be are logically compelled to admit rather that all things are at rest than that they are in motion; for there is nothing for them to change into, since everything exists in everything)

And as concerning reality, that not every appearance is real, we shall say, first, that indeed the perception, at least of the proper object of a sense, is not false, but the impression we get of it is not the same as the perception. And then we may fairly express surprise if our opponents raise the question whether magnitudes and colours are really such as

<sup>a</sup> Ch. v. 7.

## ARISTOTLE

1010 b

ἀποθεν φαίνεται ἢ οἷα τοῖς ἐγγύθεν, καὶ πότερον οἷα τοῖς ὑγιαίνουσιν ἢ οἷα τοῖς κάμνουσιν, καὶ βαρύτερα πότερον ἂ τοῖς ἀσθενούσιν ἢ ἂ τοῖς ἰσχύουσιν, καὶ ἀληθῆ πότερον ἂ τοῖς καθεύδουσιν  
 10 ἢ ἂ τοῖς ἐγρηγορούσιν. ὅτι μὲν γὰρ οὐκ οἶονται γε, φανερόν οὐθεὶς γοῦν ἐὰν ὑπολάβῃ νύκτωρ Ἀθήνησιν εἶναι ὦν ἐν Λιβύῃ, πορεύεται εἰς τὸ ὠδεῖον. ἔτι δὲ περὶ τοῦ μέλλοντος, ὥσπερ καὶ Πλάτων λέγει, οὐ δῆπου ὁμοίως κυρία ἢ τοῦ ἱατροῦ δόξα καὶ ἢ τοῦ ἀγνοούντος, οἶον περὶ τοῦ μέλλοντος ἔσσεσθαι  
 1. ὑγιούς ἢ μὴ μέλλοντος. ἔτι δὲ ἐπ' αὐτῶν τῶν αἰσθήσεων οὐχ ὁμοίως κυρία ἢ τοῦ ἄλλοτρίου καὶ ἰδίου ἢ τοῦ πλησίον καὶ τοῦ αὐτῆς, ἀλλὰ περὶ μὲν χρώματος ὄψις, οὐ γεῦσις, περὶ δὲ χυμοῦ γεῦσις, οὐκ ὄψις ὦν ἐκάστη ἐν τῷ αὐτῷ χρόνῳ περὶ τὸ αὐτὸ οὐδέποτε φησιν ἅμα οὕτω καὶ οὐχ οὕτως  
 20 ἔχειν. ἀλλ' οὐδ' ἐν ἐτέρῳ χρόνῳ περὶ γε τὸ πάθος ἡμφισβήτησεν, ἀλλὰ περὶ τὸ ὧ συμβέβηκε τὸ πάθος. λέγω δ' οἶον ὁ μὲν αὐτὸς οἶνος δόξειεν ἂν ἢ μεταβαλὼν ἢ τοῦ σώματος μεταβαλόντος ὅτε μὲν εἶναι γλυκὺς ὅτε δὲ οὐ γλυκὺς ἀλλ' οὐ τό γε γλυκὺ οἶόν ἐστιν ὅταν ἦ, οὐδεπώποτε μετέβαλεν,  
 25 ἀλλ' αἰεὶ ἀληθεύει περὶ αὐτοῦ, καὶ ἔστιν ἐξ ἀνάγκης τὸ ἐσόμενον γλυκὺ τοιοῦτον. καίτοι τοῦτο ἀναιροῦσιν οὗτοι οἱ λόγοι ἅπαντες, ὥσπερ καὶ οὐσίαν μὴ εἶναι μηθένος, οὕτω μηδ' ἐξ ἀνάγκης μηθέν.

<sup>a</sup> A concert-hall (used also for other purposes) built by Pericles. It lay to the south-east of the Acropolis.

<sup>b</sup> *Theaetetus* 171 r, 178 c, seqq

<sup>c</sup> An object of taste is foreign to the sense of sight; a thing may look sweet without tasting sweet. Similarly although the senses of taste and smell (and therefore their objects) are

they appear at a distance or close at hand, as they appear to the healthy or to the diseased; and whether heavy things are as they appear to the weak or to the strong; and whether truth is as it appears to the waking or to the sleeping. For clearly they do not really believe the latter alternative—at any rate no one, if in the night he thinks that he is at Athens whereas he is really in Africa, starts off to the Odeum <sup>a</sup>. And again concerning the future (as indeed Plato says <sup>b</sup>) the opinion of the doctor and that of the layman are presumably not equally reliable, *e.g.* as to whether a man will get well or not. And again in the case of the senses themselves, our perception of a foreign object and of an object proper to a given sense, or of a kindred object and of an actual object of that sense itself, is not equally reliable <sup>c</sup>; but in the case of colours sight, and not taste, is authoritative, and in the case of flavour taste, and not sight. But not one of the senses ever asserts at the same time of the same object that it is “so and not so.” Nor even at another time does it make a conflicting statement about the quality, but only about that to which the quality belongs. I mean, *e.g.*, that the same wine may seem, as the result of its own change or of that of one’s body, at one time sweet and at another not; but sweetness, such as it is when it exists, has never yet changed, and there is no mistake about it, and that which is to be sweet is necessarily of such a nature. Yet all these theories destroy the possibility of anything’s existing by necessity, inasmuch as they destroy the existence of its essence; for

kindred (*De Sensu* 440 b 29), in judging tastes the sense of taste is the more reliable.

<sup>b</sup> τὸ γὰρ ἀναγκαῖον οὐκ ἐνδέχεται ἄλλως καὶ ἄλλως ἔχειν, ὡστ' εἴ τι ἔστιν ἐξ ἀνάγκης, οὐχ ἔξει οὕτω  
<sup>30</sup> τε καὶ οὐχ οὕτως. Ὅλως τ' εἴπερ ἔστι τὸ αἰσθητὸν μόνον, οὐθὲν ἂν εἴη μὴ ὄντων τῶν ἐμφύχων· αἰσθησις γὰρ οὐκ ἂν εἴη. τὸ μὲν οὖν μήτε τὰ αἰσθητὰ εἶναι μήτε τὰ αἰσθήματα ἴσως ἀληθές (τοῦ γὰρ αἰσθανομένου πάθος τοῦτό ἐστι), τὸ δὲ τὰ ὑποκείμενα μὴ εἶναι, ἃ ποιεῖ τὴν αἰσθησιν, καὶ ἄνευ  
<sup>35</sup> αἰσθήσεως ἀδύνατον· οὐ γὰρ δὴ ἢ γ' αἰσθησις αὐτῆ ἑαυτῆς ἐστίν, ἀλλ' ἔστι τι καὶ ἕτερον παρὰ τὴν αἰσθησιν ὃ ἀνάγκη πρότερον εἶναι τῆς αἰσθήσεως· τὸ γὰρ κινουῦν τοῦ κινουμένου φύσει πρότερόν ἐστι· κἂν εἰ λέγεται πρὸς ἄλληλα ταῦτα, οὐθὲν ἦπτον.

VI. Εἰσι δέ τινες οἱ ἀποροῦσι καὶ τῶν ταῦτα πεπεισμένων καὶ τῶν τοὺς λόγους τούτους μόνον λεγόντων· ζητοῦσι γὰρ τίς ὁ κρινῶν<sup>1</sup> τὸν ὑγιαίνοντα καὶ ὄλως τὸν περὶ ἕκαστα κρινούντα ὀρθῶς. τὰ δὲ τοιαῦτα ἀπορήματα ὁμοιά ἐστι τῷ ἀπορεῖν πρότερον καθεύδομεν νῦν ἢ ἐγρηγόραμεν, δύνανται δ' αἱ ἀπορίαι αἰ τοιαῦται πᾶσαι τὸ αὐτὸ πάντων γὰρ λόγον ἀξιοῦσιν οὗτοι εἶναι· ἀρχὴν γὰρ ζητοῦσι, καὶ  
<sup>10</sup> ταύτην δι' ἀποδείξεως λαμβάνειν, ἐπεὶ ὅτι γε οὐ πεπεισμένοι εἰσὶ, φανεροί εἰσιν ἐν ταῖς πράξεσιν. ἀλλ' ὅπερ εἶπομεν, τοῦτο αὐτῶν τὸ πάθος ἐστίν· λόγον γὰρ ζητοῦσιν ὧν οὐκ ἔστι λόγος· ἀποδείξεως γὰρ ἀρχὴ οὐκ ἀπόδειξις ἐστίν. οὗτοι μὲν οὖν ῥαδίως ἂν τοῦτο πεισθεῖεν· ἔστι γὰρ οὐ χαλεπὸν  
<sup>15</sup> λαβεῖν. οἱ δὲ ἐν τῷ λόγῳ τὴν βίαν μόνον ζητοῦντες

<sup>1</sup> κρινῶν Richards: κρινων.

<sup>a</sup> Cf. *De Anima* 425 b 25-426 b 8.

<sup>b</sup> c. iv. 2.

“the necessary” cannot be in one way and in another; and so if anything exists of necessity, it cannot be “both so and not so”

And in general, if only the sensible exists, without animate things there would be nothing; for there would be no sense-faculty. That there would be neither sensible qualities nor sensations is probably true <sup>a</sup> (for these depend upon an effect produced in the percipient), but that the substrates which cause the sensation should not exist even apart from the sensation is impossible. For sensation is not of itself, but there is something else too besides the sensation, which must be prior to the sensation; because that which moves is by nature prior to that which is moved, and this is no less true if the terms are correlative

VI. But there are some, both of those who really hold these convictions and of those who merely profess these views, who raise a difficulty; they inquire who is to judge of the healthy man, and in general who is to judge rightly in each particular case. But such questions are like wondering whether we are at any given moment asleep or awake; and all problems of this kind amount to the same thing. These people demand a reason for everything. They want a starting-point, and want to grasp it by demonstration; while it is obvious from their actions that they have no conviction. But their case is just what we have stated before <sup>b</sup>; for they require a reason for things which have no reason, since the starting-point of a demonstration is not a matter of demonstration. The first class, then, may be readily convinced of this, because it is not hard to grasp. But those who look only for cogency in argument look

<sup>a</sup> ἀδύνατον ζητοῦσιν· ἐναντία γὰρ εἰπεῖν ἀξιούσιν, εὐθύς ἐναντία λέγοντες εἰ δὲ μὴ ἔστι πάντα πρὸς τι, ἀλλ' ἐνιά ἔστι καὶ αὐτὰ καθ' αὐτά, οὐκ ἂν εἴη πᾶν τὸ φαινόμενον ἀληθές τὸ γὰρ φαινόμενον τινὶ  
<sup>11</sup> ἔστι φαινόμενον ὥστε ὁ λέγων ἅπαντα τὰ φαινόμενα εἶναι ἀληθῆ, ἅπαντα ποιεῖ τὰ ὄντα πρὸς τι διὸ καὶ φυλακτέον τοῖς τὴν βίαν ἐν τῷ λόγῳ ζητοῦσιν, ἅμα δὲ καὶ ὑπέχειν λόγον ἀξιούσιν, ὅτι οὐ τὸ φαινόμενον ἔστιν, ἀλλὰ τὸ φαινόμενον ᾧ φαίνεται καὶ ὅτε φαίνεται καὶ ἦ καὶ ὡς ἂν δ'  
<sup>12</sup> ὑπέχωσι μὲν λόγον, μὴ οὕτω δὲ ὑπέχωσι, συμβήσεται αὐτοῖς τὰναντία ταχὺ λέγειν ἐνδέχεται γὰρ τῷ αὐτῷ<sup>1</sup> κατὰ μὲν τὴν ὄψιν μέλι φαίνεσθαι, τῇ δὲ γεύσει μὴ, καὶ τῶν ὀφθαλμῶν δυοῖν ὄντοι μὴ ταυτὰ ἑκατέρᾳ τῇ ὄψει, ἂν ὦσιν ἀνόμοιαι ἐπεὶ πρὸς γε τοὺς διὰ τὰς πάλαι εἰρημέναις αἰτίας τὸ  
<sup>30</sup> φαινόμενον φάσκοντας ἀληθές εἶναι, καὶ διὰ τοῦτο πάνθ' ὁμοίως εἶναι ψευδῆ καὶ ἀληθῆ οὔτε γὰρ ἅπασιν ταυτὰ φαίνεσθαι οὔτε ταυτῷ<sup>2</sup> αἰεὶ ταυτὰ, ἀλλὰ πολλάκις τὰναντία κατὰ τὸν αὐτὸν χρόνον (ἦ μὲν γὰρ ἀφή δύο λέγει ἐν τῇ ἐπαλλάξει τῶν δακτύλων, ἦ δ' ὄψις ἓν)—ἀλλ' οὐ τι<sup>3</sup> τῇ αὐτῇ γε  
<sup>31</sup> καὶ κατὰ τὸ αὐτὸ αἰσθήσει καὶ ὡσαύτως καὶ ἐν  
<sup>32</sup> τῷ αὐτῷ χρόνῳ, ὥστε τοῦτ' ἂν εἴη ἀληθές. ἀλλ' ἴσως διὰ τοῦτ' ἀνάγκη λέγειν τοῖς μὴ δι' ἀπορίαν ἀλλὰ λόγου χάριν λέγουσιν, ὅτι οὐκ ἔστιν ἀληθές τοῦτο, ἀλλὰ τούτῳ ἀληθές. καὶ ὡσπερ δὴ πρό-

<sup>1</sup> τῷ αὐτῷ E J Γ: τὸ αὐτὸ.

<sup>2</sup> ταυτῷ T comm. Bessarion Aldine: ἐαντῷ A<sup>b</sup>. αὐτῷ E J Γ.

<sup>3</sup> οὐ τι: οὔτε recc.

<sup>a</sup> c. v. 7-17.

<sup>b</sup> Cf. *Problemata* 958 b 14, 959 a 15, 965 a 36.

for an impossibility. for they claim the right to con-  
 tradict themselves. and lose no time in doing so To t  
 Yet if not everything is relative. but some things 4  
 are self-existent, not every appearance will be true : who  
 for an appearance is an appearance to someone a cog  
 And so he who says that all appearances are true p. 00  
 makes everything relative ever  
 Hence those who de- 5  
 mand something cogent in argument, and at the we c  
 same time claim to make out a case, must guard p. 00  
 themselves by saying that the appearance is true i) it  
 not in itself, but *for him to whom* it appears, and *at* ance  
*the time when* it appears, and in the *way* and *manner* at t  
 in which it appears less  
 And if they make out a case thin  
 without this qualification, as a result they will soon ive  
 contradict themselves ; for it is possible in the case is al  
 of the same man for a thing to appear honey to the 6  
 sight, but not to the taste, and for things to appear  
 different to the sight of each of his two eyes, if their  
 sight is unequal For to those who assert (for the  
 reasons previously stated <sup>a</sup>) that appearances are  
 true, and that all things are therefore equally false  
 and true, because they do not appear the same to  
 all, nor always the same to the same person, but  
 often have contrary appearances at the same time  
 (since if one crosses the fingers touch says that an 7  
 object is two, while sight says that it is only one <sup>b</sup>),  
 we shall say " but not to the same sense or to the  
 same part of it in the same way and at the same  
 time ", so that with this qualification the appear-  
 ance will be true But perhaps it is for this reason  
 that those who argue not from a sense of difficulty  
 but for argument's sake are compelled to say that  
 the appearance is not true in itself, but true to the  
 percipient ; and, as we have said before, are com- 8

<sup>b</sup>  
 5 τερον εἴρηται, ἀνάγκη καὶ πρὸς τι ποιεῖν ἅπαντα  
 καὶ πρὸς δόξαν καὶ αἴσθησιν, ὥστ' οὔτε γέγονεν  
 οὔτ' ἔσται οὐθὲν μηθενὸς προδοξάσαντος εἰ δὲ  
 γέγονεν ἢ ἔσται, δῆλον ὅτι οὐκ ἂν εἴη ἅπαντα πρὸς  
 δόξαν.

Ἔτι εἰ ἔν, πρὸς ἓν ἢ πρὸς ὠρισμένον· καὶ εἰ  
 τὸ αὐτὸ καὶ ἡμισυ καὶ ἴσον, ἀλλ' οὐ πρὸς τὸ δι-  
 0 πλάσιόν γε τὸ ἴσον. πρὸς δὴ τὸ δοξάζον εἰ ταυτὸ  
 αἰθρωπος καὶ τὸ δοξαζόμενον, οὐκ ἔσται ἄνθρωπος  
 τὸ δοξάζον, ἀλλὰ τὸ δοξαζόμενον εἰ δ' ἕκαστον  
 ἔσται πρὸς τὸ δοξάζον, πρὸς<sup>1</sup> ἄπειρα ἔσται τῷ  
 εἶδει τὸ δοξάζον. Ὅτι μὲν οὖν βεβαιοτάτη  
 δόξα πασῶν τὸ μὴ εἶναι ἀληθεῖς ἅμα τὰς ἀντικει-  
 5 μένας φάσεις, καὶ τί συμβαίνει τοῖς οὔτω λέγουσι,  
 καὶ διὰ τί οὔτω λέγουσι, τοσαῦτα εἰρήσθω ἐπεὶ  
 δ' ἀδύνατον τὴν ἀντίφασιν ἀληθεύεσθαι ἅμα κατὰ  
 τοῦ αὐτοῦ, φανερόν ὅτι οὐδὲ τὰναντία ἅμα ὑπάρχειν  
 ἐνδέχεται τῷ αὐτῷ τῶν μὲν γὰρ ἐναντίων θάτερον  
 στέρησις ἔστιν οὐχ ἡττον, οὐσίας δὲ στέρησις·  
 ἢ δὲ στέρησις<sup>2</sup> ἀπόφασίς ἔστιν ἀπὸ τινος ὠρισμένου  
 0 γένους. εἰ οὖν ἀδύνατον ἅμα καταφάναι καὶ ἀπο-  
 φάναι ἀληθῶς, ἀδύνατον καὶ τὰναντία ὑπάρχειν  
 ἅμα, ἀλλ' ἢ πῆ ἄμφω, ἢ θάτερον μὲν πῆ θάτερον  
 δὲ ἀπλῶς.

VII. Ἀλλὰ μὴν οὐδὲ μεταξὺ ἀντιφάσεως ἐνδέχεται  
 εἶναι οὐθὲν, ἀλλ' ἀνάγκη ἢ φάναι ἢ ἀποφάναι ἔν

<sup>1</sup> πρὸς om. EJ.

<sup>2</sup> ἢ δὲ στέρησις A<sup>b</sup> comm : om. EJΓ.



pelled also to make everything relative and dependent upon opinion and sensation, so that nothing has happened or will happen unless someone has first formed an opinion about it; otherwise clearly all things would not be relative to opinion

Further, if a thing is one, it is relative to one thing or to something determinate. And if the same thing is both a half and an equal, yet the equal is not relative to the double. If to the thinking subject 9  
 “man” and the object of thought are the same, “man” will be not the thinking subject but the object of thought; and if each thing is to be regarded as relative to the thinking subject, the thinking subject will be relative to an infinity of specifically different things

That the most certain of all beliefs is that opposite 10  
 statements are not both true at the same time, and what follows for those who maintain that they are true, and why these thinkers maintain this, may be regarded as adequately stated. And since the contradiction of a statement cannot be true at the same time of the same thing, it is obvious that contraries cannot apply at the same time to the same thing. For in each pair of contraries one is a privation no 11  
 less than it is a contrary—a privation of substance. And privation is the negation of a predicate to some defined genus. Therefore if it is impossible at the same time to affirm and deny a thing truly, it is also impossible for contraries to apply to a thing at the same time; either both must apply in a modified sense, or one in a modified sense and the other absolutely.

VII. Nor indeed can there be any intermediate <sup>Ar</sup>  
 between contrary statements, but of one thing we <sup>to</sup>  
 lav

1011 b

κατ' εἰὸς ὅτιοῦν δῆλον δὲ πρῶτον μὲν ὀρι-  
 σιμένοις τί τὸ ἀληθές καὶ ψεῦδος. τὸ μὲν γὰρ  
 λέγειν τὸ ὄν μὴ εἶναι ἢ τὸ μὴ ὄν εἶναι ψεῦδος, τὸ  
 δὲ τὸ ὄν εἶναι καὶ τὸ μὴ ὄν μὴ εἶναι ἀληθές,  
 ὥστε καὶ ὁ λέγων εἶναι ἢ μὴ ἀληθεύσει ἢ ψεύσεται.  
 ἀλλ' οὔτε τὸ ὄν λέγεται μὴ εἶναι ἢ εἶναι οὔτε τὸ  
 μὴ ὄν ἔτι ἤτοι<sup>1</sup> μεταξὺ ἔσται τῆς ἀντιφάσεως  
 ὥσπερ τὸ φαιὸν μέλανος καὶ λευκοῦ, ἢ ὡς τὸ  
 μηδότερον ἀνθρώπου καὶ ἵππου. εἰ μὲν οὖν  
 οὕτως, οὐκ ἂν μεταβάλλοι (ἐκ μὴ ἀγαθοῦ γὰρ  
 εἰς ἀγαθὸν μεταβάλλει, ἢ ἐκ τούτου εἰς μὴ ἀγαθόν).  
 νῦν δ' ἀεὶ φαίνεται οὐ γὰρ ἔστι μεταβολὴ ἀλλ'  
 ἢ εἰς τὰ αἰτικείμενα καὶ μεταξύ. εἰ δ' ἔστι  
 1012 a μεταξύ, καὶ οὕτως εἴη ἂν τις εἰς λευκὸν οὐκ ἐκ  
 μὴ λευκοῦ γένεσις· νῦν δ' οὐχ ὁράται. ἔτι πᾶν  
 τὸ διανοητὸν καὶ νοητὸν ἢ διάνοια ἢ κατάφησιν  
 ἢ ἀπόφησι—τούτο δ' ἐξ ὀρισμοῦ δῆλον—ὅταν  
 ἀληθεύῃ ἢ ψεύδῃται ὅταν μὲν ὠδὶ συνθῆ φᾶσα ἢ  
 ἀποφᾶσα, ἀληθεύει, ὅταν δὲ ὠδί, ψεύδεται. "Ἐτι  
 παρὰ πάσας δεῖ εἶναι τὰς ἀντιφάσεις, εἰ μὴ λόγου  
 ἕνεκα λέγεται· ὥστε καὶ οὔτε ἀληθεύσει τις οὔτ'  
 οὐκ ἀληθεύσει καὶ παρὰ τὸ ὄν καὶ τὸ μὴ ὄν ἔσται,  
 ὥστε καὶ παρὰ γένεσιν καὶ φθορὰν μεταβολὴ  
 τις ἔσται. "Ἐτι ἐν ὅσοις γένεσιν ἢ ἀπόφασιν  
 10 τὸ ἐναντίον ἐπιφέρει, καὶ ἐν τούτοις ἔσται, οἶον

<sup>1</sup> ἤτοι] ἤτοι τὸ A<sup>b</sup>.

<sup>a</sup> It is not *qua* grey (i.e. intermediate between white and black) that grey changes to white, but *qua* not-white (i.e. containing a certain proportion of black).

must either assert or deny one thing, whatever may be. This will be plain if we first define truth and falsehood. To say that what is is not, or that what is not is, is false; but to say that what is is, or that what is not is not, is true; and therefore also who says that a thing is or is not will say either what is true or what is false. But neither what is nor what is not is said not to be *or* to be. Further, an intermediate between contraries will be intermediate either as grey is between black and white, or "neither man nor horse" is between man and horse. If in the latter sense, it cannot change (for change from not-good to good, or from good to not-good, but in fact it is clearly always changing, for change can only be into the contrary and the intermediate. And if it is a true intermediate, in this case too there would be a kind of change into white not from not-white, but in fact this is not seen<sup>a</sup>. Further, to understand either affirms or denies every object of understanding or thought (as is clear from the definition<sup>b</sup>) whenever it is right or wrong. When, asserting or denying, it combines the predicates one way, it is right; when in the other, it is wrong.

Again, unless it is maintained merely for argument's sake, the intermediate must exist beside contrary terms; so that one will say what is neither true nor false. And it will exist beside what is and what is not; so that there will be a form of change, beside generation and destruction.

Again, there will also be an intermediate in classes in which the negation of a term implies the contrary assertion; *e.g.*, among numbers there will

<sup>b</sup> § 1.

ἐν ἀριθμοῖς οὔτε περιττὸς οὔτε οὐ περιττὸς ἀριθμὸς ἀλλ' ἀδύνατον· ἐκ τοῦ ὀρισμοῦ δὲ δῆλον. Ἔτι εἰς ἄπειρον βαδιεῖται, καὶ οὐ μόνον ἡμιόλια τὰ ὄντα ἔσται ἀλλὰ πλείω πάλιν γὰρ ἔσται ἀποφῆσαι τοῦτο πρὸς τὴν φάσιν καὶ τὴν ἀπό-  
 15 φασιν, καὶ τοῦτ' ἔσται τι· ἢ γὰρ οὐσία ἐστὶ τις αὐτοῦ ἄλλη. Ἔτι ὅταν ἐρομένου εἰ λευκὸν ἐστὶν εἶπη ὅτι οὐ, οὐθὲν ἄλλο ἀποπέφηκεν<sup>1</sup> ἢ τὸ εἶναι· ἀπόφασις δὲ τὸ μὴ εἶναι. Ἐλήλυθε δ' ἐνίοις αὕτη ἢ δόξα ὥσπερ καὶ ἄλλαι τῶν παραδόξων· ὅταν γὰρ λύειν μὴ δύνωνται λόγους ἐριστικούς,  
 20 ἐνδόντες τῷ λόγῳ σύμφασιν ἀληθὲς εἶναι τὸ συλλογισθέν. οἱ μὲν οὖν διὰ τοιαύτην αἰτίαν λέγουσιν, οἱ δὲ διὰ τὸ πάντων ζητεῖν λόγον. ἀρχὴ δὲ πρὸς ἅπαντας τούτους ἐξ ὀρισμοῦ ὀρισμὸς δὲ γίνεταί ἐκ τοῦ σημαίνειν τι ἀναγκαῖον εἶναι αὐτοῦς· ὁ γὰρ λόγος, οὗ τὸ ὄνομα σημεῖον, ὀρισμὸς γίνεταί· ἔοικε δ' ὁ μὲν Ἡρακλείτου  
 25 λόγος, λέγων πάντα εἶναι καὶ μὴ εἶναι, ἅπαντα ἀληθῆ ποιεῖν, ὁ δ' Ἀναξαγόρου, εἶναι τι μεταξὺ τῆς ἀντιφάσεως, ὥστε πάντα ψευδῆ· ὅταν γὰρ μιχθῆ, οὔτε ἀγαθὸν οὔτε οὐκ ἀγαθὸν τὸ μίγμα, ὥστ' οὐδὲν εἰπεῖν ἀληθές.

VIII. Διωρισμένων δὲ τούτων φανερόν ὅτι καὶ τὰ  
 30 μοναχῶς λεγόμενα καὶ τὰ κατὰ πάντων ἀδύνατον

<sup>1</sup> ἀποπέφηκεν JΓ Bessarion: ἀποπέφυκεν EA<sup>b</sup> ἀποπέφακεν Christ.

<sup>a</sup> What definition Aristotle had in mind we cannot tell, but it must have stated that every number is either even or odd.

<sup>b</sup> If besides A and not-A there is an intermediate B, besides B and not-B there will be an intermediate C which is neither B nor not-B; and so on.

be a number which is neither odd nor not-odd. But this is impossible, as is clear from the definition.<sup>a</sup>

Again, there will be an infinite progression, and existing things will be not only half as many again but even more. For again it will be possible to deny the intermediate in reference both to its assertion and to its negation, and the result will be something<sup>b</sup> for its essence is something distinct

Again, when a man is asked whether a thing is white and says "no," he has denied nothing except that it is <white>, and its not-being <white> is . . . negation.

Now this view has occurred to certain people in just the same way as other paradoxes have also occurred, for when they cannot find a way out from dialectic arguments, they submit to the argument and admit that the conclusion is true. Some, then, hold the theory for this kind of reason, and others because they require an explanation for everything. In dealing with all such persons the starting-point is from definition; and definition results from the necessity of their meaning something; because the formula, which their term implies, will be a definition.<sup>c</sup> The doctrine of Heraclitus, which says that everything is and is not,<sup>d</sup> seems to make all things true; and that of Anaxagoras<sup>e</sup> seems to imply an intermediate in contradiction, so that all things are false; for when things are mixed, the mixture is neither good nor not-good; and so no statement is true

VIII It is obvious from this analysis that the one-sided and sweeping statements which some people make cannot be substantially true—some maintain

<sup>c</sup> Cf. c. iv. 5, 6.

<sup>d</sup> Cf. c. iii. 10.

<sup>e</sup> Cf. c. iv. 28

- 312 a ὑπάρχειν, ὡςπερ τινες λέγουσιν, οἱ μὲν οὐθὲν  
 φάσκοντες ἀληθῆς εἶναι (οὐθὲν γὰρ κωλύειν φασὶν  
 οὕτως ἅπαντα εἶναι ὡςπερ τὸ τὴν διάμετρον  
 σύμμετρον εἶναι), οἱ δὲ πάντ' ἀληθῆ ἰσχυροὶ γὰρ  
 οἱ λόγοι οἱ αὐτοὶ τῷ Ἡρακλείτῳ ὁ γὰρ  
 25 λέγων ὅτι πάντ' ἀληθῆ καὶ πάντα ψευδῆ, καὶ  
 312 b χωρὶς λέγει τῶν λόγων ἑκάτερον τούτων, ὥστ'  
 εἶπερ ἀδύνατα ἐκεῖνα, καὶ ταῦτα ἀδύνατον εἶναι  
 ἔτι δὲ φανερώς ἀντιφάσεις εἰσὶν ἅς οὐχ οἶόν τε  
 ἅμα ἀληθεῖς εἶναι οὐδὲ δὴ ψευδεῖς πάσας καίτοι  
 5 δόξειε γ' ἂν μᾶλλον ἐνδέχεσθαι ἐκ τῶν εἰρημένων  
 ἀλλὰ πρὸς ἅπαντας τοὺς τοιούτους λόγους αἰτεῖ-  
 σθαι δεῖ, καθάπερ ἐλέχθη καὶ ἐν τοῖς ἐπάνω λόγοις,  
 οὐκ εἶναι τι ἢ μὴ εἶναι ἀλλὰ σημαίνει τι, ὥστε  
 ἐξ ὀρισμοῦ διαλεκτέον λαβόντας τί σημαίνει τὸ  
 ψεῦδος ἢ τὸ ἀληθές· εἰ δὲ μὴθὲν ἄλλο<sup>1</sup> τὸ ἀληθές  
 10 φάναι ἢ<sup>2</sup> ἀποφάναι ψεῦδός ἐστιν, ἀδύνατον πάντα  
 ψευδῆ εἶναι· ἀνάγκη γὰρ τῆς ἀντιφάσεως θάτερον  
 εἶναι μῦρον ἀληθές· ἔτι εἰ πᾶν ἢ φάναι ἢ ἀπο-  
 φάναι ἀναγκαῖον, ἀδύνατον ἀμφοτέρω ψευδῆ εἶναι  
 θάτερον γὰρ μέρος τῆς ἀντιφάσεως ψεῦδος ἐστιν.  
 συμβαίνει δὴ καὶ τὸ θρυλούμενον πᾶσι τοῖς  
 15 τοιούτοις λόγοις, αὐτοὺς ἑαυτοὺς ἀναιρεῖν· ὁ  
 μὲν γὰρ πάντα ἀληθῆ λέγων καὶ τὸν ἐναντίον  
 αὐτοῦ λόγον ἀληθῆ ποιεῖ, ὥστε τὸν ἑαυτοῦ οὐκ  
 ἀληθῆ (ὁ γὰρ ἐναντίος οὗ φησὶν αὐτὸν ἀληθῆ),  
 ὁ δὲ πάντα ψευδῆ καὶ αὐτὸς αὐτὸν ἂν δ' ἐξ-  
 αιρῶνται ὁ μὲν τὸν ἐναντίον ὡς οὐκ ἀληθῆς μόνος  
 20 ἐστίν, ὁ δὲ τὸν αὐτὸς αὐτοῦ ὡς οὐ ψευδῆς, οὐθὲν

<sup>1</sup> ἄλλο] ἄλλο ἢ E.J.

<sup>2</sup> ἢ] ἢ <δ> Ross.

<sup>a</sup> A stock example of impossibility and falsity; see Index.  
 904.

ing that nothing is true (for they say that there is no reason why the same rule should not apply to everything as applies to the commensurability of the diagonal of a square <sup>a</sup>), and some that everything is true. These theories are almost the same as that of Heraclitus. For the theory which says that all things are true and all false also makes each of these statements separately; so that if they are impossible in combination they are also impossible individually. And again obviously there are contrary statements which cannot be true at the same time. Nor can they all be false, although from what we have said this might seem more possible. But in opposing all such theories we must demand, as was said in our discussion above,<sup>b</sup> not that something should be or not be, but some significant statement; and so we must argue from a definition, having first grasped what "falsehood" or "truth" means. And if to assert what is true is nothing else than to deny what is false, everything cannot be false, for one part of the contradiction must be true. Further, if everything must be either asserted or denied, both parts cannot be false; for one and only one part of the contradiction is false. Indeed, the consequence follows which is notorious in the case of all such theories, that they destroy themselves; for he who says that everything is true makes the opposite theory true too, and therefore his own untrue (for the opposite theory says that his is not true); and he who says that everything is false makes himself a liar. And if they make exceptions, the one that the opposite theory alone is not true, and the other that his own theory alone is not false, it follows none the

<sup>b</sup> c. iv. 5.

<sup>b</sup> ἦττον ἀπείρους συμβαίνει αὐτοῖς αἰτεῖσθαι λόγους ἀληθεῖς καὶ ψευδεῖς ὁ γὰρ λέγων τὸν ἀληθῆ λόγον ἀληθῆ ἀληθῆς, τοῦτο δ' εἰς ἄπειρον βαδιεῖται.

Φανερόν δ' ὅτι οὐδ' οἱ πάντα ἡρεμεῖν λέγοντες ἀληθῆ λέγουσιν, οὐδ' οἱ πάντα κινεῖσθαι. εἰ μὲν γὰρ ἡρεμεῖ πάντα, αἰεὶ ταῦτα ἀληθῆ καὶ ψευδῆ ἔσται, φαίνεται δὲ τοῦτο μεταβάλλον ὁ γὰρ λέγων ποτὲ αὐτὸς οὐκ ἦν καὶ πάλιν οὐκ ἔσται εἰ δὲ πάντα κινεῖται, οὐθέν ἔσται ἀληθές· πάντα ἄρα ψευδῆ. ἀλλὰ δέδεικται ὅτι ἀδύνατον. ἔτι ἀνάγκη τὸ ὄν<sup>1</sup> μεταβάλλειν· ἔκ τινος γὰρ εἷς τι ἢ μεταβολῆ ἀλλὰ μὴν οὐδὲ πάντα ἡρεμεῖ ἢ κινεῖται ποτέ,<sup>2</sup> αἰεὶ δ' οὐθέν· ἔστι γάρ τι ὃ αἰεὶ κινεῖ τὰ κινούμενα καὶ τὸ πρῶτον κινούν ἀκίνητον αὐτό

<sup>1</sup> ἀνάγκη τὸ ὄν] τὸ οὐκ ἀνάγκη A<sup>b</sup>

<sup>2</sup> ποτε] ποτέ δέ E.A<sup>b</sup>.

<sup>a</sup> The sphere of the fixed stars; cf. XII. vi., vii 1, viii 18

<sup>b</sup> Cf. XII vii



less that they postulate an infinite number of true and false statements. For the statement that the true statement is true is also true; and this will go on to infinity.

Nor, as is obvious, are those right who say that all things are at rest; nor those who say that all things are in motion. For if all things are at rest, the same things will always be true and false, whereas "this state of affairs" is obviously subject to change; for the speaker himself once did not exist, and again he will not exist. And if all things are in motion, nothing will be true, so everything will be false; but this has been proved to be impossible. Again, it must be that which *is* that changes, for change is from something into something. And further, neither is it true that all things are at rest or in motion sometimes, but nothing continuously; for there is something <sup>a</sup> which always moves that which is moved, and the "prime mover" is itself unmoved <sup>b</sup>

Δ

2 b

I. Ἀρχὴ λέγεται ἢ μὲν ὅθεν ἄν τις τοῦ πράγματος κινήθειν πρῶτον, οἷον τοῦ μήκους καὶ ὁδοῦ ἐντεῦθεν μὲν αὕτη ἀρχή, ἐξ ἐναντίας δ' ἑτέρα ἢ δὲ ὅθεν ἄν κάλλιστα ἕκαστον γένοιτο,<sup>1</sup> οἷον καὶ μαθήσεως οὐκ ἀπὸ τοῦ πρῶτου καὶ τῆς τοῦ πράγματος ἀρχῆς ἐνίοτε ἀρκτέον, ἀλλ' ὅθεν ῥᾶσ' ἄν μάθοι ἢ δὲ ὅθεν πρῶτον γίνεται ἐνυπάρχοντος, οἷον ὡς πλοίου τρόπις καὶ οἰκίας θεμέλιος, καὶ τῶν ζώων οἱ μὲν καρδίαν οἱ δὲ ἐγκέφαλον οἱ δ' ὅ τι ἄν τύχῃσι τοιοῦτον ὑπολαμβάνουσιν· ἢ δὲ ὅθεν γίνεται πρῶτον μὴ ἐνυπάρχοντος, καὶ ὅθεν πρῶτον ἢ κινήσεις πέφυκεν ἄρχεσθαι καὶ ἢ μεταβολή, οἷον τὸ τέκνον ἐκ τοῦ πατρὸς καὶ τῆς μητρὸς καὶ ἢ μάχη ἐκ τῆς λουδορίας· ἢ δὲ οὐ κατὰ προαίρεσιν κινεῖται τὰ κινούμενα καὶ μεταβάλλει τὰ μεταβάλλοντα, ὥσπερ αἱ τε κατὰ πόλεις ἀρχαὶ καὶ αἱ δυναστεῖαι καὶ αἱ βασιλεῖαι καὶ τυραννίδες ἀρχαὶ <δὲ><sup>2</sup> λέγονται καὶ αἱ τέχναι, καὶ τούτων αἱ ἀρχιτεκτονικαὶ μάλιστα. ἔτι ὅθεν γνωστὸν τὸ πρᾶγμα πρῶτον,

<sup>1</sup> ἕκαστον γένοιτο] γένοιτο ἕκαστον A<sup>b</sup>.

<sup>2</sup> ἀρχαὶ <δὲ> scripsi.

<sup>a</sup> ἀρχή means "starting-point," "principle," "rule" or "ruler."

<sup>b</sup> This was Aristotle's own view, *De Gen. An.* 738 b 16.

## BOOK V

I. "Beginning"<sup>a</sup> means · (a) That part of a thing from which one may first move; *e g.*, a line or a journey has one beginning *here*, and another at the opposite extremity. (b) The point from which each thing may best come into being; *e g.*, a course of study should sometimes be begun not from what is primary or from the starting-point of the subject, but from the point from which it is easiest to learn. (c) That thing as a result of whose presence something first comes into being; *e g.*, as the keel is the beginning of a ship, and the foundation that of a house, and as in the case of animals some thinkers suppose the heart<sup>b</sup> to be the "beginning," others the brain,<sup>c</sup> and others something similar, whatever it may be. (d) That from which, although not present in it, a thing first comes into being, and that from which motion and change naturally first begin, as the child comes from the father and mother, and fighting from abuse. (e) That in accordance with whose deliberate choice that which is moved is moved, and that which is changed is changed; such as magistracies, authorities, monarchies and despotisms. (f) Arts are also called "beginnings,"<sup>d</sup> especially the 2 architectonic arts. (g) Again, "beginning" means

<sup>a</sup> So Plato held, *Timaeus* 44 D.

<sup>d</sup> As directing principles.

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καὶ<sup>1</sup> αὕτη ἀρχὴ λέγεται τοῦ πράγματος, οἷον τῶν ἀποδείξεων αἱ ὑποθέσεις. ἰσαχῶς δὲ καὶ τὰ αἷτια λέγεται· πάντα γὰρ τὰ αἷτια ἀρχαί Πασῶν μὲν οὖν κοινὸν τῶν ἀρχῶν τὸ πρῶτον εἶναι ὅθεν ἢ ἔστιν ἢ γίγνεται ἢ γιγνώσκεται τούτων δὲ αἱ  
 20 μὲν ἐνυπάρχουσαί εἰσιν αἱ δὲ ἐκτός. διὸ ἢ τε φύσις ἀρχὴ καὶ τὸ στοιχεῖον καὶ ἡ διάνοια καὶ ἡ προαίρεσις καὶ οὐσία καὶ τὸ οὐ ἔνεκα· πολλῶν γὰρ καὶ τοῦ γνῶναι καὶ τῆς κινήσεως ἀρχὴ τὰ γαθὸν καὶ τὸ καλόν.<sup>2</sup>

II. Αἷτιον λέγεται ἓνα μὲν τρόπον ἐξ οὗ γίγνεται  
 25 τι ἐνυπάρχοντος, οἷον ὁ χαλκὸς τοῦ ἀνδριάντος καὶ ὁ ἄργυρος τῆς φιάλης καὶ τὰ τούτων γένη ἄλλον δὲ τὸ εἶδος καὶ τὸ παράδειγμα τοῦτο δ' ἔστιν ὁ λόγος τοῦ τί ἦν εἶναι καὶ τὰ τούτου<sup>3</sup> γένη, οἷον τοῦ διὰ πασῶν τὸ<sup>4</sup> δύο πρὸς ἓν καὶ ὅλως ὁ ἀριθμὸς  
 30 καὶ τὰ μέρη τὰ ἐν τῷ λόγῳ ἔτι ὅθεν ἡ ἀρχὴ τῆς μεταβολῆς ἢ πρώτη ἢ τῆς ἡρεμῆσεως, οἷον ὁ βουλεύσας αἷτιος, καὶ ὁ πατήρ τοῦ τέκνου, καὶ ὅλως τὸ ποιοῦν τοῦ ποιουμένου καὶ τὸ μεταβλητικὸν τοῦ μεταβάλλοντος. ἔτι ὡς τὸ τέλος τοῦτο δ' ἔστι τὸ οὐ ἔνεκα, οἷον τοῦ περιπατεῖν ἢ ὑγίεια.  
 35 ὑγιάινη, καὶ εἰπόντες οὕτως οἰόμεθα ἀποδεδωκέναι τὸ αἷτιον. καὶ ὅσα δὴ κινήσαντος ἄλλου  
 13 b μεταξὺ γίγνεται τοῦ τέλους, οἷον τῆς ὑγείας ἢ ἰσχυασία ἢ ἡ κάθαρσις ἢ τὰ φάρμακα ἢ τὰ

<sup>1</sup> καὶ] καὶ γὰρ A<sup>b</sup>.<sup>3</sup> τούτου] τούτων recc.<sup>2</sup> καλόν Alexander: κακόν.<sup>4</sup> τὸ A<sup>b</sup>. τὰ.<sup>a</sup> i.e., the material cause.<sup>b</sup> sc. of material—metal, wood, etc.

the point from which a thing is first comprehensible, this too is called the "beginning" of the thing, *e.g.* the hypotheses of demonstrations. ("Cause" can have a similar number of different senses, for all causes are "beginnings")

It is a common property, then, of all "beginnings" <sup>3</sup> to be the first thing from which something either exists or comes into being or becomes known; and some beginnings are originally inherent in things, while others are not. Hence "nature" is a beginning, and so is "element" and "understanding" and "choice" and "essence" and "final cause"—for in many cases the Good and the Beautiful are the beginning both of knowledge and of motion

II. "Cause" means: (a) in one sense, that <sup>a</sup> as "the result of whose presence something comes into being—*e.g.* the bronze of a statue and the silver of a cup, and the classes <sup>b</sup> which contain these; (b) in another sense, the *form* or pattern: that is, the essential formula and the classes which contain it—*e.g.* the ratio 2 : 1 and number in general is the cause of the octave—and the parts of the formula. (c) The source of the first beginning of change or <sup>2</sup> rest; *e.g.* the man who plans is a cause, and the father is the cause of the child, and in general that which produces is the cause of that which is produced, and that which changes of that which is changed. (d) The same as "end"; *i.e.* the final cause: *e.g.*, as the "end" of walking is health. For why does a <sup>3</sup> man walk? "To be healthy," we say, and by saying this we consider that we have supplied the cause. (e) All those means towards the end which arise at the instigation of something else; as, *e.g.* fat-reducing, purging, drugs and instruments are causes of health;

ὄργανα· πάντα γὰρ ταῦτα τοῦ τέλους ἕνεκά ἐστι, διαφέρει δὲ ἀλλήλων ὡς ὄντα τὰ μὲν ὄργανα, τὰ δ' ἔργα.

Τὰ μὲν οὖν αἷτια σχεδὸν τοσαυταχῶς λέγεται, 5 συμβαίνει δὲ πολλαχῶς λεγομένων τῶν αἰτίων καὶ πολλὰ τοῦ αὐτοῦ αἷτια εἶναι οὐ κατὰ συμβεβηκός, οἷον τοῦ ἀνδριάντος καὶ ἡ ἀνδριαντο-  
 ποικη<sup>1</sup> καὶ ὁ χαλκός οὐ καθ' ἕτερόν τι, ἀλλ' ἡ ἀνδριάς ἀλλ' οὐ τὸν αὐτὸν τρόπον, ἀλλὰ τὸ μὲν ὡς ὕλη τὸ δ' ὡς ὄθεν ἡ κίνησις. καὶ ἀλλήλων  
 10 αἷτια, οἷον τὸ πονεῖν τῆς εὐεξίας καὶ αὕτη τοῦ πονεῖν ἀλλ' οὐ τὸν αὐτὸν τρόπον, ἀλλὰ τὸ μὲν ὡς τέλος τὸ δ' ὡς ἀρχὴ κινήσεως. ἔτι δὲ ταῦτὸ ἐνίοτε τῶν ἐναντίων ἐστίν· ὁ γὰρ παρὸν αἷτιον τουδί, τουτ' ἀπὸν αἰτιώμεθα ἐνίοτε τοῦ ἐναντίου, οἷον τὴν ἀπουσίαν τοῦ κυβερνήτου τῆς ἀνατροπῆς,  
 15 οὐ ἦν ἡ παρουσία αἷτια τῆς σωτηρίας ἄμφω δέ, καὶ ἡ παρουσία καὶ ἡ στέρησις, αἷτια ὡς κινουῦντα.

Ἄπαντα δὲ τὰ νῦν εἰρημένα αἷτια εἰς τέτταρας τρόπους πίπτει τοὺς φανερωτάτους. τὰ μὲν γὰρ στοιχεῖα τῶν συλλαβῶν καὶ ἡ ὕλη τῶν σκευαστῶν καὶ τὸ πῦρ καὶ ἡ γῆ καὶ τὰ τοιαῦτα πάντα  
 20 τῶν σωμάτων καὶ τὰ μέρη τοῦ ὄλου καὶ αἱ ὑποθέσεις τοῦ συμπεράσματος ὡς τὸ ἐξ οὗ αἷτια ἐστίν· τούτων δὲ τὰ μὲν ὡς τὸ ὑποκείμενον, οἷον τὰ μέρη, τὰ δὲ ὡς τὸ τί ἦν εἶναι, τό τε ὄλον καὶ ἡ σύνθεσις καὶ τὸ εἶδος. τὸ δὲ σπέρμα καὶ ὁ ἰατρός καὶ ὁ βουλευσας καὶ ὄλως τὸ ποιοῦν,  
 25 πάντα ὄθεν ἡ ἀρχὴ τῆς μεταβολῆς ἢ στάσεως. τὰ δ' ἄλλα ὡς τὸ τέλος καὶ τὰ γαθὸν τῶν ἄλλων·

<sup>1</sup> ἀνδριαντοποιητικῆ A<sup>b</sup> comm.

for they all have the *end* as their object, although they differ from each other as being some instruments, others actions

These are roughly all the meanings of "cause," 4 but since causes are spoken of with various meanings, it follows that there are several causes (and that not in an accidental sense) of the same thing. *E g*, both *statuary* and *bronze* are causes of the statue, not in different connexions, but *qua* statue. However, they are not causes in the same way, but the one as *material* and the other as the *source of motion*. And 5 things are causes of each other; as *e g* labour of vigour, and vigour of labour—but not in the same way, the one as an *end*, and the other as *source of motion*. And again the same thing is sometimes the cause of contrary results; because that which by its presence is the cause of so-and-so we sometimes accuse of being, by its absence, the cause of the contrary—as, *e g*, we say that the absence of the pilot is the cause of a capsizing, whereas his presence was the cause of safety. And both, presence and 6 privation, are *moving* causes

Now there are four senses which are most obvious under which all the causes just described may be classed. The components of syllables; the material 7 of manufactured articles; fire, earth and all such bodies; the parts of a whole; and the premisses of a syllogistic conclusion; are causes in the *material* sense. Of these some are causes as substrate · *e g*. the parts; and others as *essence*: the whole, and the composition, and the form. The seed and the 8 physician and the contriver and in general that which produces, all these are the source of change or stationariness. The remainder represent the *end*

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τὸ γὰρ οὐ ἔνεκα βέλτιστον καὶ τέλος τῶν ἄλλων  
 ἐθέλει εἶναι διαφερέτω δὲ μηδὲν αὐτὸ εἰπεῖν  
 ἀγαθὸν ἢ φαινόμενον ἀγαθόν. Τὰ μὲν οὖν αἷτια  
 τοσαῦτά ἐστι τῷ εἶδει, τρόποι δὲ τῶν αἰτίων  
 30 ἀριθμῷ μὲν εἰσι πολλοί, κεφαλαιούμενοι δὲ καὶ  
 οὗτοι ἐλάττους. λέγεται γὰρ αἷτια πολλαχῶς, καὶ  
 αὐτῶν τῶν ὁμοειδῶν προτέρως καὶ ὑστέρωσ ἄλλο  
 ἄλλου, οἷον ὑγιείας ὁ ἰατρὸς καὶ ὁ τεχνίτης, καὶ τοῦ  
 διὰ πασῶν τὸ διπλάσιον καὶ ἀριθμὸς, καὶ αἰεὶ τὰ  
 περιέχοντα ὀτιοῦν τῶν καθ' ἕκαστα. ἔτι δ' ὡς  
 35 τὸ συμβεβηκὸς καὶ τὰ τούτων γένη, οἷον ἀνδριάν-  
 τος ἄλλως Πολύκλειτος καὶ ἄλλως ἀνδριαντο-  
 014 a ποιός, ὅτι συμβέβηκε τῷ ἀνδριαντοποιῷ Πολυ-  
 κλείτῳ εἶναι καὶ τὰ περιέχοντα δὲ τὸ συμβεβη-  
 κός, οἷον ἄνθρωπος αἷτιος ἀνδριάντος, ἢ καὶ ὄλως  
 ζῶον, ὅτι ὁ Πολύκλειτος ἄνθρωπος, ὁ δὲ ἄν-  
 θρωπος ζῶον ἔστι δὲ καὶ τῶν συμβεβηκόντων  
 5 ἄλλα ἄλλων πορρώτερον<sup>1</sup> καὶ ἐγγύτερον, οἷον εἰ ὁ  
 λευκὸς καὶ ὁ μουσικὸς αἷτιος λέγοιτο τοῦ ἀνδριάν-  
 τος ἀλλὰ μὴ μόνον Πολύκλειτος ἢ ἄνθρωπος.  
 Παρὰ πάντα δὲ καὶ τὰ οἰκείως λεγόμενα καὶ τὰ  
 κατὰ συμβεβηκός, τὰ μὲν ὡς δυνάμενα λέγεται  
 τὰ δ' ὡς ἐνεργοῦντα, οἷον τοῦ οἰκοδομεῖσθαι  
 10 οἰκοδόμος ἢ οἰκοδομῶν οἰκοδόμος ὁμοίως δὲ  
 λεχθήσεται καὶ ἐφ' ὧν αἷτια τὰ αἷτια τοῖς  
 εἰρημένοις, οἷον τοῦδε τοῦ ἀνδριάντος ἢ<sup>2</sup> ἀνδριάν-  
 τος ἢ ὄλως εἰκόνοσ, ἢ χαλκοῦ τοῦδε ἢ<sup>3</sup> χαλκοῦ ἢ

<sup>1</sup> πορρώτερον EJ Physics · πορρώτερα A<sup>b</sup> προτερον.

<sup>2</sup> ἢ EJ Physics: ἢ A<sup>b</sup>.

<sup>3</sup> ἢ E Physics: ἢ A<sup>b</sup>J.



and *good* of the others ; for the final cause tends to be the greatest good and *end* of the rest. Let it be assumed that it makes no difference whether we call it " good " or " apparent good." In *kind*, then, there are these four classes of cause.

The *modes* of cause are numerically many, although these too are fewer when summarized. For causes are spoken of in many senses, and even of those which are of the same kind, some are causes in a prior and some in a posterior sense ; *e g.*, the physician and the expert are both causes of health ; and the ratio 2 : 1 and number are both causes of the octave ; and the universals which include a given cause are causes of its particular effects. Again, a thing may be a cause in the sense of an accident, and the classes which contain accidents ; *e g.*, the cause of a statue is in one sense Polyclitus and in another a sculptor, because it is an accident of the sculptor to be Polyclitus. And the universal terms which include accidents are causes, *e g.*, the cause of a statue is a man, or even, generally, an animal ; because Polyclitus is a man, and man is an animal. And even of accidental causes some are remoter or more proximate than others ; *e g.*, the cause of the statue might be said to be " white man " or " cultured man," and not merely " Polyclitus " or " man."

And besides the distinction of causes as *proper* and *accidental*, some are termed causes in a *potential* and others in an *actual* sense ; *e.g.*, the cause of building is either the builder or the builder who builds. And the same distinctions in meaning as we have already described will apply to the *effects* of the causes ; *e g.* to *this* statue, or *a* statue, or generally an image ; and to *this* bronze, or bronze, or

114<sup>a</sup> ὅλως ὕλης· καὶ ἐπὶ τῶν συμβεβηκότων ὡσαύτως.  
 ἔτι δὲ συμπλεκόμενα καὶ ταῦτα κάκεῖνα λεχθή-  
 11 σεται, οἷον οὐ Πολύκλειτος οὐδὲ ἀνδριαντοποιός,  
 ἀλλὰ Πολύκλειτος ἀνδριαντοποιός. Ἄλλ' ὁμως  
 ἅπαντά γε ταῦτ' ἐστὶ τὸ μὲν πλῆθος ἕξ, λεγόμε-  
 12 να δὲ διχῶς· ἢ γὰρ ὡς τὸ καθ' ἕκαστον, ἢ  
 ὡς τὸ γένος αὐτοῦ, ἢ ὡς τὸ συμβεβηκός, ἢ ὡς  
 τὸ γένος τοῦ συμβεβηκότος, ἢ ὡς συμπλεκόμενα  
 20 ταῦτα, ἢ ἀπλῶς λεγόμενα, πάντα δὲ ἢ<sup>1</sup> ὡς ἐνε-  
 ροῦντα ἢ κατὰ δύναμιν. διαφέρει δὲ τοσοῦτον,  
 ὅτι τὰ μὲν ἐνεργοῦντα καὶ τὰ καθ' ἕκαστον ἅμα  
 ἔστι καὶ οὐκ ἔστιν [αὐτά τε]<sup>2</sup> καὶ ὦν αἴτια, οἷον  
 ὄδε ὁ ἰατρούων τῷδε τῷ ὑγιαζομένῳ, καὶ ὄδε ὁ  
 οἰκοδόμος τῷδε τῷ οἰκοδομουμένῳ, τὰ δὲ κατὰ  
 25 δύναμιν οὐκ αἰεὶ· φθείρεται γὰρ οὐχ ἅμα ἢ οἰκία  
 καὶ ὁ οἰκοδόμος.

III Στοιχείον λέγεται ἕξ οὐ σύγκειται πρώτου  
 ἐνυπάρχοντος ἀδιαιρέτου τῷ εἶδει εἰς ἕτερον εἶδος,  
 οἷον φωνῆς στοιχεῖα ἕξ ὧν σύγκειται ἡ φωνή  
 καὶ εἰς ἅ διαιρεῖται ἔσχατα, ἐκεῖνα δὲ μηκέτ'  
 30 εἰς ἄλλας φωνὰς ἐτέρας τῷ εἶδει αὐτῶν· ἀλλὰ  
 κἄν διαιρηῆται, τὰ μόρια ὁμοειδή, οἷον ὕδατος τὸ  
 μόριον ὕδωρ, ἀλλ' οὐ τῆς συλλαβῆς. ὁμοίως δὲ  
 καὶ τὰ τῶν σωμάτων στοιχεῖα λέγουσιν οἱ λέγον-  
 τες, εἰς ἅ διαιρεῖται τὰ σώματα ἔσχατα, ἐκεῖνα

<sup>1</sup> πάντα δὲ ἢ A<sup>b</sup> Physics Alexander (?). ἔτι EJ.

<sup>2</sup> om. A<sup>b</sup> Physics.

<sup>a</sup> Effects, just like causes (§ 10), may be particular or general. The metal-worker produces (a) the bronze for a particular statue by the sculptor, (b) bronze for a statue, (c) metal for an image.

<sup>b</sup> The cause of a statue may be said to be (1.) a sculptor,

generally material<sup>a</sup> And it is the same with accidental effects Again, the proper and accidental senses will be combined; *e g*, the cause is neither "Polychtus" nor "a sculptor" but "the sculptor Polychtus"

However, these classes of cause are in all six in number, each used in two senses Causes are (i.) particular, (ii.) generic, (iii.) accidental, (iv.) generically accidental; and these may be either stated singly or (v., vi.) in combination<sup>b</sup>; and further they are all either actual or potential And there is this difference between them, that actual and particular causes coexist or do not coexist with their effects (*e g this* man giving medical treatment with *this* man recovering his health, and *this* bulder with *this* building in course of erection); but potential causes do not always do so; for the house and the bulder do not perish together

III. "Element" means (a) the primary immanent thing, formally indivisible into another form. of which something is composed *E g*, the elements of a sound<sup>c</sup> are the parts of which that sound is composed and into which it is ultimately divisible, and which are not further divisible into other sounds formally different from themselves. If an element be divided, the parts are formally the same as the whole: *e g.*, a part of water is water; but it is not so with the syllable (b) Those who speak of the elements of *bodies* similarly mean the parts into which bodies are ultimately divisible, and which are

(ii.) an artist, (iii.) Polychtus, (iv.) a man, (v.) the sculptor Polychtus (combination of (i.) and (iii.)), (vi.) an artistic man (combination of (ii.) and (iv.)).

<sup>c</sup> Cf. I. ix. 35 n.

014<sup>a</sup> δὲ μηκέτ' εἰς ἄλλα εἶδει διαφέροντα καὶ εἴτε ἐν  
 3 εἴτε πλείω τὰ τοιαῦτα, ταῦτα στοιχεῖα λέγουσιν.  
 παραπλησίως δὲ καὶ τῶν διαγραμμάτων στοιχεῖα  
 λέγεται, καὶ ὅλως τὰ τῶν ἀποδείξεων· αἱ γὰρ  
 114<sup>b</sup> πρῶται ἀποδείξεις καὶ ἐν πλείοσιν ἀποδείξεσιν  
 ἐνυπάρχουσαι, αὗται στοιχεῖα τῶν ἀποδείξεων  
 λέγονται εἰς δὲ τοιοῦτοι συλλογισμοὶ οἱ πρῶτοι  
 ἐκ τῶν τριῶν δι' ἑνὸς μέσου. καὶ μεταφέροντες  
 δὲ στοιχεῖον καλοῦσιν ἐντεῦθεν ὃ ἂν ἐν ὄν καὶ  
 5 μικρὸν ἐπὶ πολλὰ ἢ χρήσιμον διὸ καὶ τὸ μικρὸν  
 καὶ ἀπλοῦν καὶ ἀδιαίρετον στοιχεῖον λέγεται.  
 ὅθεν ἐλήλυθε τὰ μάλιστα καθόλου στοιχεῖα εἶναι,  
 ὅτι ἕκαστον αὐτῶν ἐν ὄν καὶ ἀπλοῦν ἐν πολλοῖς  
 ὑπάρχει ἢ πᾶσιν ἢ ὅτι πλείστοις· καὶ<sup>1</sup> τὸ ἐν καὶ  
 τὴν στιγμῆν ἀρχάς τισι δοκεῖ εἶναι ἐπεὶ οὖν τὰ  
 10 καλούμενα γένη καθόλου καὶ ἀδιαίρετα (οὐ<sup>2</sup> γὰρ  
 ἔστι λόγος αὐτῶν), στοιχεῖα τὰ γένη λέγουσί  
 τινες, καὶ μᾶλλον ἢ τὴν διαφοράν, ὅτι καθόλου  
 μᾶλλον τὸ γένος· ὧ μὲν γὰρ ἡ διαφορὰ ὑπάρχει,  
 καὶ τὸ γένος ἀκολουθεῖ, ὧ δὲ τὸ γένος, οὐ παντὶ  
 ἡ διαφορά. ἀπάντων δὲ κοινὸν τὸ εἶναι στοιχεῖον  
 15 ἐκάστου τὸ πρῶτον ἐνυπάρχον ἐκάστῳ.

IV. Φύσις λέγεται ἓνα μὲν τρόπον ἢ τῶν φυομένων  
 γένεσις, οἷον εἴ τις ἐπεκτείνας λέγοι τὸ υ, ἓνα δὲ

<sup>1</sup> διὸ καὶ A<sup>b</sup>.

<sup>2</sup> οὐ A<sup>b</sup> Alexander · εἰς E εἰς J.

<sup>a</sup> Cf. III iii 1.

<sup>b</sup> This must refer to the highest genera, which have no definition because they cannot be analysed into genus and differentia (Ross)

<sup>c</sup> On the meaning of φύσις cf Burnet, *EGP*. pp 10-12, 363-364.

not further divisible into other parts different in form. And whether they speak of one such element or of more than one, this is what they mean. (c) The term is applied with a very similar meaning to the "elements" of geometrical figures, and generally to the "elements" of demonstrations; for the primary demonstrations which are contained in a number of other demonstrations are called "elements" of demonstrations.<sup>a</sup> Such are the primary syllogisms consisting of three terms and with one middle term. (d) The term "element" is also applied metaphorically to any small unity which is useful for various purposes; and so that which is small or simple or indivisible is called an "element". (e) Hence it comes that the most universal things are elements: because each of them, being a simple unity, is present in many things—either in all or in as many as possible. Some too think that unity and the point are first principles. (f) Therefore since what are called genera<sup>b</sup> are universal and indivisible (because they have no formula), some people call the genera elements, and these rather than the differentia, because the genus is more universal. For where the differentia is present, the genus also follows; but the differentia is not always present where the genus is. And it is common to all cases that the element of each thing is that which is primarily inherent in each thing.

IV "Nature"<sup>c</sup> means (a) in one sense, the "genesis of growing things—as would be suggested by pronouncing the  $\nu$  of  $\phi\acute{\iota}\sigma\iota\varsigma$  long—and (b) in another, that immanent thing<sup>d</sup> from which a grow-

<sup>a</sup> Probably the seed (Bonitz).

4 b ἐξ οὗ φύεται πρώτου<sup>1</sup> τὸ φυόμενον ἐνυπάρχοντος·  
 ἔτι ὅθεν ἢ κίνησις ἢ πρώτη ἐν ἐκάστῳ τῶν φύσει  
 20 ὄντων ἐν αὐτῷ ἢ αὐτὸ<sup>2</sup> ὑπάρχει. φύεσθαι δὲ  
 λέγεται ὅσα αὐξήσιν ἔχει δι' ἐτέρου τῷ ἄπτεσθαι  
 καὶ συμπεφυκέναι ἢ προσπεφυκέναι ὡσπερ τὰ  
 ἔμβρυα· διαφέρει δὲ σύμφυσις ἀφῆς, ἔνθα μὲν γὰρ  
 οὐδὲν παρὰ τὴν ἀφῆν ἕτερον ἀνάγκη εἶναι, ἐν δὲ  
 τοῖς συμπεφυκόσιν ἔστι τι ἐν τῷ αὐτῷ ἐν ἀμφοῖν  
 25 ὃ ποιεῖ ἀντὶ τοῦ ἄπτεσθαι συμπεφυκέναι καὶ εἶναι  
 ἐν κατὰ τὸ συνεχές καὶ ποσόν, ἀλλὰ μὴ κατὰ τὸ  
 ποιόν. ἔτι δὲ φύσις λέγεται ἐξ οὗ πρώτου ἢ ἔστιν  
 ἢ γίνεταί τι τῶν φύσει ὄντων, ἀρρυθμίστου ὄντος  
 καὶ ἀμεταβλήτου ἐκ τῆς δυνάμεως τῆς αὐτοῦ,  
 οἷον ἀνδριάντος καὶ τῶν σκευῶν τῶν χαλκῶν ὃ  
 30 χαλκὸς ἢ φύσις λέγεται, τῶν δὲ ξυλίνων ξύλον·  
 ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων· ἐκ τούτων γὰρ  
 ἔστιν ἕκαστον διασωζομένης τῆς πρώτης ὑλης·  
 τοῦτον γὰρ τὸν τρόπον καὶ τῶν φύσει ὄντων τὰ  
 στοιχεῖα φασιν εἶναι φύσιν, οἱ μὲν πῦρ οἱ δὲ γῆν οἱ  
 δ' αἶρα οἱ δ' ὕδωρ οἱ δ' ἄλλο τι τοιοῦτον λέγοντες,  
 35 οἱ δ' ἔνια τούτων οἱ δὲ πάντα ταῦτα. ἔτι δ' ἄλλον  
 τρόπον λέγεται ἢ φύσις ἢ τῶν φύσει ὄντων οὐσία,  
 οἷον οἱ λέγοντες τὴν φύσιν εἶναι τὴν πρώτην σύν-  
 15 a θεσιν, ἢ<sup>3</sup> ὡσπερ Ἐμπεδοκλῆς λέγει ὅτι

φύσις οὐδενὸς ἔστιν ἑόντων,  
 ἀλλὰ μόνον μίξις τε διάλλαξις τε μιγέντων  
 ἔστι, φύσις δ' ἐπὶ τοῖς ὀνομάζεται ἀνθρώποισιν.

Διὸ καὶ ὅσα φύσει ἔστιν ἢ γίνεταί, ἤδη ὑπάρχοντος  
 5 ἐξ οὗ πέφυκε γίνεσθαι ἢ εἶναι, οὕτω φαμέν τὴν

<sup>1</sup> πρώτου E<sup>2</sup> Alexander. πρώτων

<sup>2</sup> αὐτῷ E.

<sup>3</sup> ἢ om Γ, Bekker.

ing thing first begins to grow. (c) The source from which the primary motion in every natural object is induced in that object as such. All things are said to grow which gain increase through something else by contact and organic unity (or adhesion, as in the case of embryos). Organic unity differs from contact; for in the latter case there need be nothing except contact, but in both the things which form an organic unity there is some one and the same thing which produces, instead of mere contact, a unity which is organic, continuous and quantitative (but not qualitative). Again, "nature" means (d) the primary stuff, shapeless and unchangeable from its own potency, of which any natural object consists or from which it is produced; e.g., bronze is called the "nature" of a statue and of bronze articles, and wood that of wooden ones, and similarly in all other cases. For each article consists of these "natures," the primary material persisting. It is in this sense that men call the elements of natural objects the "nature," some calling it fire, others earth or air or water, others something else similar, others some of these, and others all of them. Again in another sense "nature" means (e) the substance of natural objects; as in the case of those who say that the "nature" is the primary composition of a thing, or as Empedocles says:

Of nothing that exists is there nature, but only mixture and separation of what has been mixed; nature is but a name given to these by men.<sup>a</sup>

Hence as regards those things which exist or are produced by nature, although that from which they naturally are produced or exist is already present, we

<sup>a</sup> Fr. 8 (Diels).

<sup>a</sup> φύσιν ἔχειν ἂν μὴ ἔχῃ τὸ εἶδος καὶ τὴν μορφήν. φύσει μὲν οὖν τὸ ἐξ ἀμφοτέρων τούτων ἐστίν, οἷον τὰ ζῶα καὶ τὰ μόρια αὐτῶν· φύσις δὲ ἢ τε πρώτη ὕλη (καὶ αὕτη διχῶς, ἢ ἡ πρὸς αὐτὸ πρώτη ἢ ἡ ὅλως πρώτη, οἷον τῶν χαλκῶν ἔργων πρὸς αὐτὰ  
 10 μὲν πρῶτος ὁ χαλκός, ὅλως δ' ἴσως ὕδωρ, εἰ πάντα τὰ τηκτὰ ὕδωρ), καὶ τὸ εἶδος καὶ ἡ οὐσία· τοῦτο δ' ἐστὶ τὸ τέλος τῆς γενέσεως. μεταφορᾷ δ' ἤδη καὶ ὅλως πᾶσα οὐσία φύσις λέγεται δια ταύτην, ὅτι καὶ ἡ φύσις οὐσία τίς ἐστίν. Ἐκ δὴ τῶν εἰρημένων ἡ πρώτη φύσις καὶ κυρίως λεγο-  
 15 μένη ἐστὶν ἡ οὐσία ἡ τῶν ἐχόντων ἀρχὴν κινήσεως ἐν αὐτοῖς ἢ αὐτά· ἡ γὰρ ὕλη τῷ ταύτης δεκτικὴ εἶναι λέγεται φύσις, καὶ αἱ γενέσεις καὶ τὸ φύεσθαι τῷ ἀπὸ ταύτης εἶναι κινήσεις καὶ ἡ ἀρχὴ τῆς κινήσεως τῶν φύσει ὄντων αὕτη ἐστίν, ἐνυπάρχουσά πως ἢ δυνάμει ἢ ἐντελεχείᾳ.

20 V. Ἀναγκαῖον λέγεται οὐ ἄνευ οὐκ ἐνδέχεται ζῆν ὡς συναιτίου, οἷον τὸ ἀναπνεῖν καὶ ἡ τροφή τῷ ζῳῷ ἀναγκαῖον· ἀδύνατον γὰρ ἄνευ τούτων εἶναι· καὶ ὦν ἄνευ τὸ ἀγαθὸν μὴ ἐνδέχεται ἢ εἶναι ἢ γενέσθαι, ἢ τὸ<sup>1</sup> κακὸν ἀποβαλεῖν ἢ στερηθῆναι,  
 25 οἷον τὸ πιεῖν τὸ φάρμακον ἀναγκαῖον ἵνα μὴ κάμνη, καὶ τὸ πλεῦσαι εἰς Αἴγιναν ἵν' ἀπολάβῃ τὰ χρήματα. ἔτι τὸ βίαιον καὶ ἡ βία· τοῦτο δ' ἐστὶ τὸ παρὰ τὴν ὄρμην καὶ τὴν προαίρεσιν ἐμποδίζον

<sup>1</sup> τὸ A<sup>b</sup> comm. : τι EJ.



say that they have not their nature yet unless they have their form and shape. That which comprises both of these exists by nature; *e.g.* animals and their parts. And nature is both the primary matter (and this in two senses—either primary in relation to the thing, or primary in general, *e.g.*, in bronze articles the primary matter in relation to those articles is bronze, but in general it is perhaps water—that is if all things which can be melted are water) and the form or essence, *i.e.* the end of the process of generation. Indeed from this sense of “nature,” by an extension of meaning, every essence in general is called “nature,” because the nature of anything is a kind of essence.

From what has been said, then, the primary and proper sense of “nature” is the essence of those things which contain in themselves as such a source of motion; for the matter is called “nature” because it is capable of receiving the nature, and the processes of generation and growth are called “nature” because they are motions derived from it. And nature in this sense is the source of motion in natural objects, which is somehow inherent in them, either potentially or actually.

V. “Necessary” means: (a) That without which, as a concomitant condition, life is impossible; *e.g.*, respiration and food are necessary for an animal, because it cannot exist without them. (b) The conditions without which good cannot be or come to be, or without which one cannot get rid of or keep free of evil—*e.g.*, drinking medicine is necessary to escape from ill-health, and sailing to Aegina is necessary to recover one’s money. (c) The compulsory and compulsion; *i.e.* that which hinders and prevents, in

15<sup>a</sup> καὶ κωλυτικόν· τὸ γὰρ βίαιον ἀναγκαῖον λέγεται,  
διὸ καὶ λυπηρόν, ὥσπερ καὶ Εὐῆνός φησι

30 πᾶν γὰρ ἀναγκαῖον πρᾶγμα<sup>1</sup> ἀνιαρόν ἔφθ.

καὶ ἡ βία ἀνάγκη τις, ὥσπερ καὶ Σοφοκλῆς λέγει  
ἀλλ' ἡ βία με ταῦτ' ἀναγκάζει ποιεῖν.

Καὶ δοκεῖ ἡ ἀνάγκη ἀμετάπειστον τι εἶναι, ὀρθῶς·  
ἐναντίον γὰρ τῇ κατὰ τὴν προαίρεσιν κινήσει καὶ  
κατὰ τὸν λογισμόν. <sup>2</sup>Ἐτι τὸ μὴ ἐνδεχόμενον

35 ἄλλως ἔχειν ἀναγκαῖον φαμεν οὕτως ἔχειν καὶ κατὰ  
τοῦτο τὸ ἀναγκαῖον καὶ τᾶλλα λέγεται πως ἅπαντα

115<sup>b</sup> ἀναγκαῖα· τό τε γὰρ βίαιον ἀναγκαῖον λέγεται ἢ  
ποιεῖν ἢ πάσχειν τότε ὅταν μὴ ἐνδέχεται κατὰ τὴν  
ὄρμην διὰ τὸ βιαζόμενον, ὡς ταύτην ἀνάγκην  
οὐσαν δι' ἣν μὴ ἐνδέχεται ἄλλως, καὶ ἐπὶ τῶν  
συναιτίων τοῦ ζῆν καὶ τοῦ ἀγαθοῦ ὡσαύτως· ὅταν  
5 γὰρ μὴ ἐνδέχεται ἔνθα μὲν τὸ ἀγαθὸν ἔνθα δὲ τὸ  
ζῆν καὶ τὸ εἶναι ἄνευ τινῶν, ταῦτα ἀναγκαῖα καὶ ἡ  
αἰτία ἀνάγκη τίς ἐστὶν αὕτη <sup>3</sup>Ἐτι ἡ ἀπόδειξις

τῶν ἀναγκαίων, ὅτι οὐκ ἐνδέχεται ἄλλως ἔχειν, εἰ  
ἀποδέδεικται ἀπλῶς· τούτου δ' αἰτία τὰ πρῶτα, εἰ  
ἀδύνατον ἄλλως ἔχειν ἐξ ὧν ὁ συλλογισμός. Τῶν

10 μὲν δὴ ἕτερον αἷτιον τοῦ ἀναγκαῖα εἶναι, τῶν δὲ  
οὐδέν, ἀλλὰ διὰ ταῦτα ἕτερά ἐστὶν ἐξ ἀνάγκης.  
ὥστε τὸ πρῶτον καὶ κυρίως ἀναγκαῖον τὸ ἀπλοῦν

<sup>a</sup> Of Poros; sophist and poet, contemporary with Socrates.

<sup>b</sup> Fr. 8 (Hiller).

<sup>c</sup> *Electra* 256 (the quotation is slightly inaccurate).

opposition to impulse and purpose. For the compulsory is called necessary, and hence the necessary is disagreeable ; as indeed Evenus <sup>a</sup> says :

For every necessary thing is by nature grievous <sup>b</sup>

And compulsion is a kind of necessity, as Sophocles <sup>3</sup> says :

Compulsion makes me do this of necessity. <sup>c</sup>

And necessity is held, rightly, to be something inexorable ; for it is opposed to motion which is in accordance with purpose and calculation

(d) Again, what cannot be otherwise we say is necessarily so. It is from this sense of " necessary " <sup>4</sup> that all others are somehow derived ; for the term " compulsory " is used of something which it is necessary for one to do or suffer only when it is impossible to act according to impulse, because of the compulsion : which shows that necessity is that because of which a thing cannot be otherwise ; and the same is true of the concomitant conditions of living and of the good. For when in the one case good, and in the other life or existence, is impossible without certain conditions, these conditions are necessary, and the cause is a kind of necessity.

(e) Again, demonstration is a " necessary " thing, <sup>5</sup> because a thing cannot be otherwise if the demonstration has been absolute. And this is the result of the first premisses, when it is impossible for the assumptions upon which the syllogism depends to be otherwise.

Thus of necessary things, some have an external cause of their necessity, and others have not, but it is through them that other things are of necessity what they are. Hence the " necessary " in the <sup>6</sup>

15 b ἐστίν· τοῦτο γὰρ οὐκ ἐνδέχεται πλεοναχῶς ἔχειν,  
 ὥστ' οὐδὲ ἄλλως καὶ ἄλλως ἤδη γὰρ πλεοναχῶς  
 15 ἂν ἔχοι εἰ ἄρα ἔστιν ἅττα αἰδία καὶ ἀκίνητα,  
 οὐδὲν ἐκείνοις ἐστὶ βίαιον οὐδὲ παρὰ φύσιν.

VI Ἐν λέγεται τὸ μὲν κατὰ συμβεβηκός τὸ δὲ  
 καθ' αὐτό, κατὰ συμβεβηκός μὲν οἶον Κορίσκος καὶ  
 τὸ μουσικόν, καὶ Κορίσκος μουσικός· ταῦτό γὰρ  
 εἰπεῖν Κορίσκος καὶ τὸ μουσικόν, καὶ Κορίσκος  
 20 μουσικός· καὶ τὸ μουσικόν καὶ τὸ δίκαιον, καὶ  
 μουσικός δίκαιος Κορίσκος πάντα γὰρ ταῦτα  
 ἐν λέγεται κατὰ συμβεβηκός, τὸ μὲν δίκαιον καὶ  
 τὸ μουσικόν, ὅτι μιᾷ οὐσίᾳ συμβέβηκεν, τὸ δὲ μου-  
 σικόν καὶ Κορίσκος, ὅτι θάτερον θατέρῳ συμβέβη-  
 κεν· ὁμοίως δὲ τρόπον τινα καὶ ὁ μουσικός Κορί-  
 25 σκος τῷ Κορίσκῳ ἐν, ὅτι θάτερον τῶν μορίων θατέ-  
 ρῳ συμβέβηκε τῶν ἐν τῷ λόγῳ, οἶον τὸ μουσικόν  
 τῷ Κορίσκῳ, καὶ ὁ μουσικός Κορίσκος δικαίῳ  
 Κορίσκῳ, ὅτι ἑκατέρου μέρος τῷ αὐτῷ ἐνὶ συμ-  
 βέβηκεν ἐν.<sup>1</sup> ὡσαύτως δὲ κἂν ἐπὶ γένους κἂν ἐπὶ  
 τῶν καθόλου τινὸς ὀνομάτων λέγεται τὸ συμ-  
 30 βεβηκός, οἶον ὅτι ἄνθρωπος τὸ αὐτὸ καὶ μουσικός  
 ἄνθρωπος· ἢ γὰρ ὅτι τῷ ἀνθρώπῳ μιᾷ οὕσῃ οὐσίᾳ  
 συμβέβηκε τὸ μουσικόν, ἢ ὅτι ἄμφω τῶν καθ'  
 ἕκαστόν τι συμβέβηκεν, οἶον Κορίσκῳ· πλὴν οὐ  
 τὸν αὐτὸν τρόπον ἄμφω ὑπάρχει, ἀλλὰ τὸ μὲν  
 ἴσως ὡς γένος καὶ ἐν τῇ οὐσίᾳ, τὸ δὲ ὡς ἕξις ἢ

<sup>1</sup> post ἐν addunt οὐδὲν γὰρ διαφέρει ἢ Κορίσκῳ τὸ μουσικόν  
 συμβεβηκέναι EJ.

primary and proper sense is the *simple*, for it cannot be in more than one condition. Hence it cannot be in one state *and* in another; for if so it would *ipso facto* be in more than one condition. Therefore if there are certain things which are eternal and immutable, there is nothing in them which is compulsory or which violates their nature.

VI. The term "one" is used (1) in an accidental, "0 (ii) in an absolute sense. (1) In the accidental sense it is used as in the case of "Coriscus"<sup>a</sup> and "cultured" and "cultured Coriscus" (for "Coriscus" and "cultured" and "cultured Coriscus" mean the same); and "cultured" and "upright" and 2 "cultured upright Coriscus." For all these terms refer accidentally to one thing, "upright" and "cultured" because they are accidental to one substance, and "cultured" and "Coriscus" because the one is accidental to the other. And similarly in one sense 3 "cultured Coriscus" is one with "Coriscus," because one part of the expression is accidental to the other, *e.g.* "cultured" to "Coriscus"; and "cultured Coriscus" is one with "upright Coriscus," because one part of each expression is one accident of one 4 and the same thing. It is the same even if the accident is applied to a genus or a general term; *e.g.* "man" and "cultured man" are the same, either because "cultured" is an accident of "man," which is one substance, or because both are accidents of some individual, *e.g.* Coriscus. But they do not 5 both belong to it in the same way; the one belongs presumably as *genus* in the substance, and the other

<sup>a</sup> Coriscus of Scepsis was a Platonist with whom Aristotle was probably acquainted; but the name is of course chosen quite arbitrarily.

- <sup>b</sup>  
 35 πάθος τῆς οὐσίας. ὅσα μὲν οὖν κατὰ συμβεβηκὸς  
 λέγεται ἔν, τοῦτον τὸν τρόπον λέγεται. Τῶν  
 δὲ καθ' ἑαυτὰ ἔν λεγομένων τὰ μὲν λέγεται τῷ  
 3a συνεχῇ εἶναι, οἷον φάκελος δεσμῶ καὶ ξύλα κόλλη,  
 καὶ γραμμὴ καὶ κεκαμμένη ἦ, συνεχῆς δέ, μία  
 λέγεται, ὥσπερ καὶ τῶν μερῶν ἕκαστον, οἷον  
 σκέλος καὶ βραχίον. αὐτῶν δὲ τούτων μᾶλλον  
 ἔν τὰ φύσει συνεχῇ ἢ τέχνη. συνεχῆς δὲ λέγεται  
 οὐ κίνησις μία καθ' αὐτὸ καὶ μὴ οἷόν τε ἄλλως· μία  
 δ' οὐ ἀδιαίρετος, ἀδιαίρετος δὲ κατὰ χρόνον.  
 καθ' αὐτὰ δὲ συνεχῇ ὅσα μὴ ἀφῆ ἔν εἰ γὰρ θείης  
 ἀπτόμενα ἀλλήλων ξύλα, οὐ φήσεις ταῦτα εἶναι  
 ἔν, οὔτε ξύλον οὔτε σῶμα οὔτ' ἄλλο συνεχῆς οὐδέν.  
 10 τά τε δὴ ὅλως συνεχῇ ἔν λέγεται, καὶ ἔχη κάμψιν,  
 καὶ ἔτι μᾶλλον τὰ μὴ ἔχοντα κάμψιν, οἷον κνήμη  
 ἢ μηρὸς σκέλους, ὅτι ἐνδέχεται μὴ μίαν εἶναι τὴν  
 κίνησιν τοῦ σκέλους. καὶ ἡ εὐθεία τῆς κεκαμ-  
 μένης μᾶλλον ἔν· τὴν δὲ κεκαμμένην καὶ ἔχουσαν  
 γωνίαν καὶ μίαν καὶ οὐ μίαν λέγομεν, ὅτι ἐνδέχεται  
 15 καὶ μὴ ἅμα τὴν κίνησιν αὐτῆς εἶναι καὶ ἅμα· τῆς  
 δ' εὐθείας αἰεὶ ἅμα, καὶ οὐδὲν μόριον ἔχον μέγεθος  
 τὸ μὲν ἡρεμεῖ τὸ δὲ κινεῖται, ὥσπερ τῆς κεκαμ-  
 μένης.

Ἔτι ἄλλον τρόπον ἔν λέγεται τῷ τὸ ὑπο-  
 κείμενον τῷ εἶδει εἶναι ἀδιάφορον· ἀδιάφορα δ'  
 ὦν ἀδιαίρετον τὸ εἶδος κατὰ τὴν αἴσθησιν τὸ δ'  
 20 ὑποκείμενον ἢ τὸ πρῶτον ἢ τὸ τελευταῖον πρὸς τὸ

as *condition* or *affection* of the substance. Thus all things which are said to be "one" in an accidental sense are said to be so in this way.

(11.) Of those things which are said to be in themselves one, (a) some are said to be so in virtue of their continuity, *e.g.*, a faggot is made continuous by its string, and pieces of wood by glue; and a continuous line, even if it is bent, is said to be one, just like each of the limbs; *e.g.* the leg or arm. And of these things themselves those which are naturally continuous are one in a truer sense than those which are artificially continuous. "Continuous" means that whose motion is essentially one, and cannot be otherwise; and motion is one when it is indivisible, *i.e.* indivisible in *time*. Things are essentially continuous which are one not by contact only; for if you put pieces of wood touching one another you will not say that they are *one* piece of wood, or body, or any other continuous thing. And things which are completely continuous are said to be "one" even if they contain a joint, and still more those things which contain no joint; *e.g.*, the shin or the thigh is more truly one than the leg, because the motion of the leg may not be one. And the straight line is more truly one than the bent. We call the line which is bent and contains an angle both one and not one, because it may or may not move all at once; but the straight line always moves all at once, and no part of it which has magnitude is at rest while another moves, as in the bent line.

(b) Another sense of "one" is that the substrate is uniform in kind. Things are uniform whose form is indistinguishable to sensation; and the substrate is either that which is primary, or that which is final

3 a τέλος καὶ γὰρ οἶνος εἰς λέγεται καὶ ὕδωρ ἓν, ἥ  
 ἀδιαίρετον κατὰ τὸ εἶδος· καὶ οἱ χυμοὶ πάντες  
 λέγονται ἓν (οἶον ἔλαιον οἶνος) καὶ τὰ τηκτά, ὅτι  
 πάντων τὸ ἔσχατον ὑποκείμενον τὸ αὐτὸ ὕδωρ  
 γὰρ ἢ ἀήρ πάντα ταῦτ' ἐστίν. Λέγεται δ' ἓν  
 25 καὶ ὦν τὸ γένος ἐν διαφέρον ταῖς ἀντικειμέναις  
 διαφοραῖς· καὶ ταῦτα λέγεται πάντα ἓν,<sup>1</sup> ὅτι τὸ  
 γένος ἐν τὸ ὑποκείμενον ταῖς διαφοραῖς, οἶον ἵππος  
 ἄνθρωπος κύων ἓν τι, ὅτι πάντα ζῶα, καὶ τρόπον  
 δὴ παραπλήσιον ὡσπερ ἡ ὕλη μία. ταῦτα δὲ  
 ὅτε μὲν οὕτως ἐν λέγεται, ὅτε δὲ τὸ ἄνω γένος<sup>2</sup>  
 30 ταῦτὸν λέγεται—ἂν ἡ τελευταῖα τοῦ γένους εἶδη—  
 τὰ ἀνωτέρω τούτων, οἶον τὸ ἰσοσκελές καὶ τὸ  
 ἰσόπλευρον ταῦτὸ καὶ ἐν σχῆμα, ὅτι ἄμφω τρίγωνα·  
 τρίγωνα δ' οὐ ταῦτά. Ἔτι δὲ ἐν λέγεται ὅσων ὁ  
 λόγος ὁ τὸ τί ἦν εἶναι λέγων ἀδιαίρετος πρὸς ἄλλον  
 τὸν δηλοῦντα [τί ἦν εἶναι]<sup>3</sup> τὸ πρᾶγμα αὐτὸς γὰρ  
 35 καθ' αὐτὸν πᾶς λόγος διαιρετός. οὕτω γὰρ καὶ τὸ  
 ηὐξημένον καὶ φθίνον ἓν ἐστίν, ὅτι ὁ λόγος εἰς,  
 3 b ὡσπερ ἐπὶ τῶν ἐπιπέδων ὁ τοῦ εἴδους εἰς. ὅλως  
 δὲ ὦν ἢ νόησις ἀδιαίρετος ἢ νοοῦσα τὸ τί ἦν εἶναι,  
 καὶ μὴ δύναται χωρίσαι μήτε χρόνῳ μήτε τόπῳ  
 μήτε λόγῳ, μάλιστα ταῦτα ἓν· καὶ τούτων ὅσα  
 οὐσίαι· καθόλου γὰρ ὅσα μὴ ἔχει διαίρεσιν, ἢ μὴ

<sup>1</sup> πάντα ἓν· ἐν πάντα A<sup>b</sup>.

<sup>2</sup> γένος A<sup>b</sup> comm.: γένος δ EJ.

<sup>3</sup> Ross.



in relation to the end. For wine is said to be one, and water one, as being something formally indistinguishable. And all liquids are said to be one (*e.g.* oil and wine), and melted things; because the ultimate substrate of all of them is the same, for all these things are water or vapour.

(*c*) Things are said to be "one" whose genus is one and differs in its opposite differentiae. All these things too are said to be "one" because the genus, which is the substrate of the differentiae, is one (*e.g.*, "horse," "man" and "dog" are in a sense one, because they are all animals); and that in a way very similar to that in which the matter is one. Sometimes these things are said to be "one" in this sense, and sometimes their higher genus is said to be one and the same (if they are final species of their genus)—the genus, that is, which is above the genera of which their proximate genus is one; *e.g.*, the isosceles and equilateral triangles are one and the same *figure* (because they are both triangles), but not the same triangles.

(*d*) Again, things are said to be "one" when the definition stating the essence of one is indistinguishable from a definition explaining the other, for in itself every definition is distinguishable <into genus and differentiae>. In this way that which increases and decreases is one, because its definition is one; just as in the case of planes the definition of the form is one. And in general those things whose concept, which conceives the essence, is indistinguishable and cannot be separated either in time or in place or in definition, are in the truest sense one; and of these such as are substances are most truly one. For universally such things as do not admit of distinction

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ἔχει, ταύτη ἐν λέγεται, οἷον εἰ ἢ ἄνθρωπος μὴ  
 ἔχει διαίρεσιν, εἰς ἄνθρωπος, εἰ δ' ἢ ζῶον, ἐν  
 ζῶον, εἰ δὲ ἢ μέγεθος, ἐν μέγεθος. Τὰ μὲν  
 οὖν πλείστα ἐν λέγεται τῷ ἑτερόν τι ἢ ποιεῖν ἢ  
 ἔχειν ἢ πάσχειν<sup>1</sup> ἢ πρὸς τι εἶναι ἐν, τὰ δὲ πρώτως  
 λεγόμενα ἐν ὧν ἡ οὐσία μία· μία δὲ ἢ συνεχεία ἢ  
 10 εἶδει ἢ λόγῳ· καὶ γὰρ ἀριθμοῦμεν ὡς πλείω ἢ τὰ  
 μὴ συνεχῆ, ἢ ὧν μὴ ἐν τὸ εἶδος, ἢ ὧν ὁ λόγος μὴ  
 εἰς. ἔτι<sup>2</sup> δ' ἔστι μὲν ὡς ὅτιοῦν ἐν φαμεν εἶναι,  
 ἂν ἢ ποσὸν καὶ συνεχές, ἔστι δ' ὡς οὐ, ἂν μὴ τι  
 ὅλον ἢ, τοῦτο δὲ ἂν μὴ τὸ εἶδος ἔχη ἐν· οἷον οὐκ  
 ἂν φαίμεν ὁμοίως ἐν ἰδόντες ὅπως οὖν τὰ μέρη  
 15 συγκείμενα τοῦ ὑποδήματος, ἔαν μὴ διὰ τὴν συν-  
 ἔχειαν, ἀλλ' ἔαν οὕτως ὥστε ὑπόδημα εἶναι καὶ  
 εἶδος τι ἔχειν ἤδη<sup>3</sup> ἐν. διὸ καὶ ἡ τοῦ κύκλου μάλι-  
 στα μία τῶν γραμμῶν, ὅτι ὅλη καὶ τέλειός ἐστιν.

Τὸ δὲ ἐν εἶναι ἀρχῆ<sup>4</sup> τινί ἐστιν ἀριθμοῦ εἶναι τὸ  
 γὰρ πρῶτον μέτρον ἀρχή ᾧ γὰρ πρώτῳ γνωρί-  
 20 ζομεν, τοῦτο πρῶτον μέτρον ἐκάστου γένους· ἀρχή  
 οὖν τοῦ γνωστοῦ περὶ ἕκαστον τὸ ἐν. οὐ ταῦτο δὲ  
 ἐν πᾶσι τοῖς γένεσι τὸ ἐν ἔνθα μὲν γὰρ δίεσις,  
 ἔνθα δὲ τὸ φωνῆεν ἢ ἀφωνον· βάρους δ' ἕτερον  
 καὶ κινήσεως ἄλλο. πανταχοῦ δὲ τὸ ἐν ἢ τῷ ποσῷ  
 ἢ τῷ εἶδει ἀδιαίρετον τὸ μὲν οὖν κατὰ τὸ ποσὸν

<sup>1</sup> ἔχειν ἢ πάσχειν: πάσχειν ἢ ἔχειν Γ Bekker.

<sup>2</sup> ἔτι JTG γρ E ci. Alexander: ἐπει EA<sup>b</sup> comm.

<sup>3</sup> ἔχειν ἤδη: ἤδη ἔχειν A<sup>b</sup>.

<sup>4</sup> ἀρχή EJ.

are called "one" in so far as they do not admit of it: *e g.*, if "man" *qua* "man" does not admit of distinction, he is one man; and similarly if *qua* animal, he is one animal; and if *qua* magnitude, he is one magnitude.

Most things, then, are said to be "one" because they 14 produce, or possess, or are affected by, or are related to, some other one thing; but some are called "one" in a primary sense, and one of these is substance. It is one either in continuity or in form or in definition; for we reckon as more than one things which are not continuous, or whose form is not one, or whose definition is not one. Again, in one sense we call 16 anything whatever "one" if it is quantitative and continuous; and in another sense we say that it is not "one" unless it is a *whole* of some kind, *i.e.* unless it is one in form (*e g.*, if we saw the parts of a shoe put together anyhow, we should not say that they were one—except in virtue of their continuity; but only if they were so put together as to be a shoe, and to possess already some one form). Hence the 17 circumference of a circle is of all lines the most truly one, because it is whole and complete.

The essence of "one" is to be a kind of starting-point of number; for the first measure is a starting-point, because that by which first we gain knowledge of a thing is the first measure of each class of objects. "The one," then, is the starting-point of what is knowable in respect of each particular thing. But the unit is not the same in all classes, for in one it 18 is the quarter-tone, and in another the vowel or consonant; gravity has another unit, and motion another. But in all cases the unit is indivisible, either quantitatively or formally. Thus that which 19

3 b  
 25 καὶ ἡ ποσὸν<sup>1</sup> ἀδιαίρετον, τὸ μὲν πάντη καὶ ἄθετον  
 λέγεται μονάς, τὸ δὲ πάντη καὶ θέσιν ἔχον στιγμῆ,  
 τὸ δὲ μοναχῆ γραμμῆ, τὸ δὲ διχῆ ἐπίπεδον, τὸ δὲ  
 πάντη καὶ τριχῆ διαιρετὸν κατὰ τὸ ποσὸν σῶμα.  
 καὶ ἀντιστρέψαντι δὴ τὸ μὲν διχῆ διαιρετὸν ἐπί-  
 πεδον, τὸ δὲ μοναχῆ γραμμῆ, τὸ δὲ μηδαμῆ δι-  
 30 αιρετὸν κατὰ τὸ ποσὸν στιγμῆ καὶ μονάς, ἡ μὲν  
 ἄθετος μονάς, ἡ δὲ θετὸς στιγμῆ. Ἔτι δὲ τὰ  
 μὲν κατ' ἀριθμὸν ἐστὶν ἓν, τὰ δὲ κατ' εἶδος, τὰ δὲ  
 κατὰ γένος, τὰ δὲ κατ' ἀναλογίαν, ἀριθμῶ μὲν ὦν  
 ἡ ὕλη μία, εἶδει δ' ὦν ὁ λόγος εἷς, γένει δ' ὦν τὸ  
 αὐτὸ σχῆμα τῆς κατηγορίας, κατ' ἀναλογίαν δὲ  
 35 ὅσα ἔχει ὡς ἄλλο πρὸς ἄλλο. αἰεὶ δὲ τὰ ὕστερα  
 τοῖς ἔμπροσθεν ἀκολουθεῖ, οἷον ὅσα ἀριθμῶ καὶ  
 1 a εἶδει ἓν, ὅσα δ' εἶδει οὐ πάντα ἀριθμῶ ἀλλὰ γένει  
 πάντα ἓν ὅσαπερ καὶ εἶδει· ὅσα δὲ γένει οὐ πάντα  
 εἶδει ἀλλ' ἀναλογία· ὅσα δὲ ἐν ἀναλογία, οὐ πάντα  
 γένει.

Φανερόν δὲ καὶ ὅτι τὰ πολλὰ ἀντικειμένως  
 λεχθήσεται τῷ ἐνί· τὰ μὲν γὰρ τῷ μὴ συνεχῆ  
 5 εἶναι, τὰ δὲ τῷ διαιρετῆν ἔχειν τὴν ὕλην κατὰ τὸ  
 εἶδος, ἢ τὴν πρώτην ἢ τὴν τελευταίαν, τὰ δὲ τῷ  
 τοὺς λόγους πλείους τοὺς τί ἦν εἶναι λέγοντας<sup>2</sup>

VII. Τὸ ὄν λέγεται τὸ μὲν κατὰ συμβεβηκός, τὸ δὲ  
 καθ' αὐτό, κατὰ συμβεβηκός μὲν οἷον τὸν δίκαιον

<sup>1</sup> καὶ ἡ ποσὸν om A<sup>b</sup>.

<sup>2</sup> λέγονται γεcc.

is quantitatively and *qua* quantitative wholly indivisible and has no position is called a unit; and that which is wholly indivisible and has position, a point; that which is divisible in one sense, a line; in two senses, a plane; and that which is quantitatively divisible in all three senses, a body. And <sup>20</sup> reversely that which is divisible in two senses is a plane, and in one sense a line, and that which is in no sense quantitatively divisible is a point or a unit; if it has no position, a unit, and if it has position, a point

Again, some things are one numerically, others <sup>21</sup> formally, others generically, and others analogically; numerically, those whose matter is one; formally, those whose definition is one; generically, those which belong to the same category; and analogically, those which have the same relation as something else to some third object. In every case the latter types <sup>22</sup> of unity are implied in the former. *e.g.*, all things which are one numerically are also one formally, but not all which are one formally are one numerically; and all are one generically which are one formally, but such as are one generically are not all one formally, although they are one analogically; and such as are one analogically are not all one generically.

It is obvious also that "many" will have the <sup>23</sup> opposite meanings to "one." Some things are called "many" because they are not continuous; others because their matter (either primary or ultimate) is formally divisible; others because the definitions of their essence are more than one.

VII. "Being" means (i) accidental being, (ii) <sup>"Bei"</sup> absolute being. (i.) *E.g.*, we say that the upright

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μουσικὸν εἶναί φαμεν καὶ τὸν ἄνθρωπον μουσικὸν  
 10 καὶ τὸν μουσικὸν ἄνθρωπον, παραπλησίως λέγοντες  
 ὡσπερ τὸν μουσικὸν οἰκοδομεῖν, ὅτι συμβέβηκε  
 τῷ οἰκοδόμῳ μουσικῶ εἶναι ἢ τῷ μουσικῶ οἰκο-  
 δόμῳ· τὸ γὰρ τόδε εἶναι τόδε σημαίνει τὸ συμ-  
 βεβηκέναι τῷδε τόδε. οὕτω δὲ καὶ ἐπὶ τῶν εἰρη-  
 μένων τὸν γὰρ ἄνθρωπον ὅταν μουσικὸν λέγωμεν  
 15 καὶ τὸν μουσικὸν ἄνθρωπον, ἢ τὸν λευκὸν μου-  
 σικὸν ἢ τοῦτον λευκόν, τὸ μὲν ὅτι ἄμφω τῷ αὐτῷ  
 συμβεβήκασι, τὸ δ' ὅτι τῷ ὄντι συμβέβηκεν<sup>1</sup> τὸ  
 δὲ μουσικὸν ἄνθρωπον, ὅτι τούτῳ τὸ μουσικὸν  
 συμβέβηκεν· οὕτω δὲ λέγεται καὶ τὸ μὴ λευκὸν  
 εἶναι, ὅτι ᾧ συμβέβηκεν, ἐκείνο ἔστιν. τὰ μὲν οὖν  
 20 κατὰ συμβεβηκὸς εἶναι λεγόμενα οὕτω λέγεται,  
 ἢ διότι τῷ αὐτῷ ὄντι ἄμφω ὑπάρχει, ἢ ὅτι ὄντι  
 ἐκείνῳ ὑπάρχει, ἢ ὅτι αὐτὸ ἔστιν ᾧ ὑπάρχει οὐ  
 αὐτὸ κατηγορεῖται. Καθ' αὐτὰ δὲ εἶναι λέγεται  
 ὅσαπερ σημαίνει τὰ σχήματα τῆς κατηγορίας·  
 ὅσαχῶς γὰρ λέγεται, τοσαυταχῶς τὸ εἶναι σημαίνει.  
 25 ἐπεὶ οὖν τῶν κατηγορουμένων τὰ μὲν τί ἐστι  
 σημαίνει, τὰ δὲ ποιόν, τὰ δὲ ποσόν, τὰ δὲ πρόσ-  
 τι, τὰ δὲ ποιεῖν ἢ πάσχειν, τὰ δὲ πού, τὰ δὲ ποτέ,  
 ἐκάστῳ τούτων τὸ εἶναι ταῦτό σημαίνει οὐθὲν  
 γὰρ διαφέρει τὸ ἄνθρωπος ὑγιαίνων ἐστὶν ἢ τὸ ἄν-  
 θρωπος ὑγιαίνει, οὐδὲ τὸ ἄνθρωπος βαδίζων ἐστὶν  
 30 ἢ τέμνων τοῦ ἄνθρωπος βαδίζει ἢ τέμνει· ὁμοίως  
 δὲ καὶ ἐπὶ τῶν ἄλλων. Ἔτι τὸ εἶναι ση-

<sup>1</sup> τῷ ὄντι συμβέβηκεν: συμ. τῷ ὄντι A<sup>b</sup>

<sup>a</sup> The categories For the full list of these see *Categories* 1 b 25-27.

person "is" cultured, and that the man "is" cultured, and that the cultured person "is" a man; very much as we say that the cultured person builds, because the builder happens to be cultured, or the cultured person a builder; for in this sense "X is Y" means that Y is an accident of X. And so it is <sup>2</sup> with the examples cited above; for when we say that "the man is cultured" and "the cultured person is a man" or "the white is cultured" or "the cultured is white," in the last two cases it is because both predicates are accidental to the same subject, and in the first case because the predicate is accidental to what *is*; and we say that "the cultured is a man" because "the cultured" is accidental to "a man." (Similarly "not-white" is said to "be," because the <sup>3</sup> subject of which "not-white" is an accident, *is*.) These, then, are the senses in which things are said to "be" accidentally. either because both predicates belong to the same subject, which *is*; or because the predicate belongs to the subject, which *is*; or because the subject to which belongs that of which it is itself predicated itself *is*.

(11) The senses of essential being are those which <sup>4</sup> are indicated by the figures of predication <sup>a</sup>; for "being" has as many senses as there are ways of predication. Now since some predicates indicate (a) what a thing is, and others its (b) quality, (c) quantity, (d) relation, (e) activity or passivity, (f) place, (g) time, to each of these corresponds a sense of "being." There is no difference between "the <sup>5</sup> man is recovering" and "the man recovers"; or between "the man is walking" or "cutting" and "the man walks" or "cuts"; and similarly in the other cases.

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μαίνει καὶ τὸ ἔστιν ὅτι ἀληθές, τὸ δὲ μὴ εἶναι ὅτι οὐκ ἀληθές ἀλλὰ ψεῦδος, ὁμοίως ἐπὶ καταφάσεως καὶ ἀποφάσεως, οἷον ὅτι ἔστι Σωκράτης μουσικός, ὅτι ἀληθές τοῦτο, ἢ ὅτι ἔστι Σωκράτης οὐ λευκός,

35 ὅτι ἀληθές τὸ δ' οὐκ ἔστιν ἢ διάμετρος σύμμετρος,<sup>1</sup>  
117 b ὅτι ψεῦδος. Ἔτι τὸ εἶναι σημαίνει καὶ τὸ ὄν, τὸ

μὲν δυνάμει ῥητόν, τὸ δ' ἐντελεχεία τῶν εἰρημένων τούτων· ὄρων τε γὰρ εἶναί φαμεν καὶ τὸ δυνάμει ὄρων<sup>2</sup> καὶ τὸ ἐντελεχεία· καὶ [τὸ]<sup>3</sup> ἐπίστασθαι ὡσαύτως καὶ τὸ δυνάμενον χρῆσθαι τῇ ἐπιστήμῃ

5 καὶ τὸ χρώμενον, καὶ [τὸ]<sup>4</sup> ἡρεμοῦν καὶ ᾧ ἤδη ὑπάρχει ἡρεμία καὶ τὸ δυνάμενον ἡρεμεῖν ὁμοίως δὲ καὶ ἐπὶ τῶν οὐσιῶν· καὶ γὰρ Ἑρμῆν ἐν τῷ λίθῳ φαμέν εἶναι, καὶ τὸ ἡμισυ τῆς γραμμῆς, καὶ σίτον τὸν μήπω ἀδρόν· πότε δὲ δυνατὸν καὶ πότε οὐπω ἐν ἄλλοις διοριστέον.

10 VIII. Οὐσία λέγεται τὰ τε ἀπλᾶ σώματα, οἷον γῆ καὶ πῦρ καὶ ὕδωρ καὶ ὅσα τοιαῦτα, καὶ ὅλως σώματα καὶ τὰ ἐκ τούτων συνεστῶτα ζῶά τε καὶ δαιμόνια καὶ τὰ μόρια τούτων· ἅπαντα δὲ ταῦτα λέγεται οὐσία ὅτι οὐ καθ' ὑποκειμένου λέγεται, ἀλλὰ κατὰ  
15 τούτων τὰ ἄλλα. ἄλλον δὲ τρόπον ὃ ἂν ἦ αἴτιον τοῦ εἶναι, ἐνυπάρχον ἐν τοῖς τοιούτοις ὅσα μὴ λέγεται καθ' ὑποκειμένου, οἷον ἡ ψυχὴ τῷ ζῳίῳ. ἔτι ὅσα μόρια ἐνυπάρχοντά ἐστιν ἐν τοῖς τοιούτοις ὀρίζοντά τε καὶ τόδε τι σημαίνοντα, ὧν ἀναιρου-

<sup>1</sup> σύμμετρος Alexander, Bonitz ἀσύμμετρος codd.

<sup>2</sup> ὄρων· ῥητῶς ὄρων EJ.

<sup>3</sup> τὸ secl. Bonitz.

<sup>4</sup> τὸ om. A<sup>b</sup>.



(iii) Again, "to be" and "is" mean that a thing is true, and "not to be" that it is false. Similarly too in affirmation and negation; *e.g.* in "Socrates is cultured" "is" means that this is true; or in "Socrates is not-white" that this is true; but in "the diagonal is not commensurable" <sup>a</sup> "is not" means that the statement is false.

(iv.) Again, "to be" <or "is"> means that some of these statements can be made in virtue of a potentiality and others in virtue of an actuality. For we say that both that which sees potentially and that which sees actually *is* "a seeing thing." And in the same way we call "understanding" both that which *can* use the understanding, and that which *does*; and we call "tranquil" both that in which tranquillity is already present, and that which is potentially tranquil. Similarly too in the case of substances. For we say that Hermes is in the stone,<sup>b</sup> and the half of the line in the whole; and we call "corn" what is not yet ripe. But when a thing is potentially existent and when not, must be defined elsewhere.<sup>c</sup>

VIII "Substance" means (a) simple bodies, *e.g.* "Su earth, fire, water and the like; and in general bodies, <sup>stan</sup> and the things, animal or divine, including their parts, <sup>Es</sup> which are composed of bodies. All these are called substances because they are not predicated of any substrate, but other things are predicated of them. (b) In another sense, whatever, being immanent in 2 such things as are not predicated of a substrate, is the cause of their being; as, *e.g.*, the soul is the cause of being for the animal. (c) All parts immanent 3 in things which define and indicate their individuality, and whose destruction causes the destruction of the

17 b μένων ἀναιρείται τὸ ὄλον, οἶον ἐπιπέδου σώμα,  
 20 ὡς φασί τινες, καὶ ἐπίπεδον γραμμῆς καὶ ὅλως ὁ  
 ἀριθμὸς δοκεῖ εἶναί τισι τοιοῦτος (ἀναιρουμένου  
 τε γὰρ οὐδὲν εἶναι καὶ ὀρίζειν πάντα) ἔτι τὸ τί ἦν  
 εἶναι, οὐδ' ὁ λόγος ὀρισμὸς, καὶ τοῦτο οὐσία λέγεται  
 ἐκάστου. Συμβαίνει δὴ κατὰ δύο τρόπους  
 τὴν οὐσίαν λέγεσθαι, τό θ' ὑποκείμενον ἔσχατον,  
 25 ὃ μηκέτι κατ' ἄλλου λέγεται, καὶ ὃ ἂν τόδε τι ὄν  
 καὶ χωριστὸν ἦ τοιοῦτον δὲ ἐκάστου ἢ μορφὴ καὶ  
 τὸ εἶδος.

IX Ταῦτὰ λέγεται τὰ μὲν κατὰ συμβεβηκός, οἶον  
 τὸ λευκὸν καὶ τὸ μουσικὸν τὸ αὐτὸ ὅτι τῷ αὐτῷ  
 συμβέβηκε, καὶ ἄνθρωπος καὶ μουσικὸν ὅτι θάτερον  
 30 θατέρῳ συμβέβηκεν, τὸ δὲ μουσικὸν ἄνθρωπος ὅτι  
 τῷ ἀνθρώπῳ συμβέβηκεν ἐκατέρῳ δὲ τοῦτο καὶ  
 τούτῳ ἐκάτερον ἐκείνων, καὶ γὰρ τῷ ἀνθρώπῳ  
 τῷ μουσικῷ καὶ ὁ ἄνθρωπος καὶ τὸ μουσικὸν  
 ταῦτὸ λέγεται, καὶ τούτοις ἐκείνο. διὸ καὶ  
 πάντα ταῦτα καθόλου οὐ λέγεται οὐ γὰρ ἀληθές  
 35 εἰπεῖν ὅτι πᾶς ἄνθρωπος ταῦτὸ καὶ τὸ μουσικόν  
 18 a τὰ γὰρ καθόλου καθ' αὐτὰ ὑπάρχει, τὰ δὲ συμ-  
 βεβηκότα οὐ καθ' αὐτὰ ἀλλ' ἐπὶ τῶν καθ' ἕκαστα  
 ἀπλῶς λέγεται· ταῦτὸ γὰρ δοκεῖ Σωκράτης, καὶ  
 Σωκράτης εἶναι μουσικός· τὸ δὲ Σωκράτης οὐκ  
 ἐπὶ πολλῶν, διὸ οὐ πᾶς Σωκράτης λέγεται ὡσπερ  
 5 πᾶς ἄνθρωπος. καὶ τὰ μὲν οὕτως λέγεται ταῦτά,  
 τὰ δὲ καθ' αὐτὰ ὄσαχῶσπερ<sup>1</sup> καὶ τὸ ἔν· καὶ γὰρ ὦν

<sup>1</sup> ὄσαχῶσπερ ex Alexandro Jaeger· ὄσα ὡσπερ EJ· ὡσπερ Ah.

<sup>a</sup> The Pythagoreans and Platonists.

whole; as, *e g.*, the plane is essential to the body (as some <sup>a</sup> hold) and the line to the plane. And number in general is thought by some <sup>a</sup> to be of this nature, on the ground that if it is abolished nothing exists, and that it determines everything. (*d*) Again, the *essence*, whose formula is the definition, is also called the substance of each particular thing.

Thus it follows that "substance" has two senses. the ultimate subject, which cannot be further predicated of something else; and whatever has an individual and separate existence. The shape and form of each particular thing is of this nature.

IX "The same" means (*a*) accidentally the same. *E g.*, "white" and "cultured" are the same because they are accidents of the same subject; and "man" is the same as "cultured," because one is an accident of the other, and "cultured" is the same as "man" because it is an accident of "man"; and "cultured man" is the same as each of the terms "cultured" and "man," and *vice versa*, for both "man" and "cultured" are used in the same way as "cultured man," and the latter in the same way as the former. Hence none of these 2 predications can be made universally. For it is not true to say that every man is the same as "the cultured"; because universal predications are essential to things, but accidental predications are not so, but are made of individuals and with a single application. "Socrates" and "cultured Socrates" seem to be the same; but "Socrates" is not a class-name, and hence we do not say "every Socrates" as we say "every man." Some things are said to be "the 3 same" in this sense, but (*b*) others in an essential sense, in the same number of senses as "the one"

18 a ἡ ὕλη μία ἢ εἶδει ἢ ἀριθμῶ ταυτὰ λέγεται, καὶ ὦν ἡ οὐσία μία· ὥστε φανερόν ὅτι ἡ ταυτότης ἐνότης τίς ἐστὶν ἢ πλείονων τοῦ εἶναι, ἢ ὅταν χρήται ὡς πλείοσιν, οἷον ὅταν λέγη αὐτὸ αὐτῷ ταυτόν· ὡς δυοὶ γὰρ χρήται αὐτῷ.

10 Ἔτερα δὲ λέγεται ὦν ἢ τὰ εἶδη πλείω ἢ ἡ ὕλη ἢ ὁ λόγος τῆς οὐσίας· καὶ ὅλως ἀντικειμένως τῷ ταυτῷ λέγεται τὸ ἕτερον.

Διάφορα δὲ λέγεται ὅσ' ἕτερά ἐστι τὸ αὐτό τι ὄντα, μὴ μόνον ἀριθμῶ, ἀλλ' ἢ εἶδει ἢ γένει ἢ ἀναλογίᾳ· ἔτι ὦν ἕτερον τὸ γένος καὶ τὰ ἐναντία  
15 καὶ ὅσα ἔχει ἐν τῇ οὐσίᾳ τὴν ἕτερότητα.

Ὅμοια λέγεται τὰ τε πάντη ταυτὸ πεπονηθότα, καὶ τὰ πλείω ταυτὰ<sup>1</sup> πεπονηθότα ἢ ἕτερα, καὶ ὦν ἡ ποιότης μία· καὶ καθ' ὅσα ἀλλοιοῦσθαι ἐνδέχεται τῶν ἐναντίων, τούτων τὸ πλείω ἔχον ἢ κυριώτερα ὅμοιον τούτῳ. ἀντικειμένως δὲ τοῖς ὁμοίοις τὰ ἀνόμοια.

20 X. Ἀντικείμενα λέγεται ἀντίφασις καὶ τὰναντία καὶ τὰ πρὸς τι καὶ στέρησις καὶ ἕξις καὶ ἐξ ὦν καὶ εἰς ἃ ἔσχατα, οἷον αἱ γενέσεις καὶ φθοραὶ καὶ ὅσα μὴ ἐνδέχεται ἅμα παρεῖναι τῷ ἀμφοῖν δεκτικῷ, ταῦτα ἀντικεῖσθαι λέγεται, ἢ αὐτὰ ἢ ἐξ ὦν ἐστὶν φαῖον γὰρ καὶ λευκὸν ἅμα τῷ  
25 αὐτῷ οὐχ ὑπάρχει· διὸ ἐξ ὦν ἐστὶν ἀντίκειται.

<sup>1</sup> ταυτὰ Alexander, Bessarion: ταυτὸ codd.

is essentially one ; for things whose matter is formally or numerically one, and things whose substance is one, are said to be the same. Thus "sameness" is clearly a kind of unity in the being, either of two or more things, or of one thing treated as more than one, as, *e.g.*, when a thing is consistent with itself; for it is then treated as two.

Things are called "other" of which either the forms or the matter or the definition of essence is more than one; and in general "other" is used in the opposite senses to "same."

Things are called "different" which, while being in a sense the same, are "other" not only numerically, but formally or generically or analogically; also things whose genus is not the same; and contraries; and all things which contain "otherness" in their essence

Things are called "like" which have the same attributes in all respects; or more of those attributes the same than different; or whose quality is one. Also that which has a majority or the more important of those attributes of something else in respect of which change is possible (*i.e.* the contraries) is like that thing. And "unlike" is used in the opposite senses to "like."

X The term "opposite" is applied to (a) contradiction; (b) contraries; (c) relative terms; (d) privation; (e) state; (f) extremes; *e.g.* in the process of generation and destruction. And (g) all things which cannot be present at the same time in that which admits of them both are called opposites; either themselves or their constituents. "Grey" and "white" do not apply at the same time to the same thing, and hence their constituents are opposite.

<sup>1 a</sup> Ἐναντία λέγεται τὰ τε μὴ δυνατὰ ἄμα τῷ αὐτῷ παρεῖναι τῶν διαφερόντων κατὰ γένος, καὶ τὰ πλείστον διαφέροντα τῶν ἐν τῷ αὐτῷ γένει, καὶ τὰ πλείστον διαφέροντα τῶν ἐν ταυτῷ δεκτικῷ, καὶ τὰ πλείστον διαφέροντα τῶν <sup>30</sup> ὑπὸ τὴν αὐτὴν δύναμιν, καὶ ὧν ἡ διαφορὰ μεγίστη ἢ ἀπλῶς ἢ κατὰ γένος ἢ κατ' εἶδος τὰ δ' ἄλλα ἐναντία λέγεται τὰ μὲν τῷ τὰ τοιαῦτα ἔχειν, τὰ δὲ τῷ δεκτικὰ εἶναι τῶν τοιούτων, τὰ δὲ τῷ ποιητικὰ ἢ παθητικὰ εἶναι τῶν τοιούτων, ἢ ποιῶντα ἢ πάσχοντα, ἢ ἀποβολαὶ ἢ λήψεις, ἢ <sup>35</sup> ἕξεις ἢ στερήσεις εἶναι τῶν τοιούτων ἐπεὶ δὲ τὸ ἐν καὶ τὸ ὄν πολλαχῶς λέγεται, ἀκολουθεῖν ἀνάγκη καὶ τὰλλα ὅσα κατὰ ταῦτα λέγεται, ὥστε καὶ τὸ ταῦτόν καὶ τὸ ἕτερον καὶ τὸ ἐναντίον, ὥστ' εἶναι ἕτερον καθ' ἐκάστην κατηγορίαν

<sup>8 b</sup> Ἔτερα δὲ τῷ εἶδει λέγεται ὅσα τε ταυτοῦ γένους ὄντα μὴ ὑπάλληλα ἐστί, καὶ ὅσα ἐν τῷ αὐτῷ γένει ὄντα διαφορὰν ἔχει, καὶ ὅσα ἐν τῇ οὐσίᾳ ἐναντίωσιν ἔχει. καὶ τὰ ἐναντία ἕτερα τῷ εἶδει ἀλλήλων, ἢ πάντα ἢ τὰ λεγόμενα πρῶτως, <sup>5</sup> καὶ ὅσων ἐν τῷ τελευταίῳ τοῦ γένους εἶδει οἱ λόγοι ἕτεροι, οἷον ἄνθρωπος καὶ ἵππος ἄτομα τῷ γένει, οἱ δὲ λόγοι ἕτεροι αὐτῶν καὶ ὅσα ἐν τῇ αὐτῇ οὐσίᾳ ὄντα ἔχει διαφορὰν. ταῦτα δὲ τῷ εἶδει τὰ ἀντικειμένως λεγόμενα τούτοις.

XI. Πρῶτερα καὶ ὕστερα λέγεται ἓνια μὲν, ὡς <sup>10</sup> ὄντος τινὸς πρώτου καὶ ἀρχῆς ἐν ἐκάστῳ γένει,

“Contrary” means (a) attributes, generically 2  
 different, which cannot apply at the same time to the “  
 same thing (b) The most different attributes in the  
 same genus, or (c) in the same subject, or (d) falling  
 under the same faculty (e) Things whose difference  
 is greatest absolutely, or in genus, or in species.  
 Other things are called “contrary” either because 3  
 they possess attributes of this kind, or because they  
 are receptive of them, or because they are produc-  
 tive of or liable to them, or actually produce or incur  
 them, or are rejections or acquisitions or possessions  
 or privations of such attributes. And since “one” 4  
 and “being” have various meanings, all other terms  
 which are used in relation to “one” and “being” must  
 vary in meaning with them; and so “same,” “other”  
 and “contrary” must so vary, and so must have a  
 separate meaning in accordance with each category.

Things are called “other in species” (a) which “  
 belong to the same genus and are not subordinate 11  
 one to the other; or (b) which are in the same genus  
 and contain a differentia; or (c) which contain a  
 contrariety in their essence (d) Contraries, too 5  
 (either all of them or those which are called so in a  
 primary sense), are “other in species” than one  
 another; and (e) so are all things of which the for-  
 mulae are different in the final species of the genus  
 (e g, “man” and “horse” are generically indivisible,  
 but their formulae are different); and (f) attributes  
 of the same substance which contain a difference.  
 “The same in species” has the opposite meanings “7  
 to these. in

XI. “Prior” and “posterior” mean: (1) (a) In “F  
 one sense (assuming that there is in each genus some “F  
 primary thing or starting-point) that which is nearer

τῷ<sup>1</sup> ἐγγύτερον ἀρχῆς τινὸς ὠρισμένης, ἢ ἀπλῶς καὶ  
 τῇ φύσει, ἢ πρὸς τι ἢ πού ἢ ὑπό τινων, οἷον τὰ  
 μὲν κατὰ τόπον τῷ εἶναι ἐγγύτερον ἢ φύσει τινὸς  
 τόπου ὠρισμένου (οἷον τοῦ μέσου ἢ τοῦ ἐσχάτου)  
 ἢ πρὸς τὸ τυχόν, τὸ δὲ πορρώτερον ὕστερον· τὰ  
 δὲ κατὰ χρόνον· τὰ μὲν γὰρ τῷ πορρώτερον<sup>2</sup> τοῦ  
 νῦν, οἷον ἐπὶ τῶν γενομένων (πρότερον<sup>3</sup> γὰρ τὰ  
 Τρωικὰ τῶν Μηδικῶν, ὅτι πορρώτερον ἀπέχει  
 τοῦ νῦν), τὰ δὲ τῷ ἐγγύτερον<sup>4</sup> τοῦ νῦν, οἷον ἐπὶ  
 τῶν μελλόντων πρότερον γὰρ Νέμεα Πυθίων,  
 ὅτι ἐγγύτερον τοῦ νῦν τῷ νῦν<sup>5</sup> ὡς ἀρχῇ καὶ πρώτῳ  
 χρησαμένων τὰ δὲ κατὰ κίνησιν· τὸ γὰρ ἐγ-  
 γύτερον τοῦ πρώτου κινήσαντος πρότερον, οἷον  
 παῖς ἀνδρός· ἀρχῇ δὲ καὶ αὕτη τις ἀπλῶς τὰ δὲ  
 κατὰ δύναμιν· τὸ γὰρ ὑπερέχον τῇ δυνάμει πρό-  
 τερον, καὶ τὸ δυνατώτερον τοιοῦτον δ' ἐστὶν οὐ  
 κατὰ τὴν προαίρεσιν ἀνάγκη ἀκολουθεῖν θάτερον  
 καὶ τὸ ὕστερον, ὥστε μὴ κινουντός τε ἐκείνου μὴ  
 κινεῖσθαι καὶ κινουντος κινεῖσθαι· ἢ δὲ προ-  
 αἰρεσις ἀρχῇ· τὰ δὲ κατὰ τάξιν· ταῦτα δ' ἐστὶν  
 ὅσα πρὸς τι ἐν ὠρισμένον διέστηκε κατὰ τινα<sup>6</sup>  
 λόγον, οἷον παραστάτης τριτοστάτου πρότερον,  
 καὶ παρανήτη νήτης· ἔνθα μὲν γὰρ ὁ κορυφαῖος,  
 ἔνθα δὲ ἡ μέση ἀρχῇ. Ταῦτα μὲν οὖν πρό-  
 τερα τοῦτον λέγεται τὸν τρόπον, ἄλλον δὲ τρόπον

<sup>1</sup> τῷ Alexander, Bonitz· τὸ codd τῷ εἶναι Jaeger

<sup>2</sup> πορρωτέρω EJ.

<sup>3</sup> πρότερα Γ Asclepius.

<sup>4</sup> ἐγγυτέρω recc.

<sup>5</sup> τῷ νῦν om recc

<sup>6</sup> Jaeger τὸν codd

<sup>a</sup> The octachord to which Aristotle refers was composed of the following notes· E (υπάτη) F (παρυπάτη) G (λιχανός) A (μέση) B (παραμέση) C (τριτη) D (παρανήτη) E (νήτη)

<sup>b</sup> Strictly speaking there was no middle string in the octachord; the name was taken over from the earlier hepta-



to some starting-point, determined either absolutely and naturally, or relatively, or locally, or by some agency; *e g*, things are prior in space because they are nearer either to some place naturally determined, such as the middle or the extreme, or to some chance relation; and that which is further is posterior (b) In another sense, prior or posterior in *time* Some things are prior as being further from the present, as in the case of past events (for the Trojan is prior to the Persian war, because it is further distant from the present); and others as being nearer the present, as in the case of future events (for the Nemean are prior to the Pythian games because they are nearer to the present, regarded as a starting-point and as primary) (c) In another sense, in respect of motion (for that which is nearer to the prime mover is prior; *e g*, the boy is prior to the man) This too is a kind of starting-point in an absolute sense. (d) In respect of potency; for that which is superior in potency, or more potent, is prior. Such is that in accordance with whose will the other, or posterior, thing must follow, so that according as the former moves or does not move, the latter is or is not moved And the *mill* is a "starting-point." (e) In respect of order; such are all things which are systematically arranged in relation to some one determinate object. *E g.*, he who is next to the leader of the chorus is prior to him who is next but one, and the seventh string is prior to the eighth<sup>a</sup>; for in one case the leader is the starting-point, and in the other the middle<sup>b</sup> string.

In these examples "prior" has this sense; but 5 chord EFGAB<sub>♭</sub>CD, in which there was no *παραμέση*. The *μέση* was apparently what we should call the tonic Cf. XIV. vi. 5; *Problemata* 919 b 20.

τὸ τῆ γνῶσει πρότερον ὡς καὶ ἀπλῶς πρότερον τούτων δὲ ἄλλως τὰ κατὰ τὸν λόγον καὶ τὰ κατὰ τὴν αἴσθησιν. κατὰ μὲν γὰρ τὸν λόγον τὰ καθ' ὅλου πρότερα, κατὰ δὲ τὴν αἴσθησιν τὰ καθ' ἕκαστα καὶ κατὰ τὸν λόγον δὲ τὸ συμβεβηκὸς τοῦ ὅλου πρότερον, οἷον τὸ μουσικὸν τοῦ μουσικοῦ ἀνθρώπου οὐ γὰρ ἔσται ὁ λόγος ὅλος ἄνευ τοῦ μέρους· καίτοι οὐκ ἐνδέχεται μουσικὸν εἶναι μὴ ὄντος μουσικοῦ τινος Ἐπι πρότερα λέγεται τὰ τῶν προτέρων πάθη, οἷον εὐθύτης λειότητος τὸ μὲν γὰρ γραμμῆς καθ' αὐτὴν πάθος, τὸ δὲ ἐπιφανείας. Τὰ μὲν δὴ οὕτω λέγεται πρότερα καὶ ὕστερα, τὰ δὲ κατὰ φύσιν καὶ οὐσίαν, ὅσα ἐνδέχεται εἶναι ἄνευ ἄλλων, ἐκεῖνα δὲ ἄνευ ἐκείνων μὴ ἢ διαιρέσει ἐχρήσατο Πλάτων (ἐπεὶ δὲ τὸ εἶναι πολλαχῶς, πρῶτον μὲν τὸ ὑποκείμενον πρότερον, διὸ ἢ οὐσία πρότερον, ἔπειτα ἄλλως τὰ κατὰ δύναμιν καὶ κατ' ἐντελέχειαν τὰ μὲν γὰρ κατὰ δύναμιν πρότερά ἐστι, τὰ δὲ κατὰ ἐντελέχειαν, οἷον κατὰ δύναμιν μὲν ἢ ἡμίσεια τῆς ὅλης καὶ τὸ μόριον τοῦ ὅλου καὶ ἢ ὕλη τῆς οὐσίας, κατ' ἐντελέχειαν δ' ὕστερον διαλυθέντος γὰρ κατ' ἐντελέχειαν ἔσται.) τρόπον δὴ τινα πάντα τὰ πρότερον καὶ ὕστερον λεγόμενα κατὰ ταῦτα λέγεται· τὰ μὲν γὰρ κατὰ γένεσιν ἐνδέχεται ἄνευ τῶν ἐτέρων εἶναι, οἷον τὸ ὅλον τῶν μορίων, τὰ δὲ κατὰ φθοράν, οἷον τὸ μόριον τοῦ ὅλου. ὁμοίως δὲ καὶ τᾶλλα.

XII. Δύναμις λέγεται ἢ μὲν ἀρχὴ κινήσεως ἢ μετα-

<sup>a</sup> Not, apparently, in his writings

<sup>b</sup> Or "capacity" or "potentiality."

(ii) in another sense that which is prior in knowledge is treated as absolutely prior, and of things which are prior in this sense the prior in *formula* are different from the prior in *perception*. Universals are prior in formula, but particulars in perception. And in formula the attribute is prior to the concrete whole. *e.g.* "cultured" to "the cultured man"; for the formula will not be a whole without the part. Yet "cultured" cannot exist apart from 6 some cultured person.

Again, (iii) attributes of prior subjects are called prior; *e.g.*, straightness is prior to smoothness, because the former is an attribute of the line in itself, and the latter of a surface.

Some things, then, are called prior and posterior 7 in this sense; but others (iv) in virtue of their nature and substance, namely all things which can exist apart from other things, whereas other things cannot exist without them. This distinction was used by Plato<sup>a</sup> (And since "being" has various meanings, (a) the substrate, and therefore substance, is prior; (b) potential priority is different from actual priority. Some things are prior potentially, and some actually; 8 *e.g.*, potentially the half-line is prior to the whole, or the part to the whole, or the matter to the substance; but actually it is posterior, because it is only upon dissolution that it will actually exist.) Indeed, in 9 a sense all things which are called "prior" or "posterior" are so called in this connexion; for some things can exist apart from others in generation (*e.g.* the whole without the parts), and others in destruction (*e.g.* the parts without the whole) And similarly with the other examples.

XII "Potency"<sup>b</sup> means (a) the source of "Pot"

## ARISTOTLE

<sup>a</sup> βολῆς ἢ ἐν ἐτέρῳ ἢ<sup>1</sup> ἢ ἕτερον, οἷον ἢ οἰκοδομικὴ  
 δύναμις ἐστίν ἢ οὐχ ὑπάρχει ἐν τῷ οἰκοδομου-  
 μένω· ἀλλ' ἢ ἰατρικὴ δύναμις οὔσα ὑπάρχοι ἂν  
 ἐν τῷ ἰατρευομένῳ, ἀλλ' οὐχ ἢ ἰατρευόμενος.  
 ἢ μὲν οὖν ὅλως ἀρχὴ μεταβολῆς ἢ κινήσεως  
 λέγεται δύναμις ἐν ἐτέρῳ ἢ<sup>1</sup> ἢ ἕτερον, ἢ δ' ὑφ'  
 ἑτέρου ἢ<sup>2</sup> ἢ ἕτερον· καθ' ἣν γὰρ τὸ πάσχον πάσχει  
 τι, ὅτε μὲν ἐὰν ὅτιοῦν δυνατὸν αὐτό φαμεν εἶναι  
 παθεῖν, ὅτε δ' οὐ κατὰ πᾶν πάθος ἀλλ' ἂν ἐπὶ  
 τὸ βέλτιον. ἔτι ἢ τοῦ καλῶς τοῦτ' ἐπιτελεῖν ἢ  
 κατὰ προαίρεσιν· ἐνίοτε γὰρ τοὺς μόνον ἂν πορευ-  
<sup>15</sup> θέντας ἢ εἰπόντας, μὴ καλῶς δὲ ἢ μὴ ὡς προ-  
 εἶλοντο, οὗ φαμεν δύνασθαι λέγειν ἢ βαδίζειν·  
 ὁμοίως δὲ καὶ ἐπὶ τοῦ πάσχειν. ἔτι ὅσαι ἕξεις  
 καθ' ἃς ἀπαθῆ ὅλως ἢ ἀμετάβλητα ἢ μὴ ῥαδίως  
 ἐπὶ τὸ χεῖρον εὐμετακίνητα, δυνάμεις λέγονται·  
 κλᾶται μὲν γὰρ καὶ συντριβεται καὶ κάμπτεται  
<sup>30</sup> καὶ ὅλως φθείρεται οὐ τῷ δύνασθαι ἀλλὰ τῷ μὴ  
 δύνασθαι καὶ ἐλλείπειν τινός· ἀπαθῆ δὲ τῶν τοιού-  
 των ἃ μόλις καὶ ἡρέμα πάσχει διὰ δύναμιν καὶ  
 τῷ δύνασθαι καὶ τῷ<sup>3</sup> ἔχειν πῶς. Λεγομένης  
 δὲ τῆς δυνάμεως τοσαυταχῶς, καὶ τὸ δυνατὸν  
 ἓνα μὲν τρόπον λεχθήσεται τὸ ἔχον κινήσεως  
<sup>35</sup> ἀρχὴν ἢ μεταβολῆς (καὶ γὰρ τὸ στατικὸν δυνατὸν  
<sup>16</sup> τι) ἐν ἐτέρῳ ἢ ἢ<sup>4</sup> ἕτερον, ἓνα δ' ἐὰν ἔχη τι αὐτοῦ

<sup>1</sup> ἢ om. A<sup>b</sup>.<sup>3</sup> τῷ . . τῷ Jaeger. το .<sup>2</sup> ἢ om. A<sup>b</sup>Γ.

τὸ codd.

<sup>4</sup> ἢ om. A<sup>b</sup>.

motion or change which is in something other than the thing changed, or in it *qua* other. *E g*, the science of building is a potency which is not present in the thing built; but the science of medicine, which is a potency, may be present in the patient, although not *qua* patient. Thus "potency" means <sup>2</sup> the source in general of change or motion in another thing, or in the same thing *qua* other; or the source of a thing's being moved or changed by another thing, or by itself *qua* other (for in virtue of that principle by which the passive thing is affected in any way we call it capable of being affected: sometimes if it is affected at all, and sometimes not in respect of every affection, but only if it is changed for the better) (b) The power of performing this <sup>3</sup> well or according to intention; because sometimes we say that those who can merely take a walk, or speak, without doing it as well as they intended, *cannot* speak or walk. And similarly in the case of passivity. (c) All states in virtue of which things <sup>4</sup> are unaffected generally, or are unchangeable, or cannot readily deteriorate, are called "potencies." For things are broken and worn out and bent and in general destroyed not through potency but through impotence and deficiency of some sort; and things are unaffected by such processes which are scarcely or slightly affected because they have a potency and are potent and are in a definite state.

Since "potency" has all these meanings, "po- <sup>5</sup> tent" (or "capable") will mean (a) that which "contains a source of motion or change (for even what " is static is "potent" in a sense) which takes place in another thing, or in itself *qua* other (b) That over which something else has a potency of this kind.

119 b

ἄλλο δύναμιν τοιαύτην, ἓνα δ' ἔαν ἔχη μεταβάλλειν  
 ἐφ' ὅτιοῦν δύναμιν, εἴτ' ἐπὶ τὸ χεῖρον εἴτ' ἐπὶ τὸ  
 βέλτιον (καὶ γὰρ τὸ φθειρόμενον δοκεῖ δυνατὸν  
 εἶναι φθειρεσθαι, ἢ οὐκ ἂν φθαρῆναι εἰ ἦν ἀ-  
 5 δύνατον νῦν δὲ ἔχει τινὰ διάθεσιν καὶ αἰτίαν  
 καὶ ἀρχὴν τοῦ τοιοῦτου πάθους ὅτε μὲν δὴ τῷ  
 ἔχειν τι δοκεῖ, ὅτε δὲ τῷ<sup>1</sup> ἐστερηῆσθαι τοιοῦτον  
 εἶναι· εἰ δ' ἢ στέρησις ἐστὶν ἕξις πως, πάντα τῷ  
 ἔχειν ἂν εἴη τι, [εἰ δὲ μὴ]<sup>2</sup> ὥστε τῷ ἔχειν ἕξιν  
 τινὰ καὶ ἀρχὴν ἐστὶ δυνατὸν<sup>3</sup> καὶ τῷ ἔχειν τὴν  
 10 τούτου στέρησιν, εἰ ἐνδέχεται ἔχειν στέρησιν,  
 <εἰ δὲ μὴ, ὁμωνύμως><sup>4</sup>). ἓνα δὲ τῷ μὴ ἔχειν  
 αὐτοῦ δύναμιν ἢ ἀρχὴν ἄλλο<sup>5</sup> ἢ ἡ ἄλλο φθαρτικὴν.  
 ἔτι δὲ ταῦτα πάντα ἢ τῷ μόνον ἂν συμβῆναι  
 γενέσθαι ἢ μὴ γενέσθαι, ἢ τῷ καλῶς· καὶ γὰρ ἐν  
 τοῖς ἀψύχοις ἔνεστιν ἢ τοιαύτη δύναμις, οἷον ἐν  
 15 τοῖς ὀργάνοις· τὴν μὲν γὰρ δύνασθαι φασι φθέγγε-  
 γεσθαι λύραν, τὴν δ' οὐδέν, ἂν ἡ μὴ εὐφωτος.

Ἄδυναμία δὲ ἐστὶ στέρησις δυνάμεως καὶ τῆς  
 τοιαύτης ἀρχῆς ἄρσις τις<sup>6</sup> οἷα εἴρηται, ἢ ὅλως  
 ἢ τῷ πεφυκότι ἔχειν, ἢ καὶ ὅτε πέφυκεν ἤδη  
 ἔχειν· οὐ γὰρ ὁμοίως ἂν φαίεν<sup>7</sup> ἀδύνατον εἶναι  
 γεννᾶν παῖδα καὶ ἄνδρα καὶ εὐνοῦχον. ἔτι δὲ  
 20 καθ' ἑκατέραν δύναμιν ἐστὶν ἀδυναμία ἀντικειμένη,  
 τῇ τε μόνον κινητικῇ καὶ τῇ καλῶς κινητικῇ.

<sup>1</sup> τῷ τῷ τὸ . . . τὸ recc

<sup>2</sup> εἰ δὲ μὴ A<sup>b</sup>: secl Ross: εἰ δε μη, ὁμωνύμως Christ ὁμωνύμως δὲ λεγόμενον τὸ ἐν EJ.

<sup>3</sup> δυνατὸν: δυνατὸν ὁμωνύμως A<sup>b</sup>.

<sup>4</sup> Ross.

<sup>5</sup> ἄλλο ex Alexandro Bonitz· ἄλλω A<sup>b</sup>: ἐν ἄλλω EJ.

<sup>6</sup> ἀρσις τις om. A<sup>b</sup>.

<sup>7</sup> φαίμεν Bekkei.

(c) That which has the potency of changing things, either for the worse or for the better (for it seems that even that which perishes is "capable" of perishing; otherwise, if it had been incapable, it would not have perished. As it is, it has a kind of disposition or cause or principle which induces such an affection. Sometimes it seems to be such as it is because it *has* something, and sometimes because it is *deprived* of something; but if privation is in a sense a state or "habit," everything will be "potent" through *having* something; and so a thing is "potent" in virtue of having a certain "habit" or principle, and also in virtue of having the privation of that "habit," if it can *have* privation; and if privation is not in a sense "habit," the term "potent" is equivocal) (d) A thing is "potent" if neither any other thing nor itself *qua* other contains a potency or principle destructive of it (e) All these things are "potent" either because they merely might chance to happen or not to happen, or because they might do so *well*. Even in inanimate things this kind of potency is found, *e.g.* in instruments; for they say that one lyre "can" be played, and another not at all, if it has not a good tone.

"Impotence" is a privation of potency—a kind of abolition of the principle which has been described—either in general or in something which would naturally possess that principle, or even at a time when it would naturally already possess it (for we should not use "impotence"—in respect of begetting—in the same sense of a boy, a man and a eunuch) Again, there is an "impotence" corresponding to each kind of potency; both to the kinetic and to the successfully kinetic.

1019 b

Καὶ ἀδύνατα δὴ τὰ μὲν κατὰ τὴν ἀδυναμίαν ταύτην λέγεται, τὰ δ' ἄλλον τρόπον, οἷον δυνατόν τε καὶ ἀδύνατον. ἀδύνατον μὲν οὐ τὸ ἐναντίον ἐξ ἀνάγκης ἀληθές, οἷον τὸ τὴν διάμετρον σύμμετρον εἶναι ἀδύνατον, ὅτι ψεῦδος τὸ τοιοῦτον οὐ τὸ ἐναντίον οὐ μόνον ἀληθές ἀλλὰ καὶ ἀνάγκη [ἀσύμμετρον εἶναι]<sup>1</sup>. τὸ ἄρα σύμμετρον οὐ μόνον ψεῦδος ἀλλὰ καὶ ἐξ ἀνάγκης ψεῦδος· τὸ δ' ἐναντίον τούτῳ, τὸ δυνατόν, ὅταν μὴ ἀναγκαῖον ἦ τὸ ἐναντίον ψεῦδος εἶναι, οἷον τὸ καθῆσθαι ἄνθρωπον δυνατόν οὐ γὰρ ἐξ ἀνάγκης τὸ μὴ καθῆσθαι ψεῦδος. τὸ μὲν οὖν δυνατόν ἓνα μὲν τρόπον, ὥσπερ εἴρηται, τὸ μὴ ἐξ ἀνάγκης ψεῦδος σημαίνει, ἓνα δὲ τὸ ἀληθές [εἶναι],<sup>1</sup> ἓνα δὲ τὸ ἐνδεχόμενον ἀληθές εἶναι. Κατὰ μεταφορὰν δὲ ἢ ἐν τῇ γεωμετρίᾳ λέγεται δύναμις. Ταῦτα μὲν οὖν τὰ δυνατὰ οὐ κατὰ δύναμιν· τὰ δὲ λεγόμενα κατὰ δύναμιν πάντα λέγεται πρὸς τὴν πρώτην [μίαν]<sup>2</sup>. αὕτη δ' ἐστὶν ἀρχὴ μεταβολῆς ἐν ἄλλῳ ἢ<sup>3</sup> ἢ ἄλλο. τὰ γὰρ ἄλλα λέγεται δυνατὰ τῷ τὰ μὲν ἔχειν αὐτῶν ἄλλο τι τοιαύτην δύναμιν, τὰ δὲ μὴ ἔχειν, τὰ δὲ ὠδὶ ἔχειν. ὁμοίως δὲ καὶ τὰ ἀδύνατα. ὥστε ὁ κύριος ὅρος τῆς πρώτης δυνάμεως ἂν εἴη ἀρχὴ μεταβλητικῆ ἐν ἄλλῳ ἢ<sup>4</sup> ἢ ἄλλο.

<sup>1</sup> Ross<sup>2</sup> μίαν γρ. Asclepius· om. cet.<sup>3</sup> ἢ om. A<sup>b</sup>J comm<sup>4</sup> ἢ om A<sup>b</sup>J Alexander.

<sup>a</sup> A square was called a δύναμις. Plato, *Republic* 587 D; *Timaeus* 31 c.

<sup>b</sup> sc. in a *passive* sense, which the English word "potent" cannot bear.



Some things are said to be "impotent" in accordance with this meaning of "impotence," but others in a different sense, namely "possible" and "impossible." "Impossible" means: (*a*), the whose contrary is necessarily true; *e g.*, it is impossible that the diagonal of a square should be commensurable with the sides, because such a thing is a lie, whose contrary is not only true but inevitable. Hence that it is commensurable is not only a lie but necessarily a lie. And the contrary of the impossible *i.e.* the possible, is when the contrary is not necessarily a lie; *e g.*, it is possible that a man should be seated, for it is not necessarily a lie that he should not be seated. "Possible," then, means in one sense, as we have said, that which is not necessarily a lie; in another, that which is true; and in another that which may be true.

(The "power" in geometry<sup>a</sup> is so called by an extension of meaning)

These are the senses of "potent" which do not correspond to "potency." Those which do correspond to it all refer to the first meaning, *i.e.* "a source of change which exists in something other than that in which the change takes place, or in the same thing *qua* other." Other things are said to be "potent"<sup>b</sup> because something else has such a potency over them; others because it does not possess it; others because it possesses it in a particular way. The term "impotent" is similarly used. Thus the authoritative definition of "potency" in the primary sense will be "a principle producing change, which is in something other than that in which the change takes place, or in the same thing *qua* other."

1020 a

XIII Ποσὸν λέγεται τὸ διαιρετὸν εἰς ἐνυπάρχοντα, ὧν ἑκάτερον ἢ ἕκαστον ἔν τι καὶ τόδε τι πέφυκεν εἶναι πλῆθος μὲν οὖν ποσόν τι ἂν ἀριθμητὸν ἦ, 10 μέγεθος δὲ ἂν μετρητὸν ἦ λέγεται δὲ πλῆθος μὲν τὸ διαιρετὸν δυνάμει εἰς μὴ συνεχῆ, μέγεθος δὲ τὸ εἰς συνεχῆ μεγέθους δὲ τὸ μὲν ἐφ' ἐν συνεχῆς μῆκος, τὸ δ' ἐπὶ δύο πλάτος, τὸ δ' ἐπὶ τρία βάθος. τούτων δὲ πλῆθος μὲν τὸ πεπερασμένον ἀριθμός, μῆκος δὲ γραμμῆ, πλάτος δὲ ἐπι- 15 φάνεια, βάθος δὲ σῶμα ἔτι τὰ μὲν λέγεται καθ' αὐτὰ ποσὰ ἅττα, τὰ δὲ κατὰ συμβεβηκός, οἷον ἢ μὲν γραμμῆ ποσόν τι καθ' ἑαυτό, τὸ δὲ μουσικὸν κατὰ συμβεβηκός τῶν δὲ καθ' αὐτὰ τὰ μὲν κατ' οὐσίαν ἐστὶν οἷον ἢ γραμμῆ [ποσόν τι]<sup>1</sup> (ἐν γὰρ τῷ λόγῳ τῷ τί ἐστι λέγοντι τὸ ποσόν τι ὑπάρχει), 20 τὰ δὲ πάθη καὶ ἕξεις τῆς τοιαύτης ἐστὶν οὐσίας, οἷον τὸ πολὺ καὶ τὸ ὀλίγον, καὶ μακρὸν καὶ βραχύ, καὶ πλατὺ καὶ στενόν, καὶ βαθὺ καὶ ταπεινόν, καὶ βαρὺ καὶ κοῦφον, καὶ τᾶλλα τὰ τοιαῦτα ἔστι δὲ καὶ τὸ μέγα καὶ τὸ μικρόν, καὶ τὸ μείζον καὶ ἔλαττον, καὶ καθ' αὐτὰ καὶ πρὸς ἄλληλα 25 λεγόμενα, τοῦ ποσοῦ πάθη καθ' αὐτὰ μεταφέρεται μέντοι καὶ ἐπ' ἄλλα ταῦτα τὰ ὀνόματα. τῶν δὲ κατὰ συμβεβηκός λεγομένων ποσῶν τὰ<sup>2</sup> μὲν οὕτως λέγεται ὥσπερ ἐλέχθη ὅτι τὸ μουσικὸν ποσόν καὶ τὸ λευκὸν τῷ εἶναι ποσόν τι ᾧ ὑπάρχουσι, τὰ δὲ ὡς κινήσεις καὶ χρόνος· καὶ γὰρ

<sup>1</sup> ποσόν τι seclusi.<sup>2</sup> τὰ Γ Jaeger τὸ.

XIII. "Quantity" means that which is divisible into constituent parts, each<sup>a</sup> or every one of which by nature some one individual thing. Thus plurality, if it is numerically calculable, is a kind of quantity; and so is magnitude, if it is measurable. "Plurality" means that which is potentially divisible into non-continuous parts; and "magnitude" that which is potentially divisible into continuous parts. Of kinds of magnitude, that which is continuous in one direction is length; in two directions breadth, in three, depth. And of these, plurality when limited, is a number, length, a line; breadth a plane; depth, a body. Again, some things are essentially quantitative, but others only accidentally—*e.g.* the line is essentially, but "cultured" accidentally quantitative. And of the former class some are quantitative in virtue of their substance, *e.g.* the line (because the definition which describes it is quantitative in some form); and others are attributes and conditions of a substance of this kind—*e.g.* "much" and "little," "long" and "short," "broad" and "narrow," "deep" and "shallow," "heavy" and "light," etc. Moreover, "great" and "small," and "greater" and "smaller," whether used absolutely or relatively to one another are essential attributes of quantity; by an extension of meaning, however, these terms are also applied to other things. Of things called quantitative in an accidental sense, one kind is so called in the sense in which we said above that "cultured" or "white" is quantitative—because the subject to which they belong is quantitative; and others in the sense that motion and time are so called—for these too are said

<sup>a</sup> *i.e.*, if there are only two.

1 a  
 30 ταῦτα πόσ' ἄττα λέγεται καὶ συνεχῆ τῷ ἐκεῖνα  
 διαιρετὰ εἶναι ὧν ἐστὶ ταῦτα πάθη λέγω δὲ οὐ  
 τὸ κινούμενον ἀλλ' ὃ ἐκινήθη τῷ γὰρ ποσὸν  
 εἶναι ἐκεῖνο καὶ ἡ κίνησις ποσῆ, ὃ δὲ χρόνος τῷ  
 ταύτην.

XIV. [Τὸ]<sup>1</sup> ποιὸν λέγεται ἓνα μὲν τρόπον ἢ διαφορὰ  
 τῆς οὐσίας, οἷον ποιόν τι ἄνθρωπος ζῶον ὅτι  
 3, δίπουν, ἵππος δὲ τετράπουν καὶ κύκλος ποιόν τι  
 b σχῆμα ὅτι ἀγώνιον, ὡς τῆς διαφορᾶς τῆς κατὰ  
 τὴν οὐσίαν ποιότητος οὔσης. ἓνα μὲν δὴ τρόπον  
 τοῦτον λέγεται ἢ ποιότητος διαφορὰ οὐσίας, ἓνα  
 δὲ ὡς τὰ ἀκίνητα καὶ τὰ μαθηματικά, ὥσπερ οἱ  
 ἀριθμοὶ ποιοὶ τινες, οἷον οἱ σύνθετοι καὶ μὴ  
 5 μόνον ἐφ' ἓν ὄντες ἀλλ' ὧν μίμημα τὸ ἐπίπεδον  
 καὶ τὸ στερεόν (οὔτοι δ' εἰσὶν οἱ ποσάκεις ποσοὶ  
 ἢ ποσάκεις ποσάκεις ποσοί), καὶ ὅλως ὃ παρὰ τὸ  
 ποσὸν ὑπάρχει ἐν τῇ οὐσίᾳ οὐσία γὰρ ἐκάστου  
 δ<sup>2</sup> ἅπαξ, οἷον τῶν ἕξ οὐχ ὃ δις ἢ τρις εἰσὶν ἀλλὰ  
 ὃ ἅπαξ· ἕξ γὰρ ἅπαξ ἕξ. ἔτι ὅσα πάθη τῶν  
 κινουμένων οὐσιῶν, οἷον θερμότης καὶ ψυχρότης,  
 10 καὶ λευκότης καὶ μελανία, καὶ βαρύτης καὶ κου-  
 φότης, καὶ ὅσα τοιαῦτα, καθ' ἃ λέγονται καὶ  
 ἀλλοιοῦσθαι τὰ σώματα μεταβαλλόντων. ἔτι κατ'  
 ἀρετὴν καὶ κακίαν καὶ ὅλως τὸ κακὸν καὶ ἀγαθόν.

Σχεδὸν δὴ κατὰ δύο τρόπους λέγοιτ' ἂν τὸ ποιόν,

<sup>1</sup> Bonitz

<sup>2</sup> δ Bonitz: τὸ.

in a sense to be quantitative and continuous, since the subjects of which they are attributes are divisible. I mean, not the thing moved, but that through or along which the motion has taken place; for it is because the latter is quantitative that the motion is quantitative, and because the motion is quantitative that the time is also

XIV. "Quality" means (a) in one sense, the differentia of essence; e.g. a man is an animal of a certain quality because he is two-footed; and so is a horse, because it is four-footed. Also a circle is a geometrical figure of a certain quality, because it has no angles; which shows that the essential differentia is quality. In this one sense, then, "quality" means differentia of essence; but (b) in another it is used as of immovable and mathematical objects, in the sense that numbers are in a way qualitative—e.g. such as are composite and are represented geometrically not by a line but by a plane or solid (these are products respectively of two and of three factors)—and in general means that which is present besides quantity in the essence. For the essence of each number is that which goes into it once; e.g. that of 6 is not what goes twice or three times, but what goes once; for 6 is once 6. (c) All affections of substance in motion in respect of which bodies become different when they (the affections) change—e.g. heat and cold, whiteness and blackness, heaviness and lightness, etc. (d) The term is used with reference to goodness and badness, and in general to good and bad

Thus there are, roughly speaking, two meanings which the term "quality" can bear, and of these one

<sup>b</sup> καὶ τούτων ἓνα τὸν κυριώτατον· πρώτη μὲν γὰρ ποιότης ἢ τῆς οὐσίας διαφορά (ταύτης δέ τι καὶ ἢ ἐν τοῖς ἀριθμοῖς ποιότης μέρος· διαφορά γὰρ τις οὐσιῶν, ἀλλ' ἢ οὐ κινουμένων ἢ οὐχ ἢ κινούμενα), τὰ δὲ πάθη τῶν κινουμένων ἢ κινούμενα, καὶ αἱ τῶν κινήσεων διαφοραί. ἀρετὴ δὲ καὶ κακία τῶν παθημάτων μέρος τι· διαφορὰς γὰρ <sup>ο</sup> δηλοῦσι τῆς κινήσεως καὶ τῆς ἐνεργείας καθ' ἃς ποιοῦσιν ἢ πάσχουσι καλῶς ἢ φαύλως τὰ ἐν κινήσει ὄντα τὸ μὲν γὰρ ὡδὶ δυνάμενον κινεῖσθαι ἢ ἐνεργεῖν ἀγαθόν, τὸ δ' ὡδὶ καὶ ἐναντίως μοχθηρόν. μάλιστα δὲ τὸ ἀγαθὸν καὶ τὸ<sup>1</sup> κακὸν σημαίνει τὸ ποιὸν ἐπὶ τῶν ἐμφύχων, καὶ τούτων μάλιστα <sup>ο</sup> ἐπὶ τοῖς ἔχουσι προαίρεσιν.

XV. Πρὸς τι λέγεται τὰ μὲν ὡς διπλάσιον πρὸς ἡμισυ καὶ τριπλάσιον πρὸς τριτημόριον, καὶ ὅλως πολλαπλάσιον πρὸς πολλοστημόριον καὶ ὑπερέχον πρὸς ὑπερεχόμενον· τὰ δ' ὡς τὸ θερμαντικὸν πρὸς <sup>ο</sup> τὸ θερμαντὸν καὶ τὸ τμητικὸν πρὸς τὸ τμητόν, καὶ ὅλως τὸ ποιητικὸν πρὸς τὸ παθητικόν τὰ δ' ὡς τὸ μετρητόν πρὸς τὸ μέτρον καὶ ἐπιστητὸν πρὸς ἐπιστήμην καὶ αἰσθητὸν πρὸς αἴσθησιν. Λέγεται δὲ τὰ μὲν πρῶτα κατ' ἀριθμόν, ἢ ἀπλῶς ἢ ὠρισμένως πρὸς αὐτοὺς ἢ πρὸς ἓν· οἷον τὸ μὲν διπλάσιον πρὸς ἓν ἀριθμὸς ὠρισμένος, τὸ δὲ πολλα- <sup>ο</sup> πλάσιον κατ' ἀριθμόν πρὸς ἓν, οὐχ ὠρισμένον <sup>α</sup> δέ, οἷον τόνδε ἢ τόνδε· τὸ δὲ ἡμιόλιον πρὸς τὸ ὑφημιόλιον κατ' ἀριθμόν πρὸς ἀριθμὸν ὠρισμένον·

<sup>1</sup> τὸ om A<sup>b</sup>.

is more fundamental than the other. Quality in the primary sense is the differentia of the essence; and quality in numbers falls under this sense, because it is a kind of differentia of essences, but of things either not in motion or not *qua* in motion. Secondly, there are the affections of things in motion *qua* in motion, and the differentiae of motions. Goodness and badness fall under these affections, because they denote differentiae of the motion or functioning in respect of which things in motion act or are acted upon well or badly. For that which can function or be moved in such-and-such a way is good, and that which can function in such-and-such a way *and* in the contrary way is bad. Quality refers especially to "good" and "bad" in the case of living things, and of these especially in the case of such as possess choice.

XV. Things are called "relative" (a) In the sense that "the double" is relative to the half, and "the triple" to the third; and in general the "many times greater" to the "many times smaller," and that which exceeds to the thing exceeded. (b) In the sense that the thing which heats or cuts is relative to the thing heated or cut; and in general the active to the passive. (c) In the sense that the measurable is relative to the measure, and the knowable to knowledge, and the sensible to sensation.

(a) In the first sense they are said to be numerically relative; either simply, or in a definite relation to numbers or to 1. *E.g.*, "the double" in relation to 1 is a definite number; the "many times as great" is in a numerical relation to 1, but not in a definite relation such as *this* or *that*; the relation of that which is  $1\frac{1}{2}$  times something else to that something is a definite numerical relation to a number;

<sup>a</sup> τὸ δ' ἐπιμόριον πρὸς τὸ ὑπεπιμόριον κατὰ ἀόριστον,  
ὡσπερ τὸ πολλαπλάσιον πρὸς τὸ ἓν τὸ δ' ὑπερέχον  
πρὸς τὸ ὑπερεχόμενον ὅλως ἀόριστον κατ' ἀρι-  
<sup>5</sup> θμόν· ὁ γὰρ ἀριθμὸς σύμμετρος, κατὰ μὴ συμ-  
μέτρου<sup>2</sup> δὲ ἀριθμὸς οὐ<sup>3</sup> λέγεται<sup>4</sup> τὸ γὰρ ὑπερέχον  
πρὸς τὸ ὑπερεχόμενον τοσοῦτόν τέ ἐστὶ καὶ ἔτι  
τοῦτο δὲ ἀόριστον· ὁπότερον γὰρ ἔτυχέν ἐστιν, ἢ  
ἴσον ἢ οὐκ ἴσον. ταυτὰ τε οὖν τὰ πρὸς τι πάντα  
κατ' ἀριθμὸν λέγεται καὶ ἀριθμοῦ πάθη, καὶ ἔτι  
<sup>10</sup> τὸ ἴσον καὶ ὅμοιον καὶ ταυτὸ κατ' ἄλλον τρόπον·  
κατὰ γὰρ τὸ ἓν λέγεται πάντα ταυτὰ μὲν γὰρ  
ὦν μία ἢ οὐσία, ὅμοια δ' ὦν ἢ ποιότης μία, ἴσα  
δὲ ὦν τὸ ποσὸν ἓν· τὸ δ' ἓν τοῦ ἀριθμοῦ ἀρχὴ καὶ  
μέτρον, ὥστε ταυτὰ πάντα πρὸς τι λέγεται κατ'  
ἀριθμὸν μὲν, οὐ τὸν αὐτὸν δὲ τρόπον. Τὰ δὲ  
<sup>15</sup> ποιητικὰ καὶ παθητικὰ κατὰ δύναμιν ποιητικὴν καὶ  
παθητικὴν καὶ ἐνεργείας τὰς τῶν δυνάμεων, οἷον  
τὸ θερμαντικὸν πρὸς τὸ θερμαντόν, ὅτι δύναιται,  
καὶ πάλιν τὸ θερμαῖνον πρὸς τὸ θερμαινόμενον  
καὶ τὸ τέμνον πρὸς τὸ τεμνόμενον, ὡς ἐνεργοῦντα.  
<sup>20</sup> τῶν δὲ κατ' ἀριθμὸν οὐκ εἰσὶν ἐνέργειαι ἀλλ' ἢ  
ὄν τρόπον ἐν ἑτέροις εἴρηται αἱ δὲ κατὰ κίνησιν  
ἐνέργειαι οὐχ ὑπάρχουσιν τῶν δὲ κατὰ δύναμιν  
καὶ κατὰ χρόνους ἤδη λέγονται πρὸς τι, οἷον τὸ

<sup>1</sup> δ' om. A<sup>b</sup>.

<sup>2</sup> συμμέτρου Ross. συμμέτρων Apelt· σύμμετρον.

<sup>3</sup> ἀριθμὸς οὐ A<sup>b</sup> Ross: ἀριθμοὶ οὐ Apelt. ἀριθμῷ Zeller  
ἀριθμόν.

<sup>4</sup> λέγεται A<sup>b</sup> comm.· λέγονται EJ Apelt.

<sup>a</sup> The reference is quite uncertain, but cf. IX. ix. 4, 5. The point is that the actualization of a numerical (or geo-  
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and that which is  $\frac{n+1}{n}$  times something else is in an indefinite relation to a number, just as 'the many times as great' is in an indefinite relation to 1. The relation of that which exceeds to that which is exceeded is numerically quite indefinite, for number is commensurate, and is not predicated of the incommensurate; whereas that which exceeds, in relation to that which is exceeded, is "so much" *plus* something more; and this something more is indefinite, for it is indifferently equal or not equal to the "so much." Thus not only are all these things said to be relative in respect of number, but also the "equal" and "like" and "same," though in another way. For all these terms are used in respect of "one." Things are "the same" whose essence is one; "like" whose quality is one; "equal" whose quantity is one. Now "one" is the starting-point and standard of number: and so all these relations involve number, though not all in the same way.

(b) Active and passive things are called relative in virtue of an active or passive potentiality or actualization of the potentialities; e.g., that which can heat is called relative to that which can be heated, because it *can* heat; and again the thing heating is called relative to the thing heated, and the thing cutting to the thing cut, because their potentialities are actualized. Numerical relations, on the other hand, are not actualized (except as has been described elsewhere)<sup>a</sup>; they have no actualizations in respect of motion. Of things potentially relative, some are further relative in respect of particular times; as, e.g., that which has made or will make is (metrical) relation does not imply an active functioning, as in the case of the potentialities just described.

<sup>a</sup> πεποιηκός πρὸς τὸ πεποιημένον καὶ τὸ ποιήσον  
 πρὸς τὸ ποιησόμενον οὕτω γὰρ καὶ πατὴρ υἱοῦ  
 λέγεται πατήρ τὸ μὲν γὰρ πεποιηκός τὸ δὲ  
 1) πεπονθός τί ἐστιν. ἔτι ἕνια κατὰ στέρησιν δυνά-  
 μεως, ὡσπερ τὸ ἀδύνατον καὶ ὅσα οὕτω λέγεται,  
 οἷον τὸ ἀόρατον Τὰ μὲν οὖν κατ' ἀριθμὸν καὶ  
 δύναμιν λεγόμενα πρὸς τι πάντα ἐστὶ πρὸς τι τῷ  
 ὅπερ ἐστὶν ἄλλου λέγεσθαι αὐτὸ ὃ ἐστίν, ἀλλὰ μὴ  
 τῷ ἄλλο πρὸς ἐκείνο· τὸ δὲ μετρητὸν καὶ τὸ  
 2) ἐπιστητὸν καὶ τὸ διανοητὸν τῷ ἄλλο πρὸς αὐτὸ  
 λέγεσθαι πρὸς τι λέγονται τό τε γὰρ διανοητὸν  
 σημαίνει ὅτι ἔστιν αὐτοῦ διάνοια, οὐκ ἔστι δ' ἡ  
 διάνοια πρὸς τοῦτο οὐδ' ἐστὶ διάνοια· δις γὰρ ταῦτον  
 εἰρημένον ἂν εἶη· ὁμοίως δὲ καὶ τινός ἐστιν ἡ ὄψις  
 3) ὄψις, οὐχ οὐδ' ἐστὶν ὄψις (καίτοι γ' ἀληθὲς τοῦτο  
 εἰπεῖν) ἀλλὰ πρὸς χρῶμα ἢ πρὸς ἄλλο τι τοιοῦτον.  
 ἐκείνως δὲ δις τὸ αὐτὸ λεχθήσεται, ὅτι ἐστὶν ὄψις οὐ  
 ἐστὶν ἡ ὄψις Τὰ μὲν οὖν καθ' ἑαυτὰ λεγόμενα  
 4) πρὸς τι τὰ μὲν οὕτω λέγεται, τὰ δὲ ἂν τὰ γένη  
 αὐτῶν ἢ τοιαῦτα, οἷον ἡ ἰατρικὴ τῶν πρὸς τι ὅτι  
 τὸ γένος αὐτῆς ἢ ἐπιστήμη δοκεῖ εἶναι τῶν πρὸς  
 τι. ἔτι καθ' ὅσα τὰ ἔχοντα λέγεται πρὸς τι, οἷον  
 ἰσότης ὅτι τὸ ἴσον καὶ ὁμοιότης ὅτι τὸ ὁμοιον· τὰ  
 δὲ κατὰ συμβεβηκός, οἷον ἄνθρωπος πρὸς τι ὅτι

relative to that which has been or will be made. It is in this way that a father is called father of a son; the one has acted, and the other has been acted upon, in a particular way. Again, some things are relative in virtue of a privation of their potentiality; such is "the impossible" and all similar terms, *e.g.* "the invisible."

Thus relative terms which involve number and 8 potentiality are all relative because their very essence contains a reference to something else; but not because something else is related to their essence. But (*c*) that which is measurable or knowable or thinkable is called relative because something else is related to its essence. For "thinkable" signifies 9 that there is a thought which thinks it; but thought is not relative to that of which it is the thought (for then the same thing would have been said twice). And similarly sight is the sight of something; not of that of which it is the sight, although this is of course true—it is relative to some colour or other similar thing. To describe it in the other way—"the 10 sight of the object of sight"—would be to say the same thing twice.

Things, then, which are called relative of their own nature are so called, some in these senses, and others because the classes which contain them are of this kind. *E.g.*, medicine is reckoned as relative because its genus, science, is thought to be a relative thing. Further, there are the properties in virtue 11 of which the things which possess them are called relative; *e.g.*, "equality" is relative because "the equal" is relative, and "similarity" because "the similar" is relative. Other things are accidentally relative; *e.g.*, a man is relative because he happens

21 b

10 συμβέβηκεν αὐτῷ διπλασίῳ εἶναι, τοῦτο δ' ἐστὶ τῶν πρὸς τι ἢ τὸ λευκόν, εἰ τῷ αὐτῷ συμβέβηκε διπλασίῳ καὶ λευκῷ εἶναι

XVI. Τέλειον λέγεται ἐν μὲν οὐ μὴ ἔστιν ἔξω τι λαβεῖν μηδὲ ἐν μόριον, οἷον ὁ χρόνος τέλειος ἐκάστου οὗτος οὐ μὴ ἔστιν ἔξω λαβεῖν χρόνον τινὰ ὃς  
 15 τούτου μέρος ἐστὶ τοῦ χρόνου· καὶ τὸ κατ' ἀρετὴν καὶ τὸ<sup>1</sup> εὖ μὴ ἔχον ὑπερβολὴν πρὸς τὸ γένος, οἷον τέλειος ἰατρὸς καὶ τέλειος αὐλητής, ὅταν κατὰ τὸ εἶδος τῆς οἰκείας ἀρετῆς μηθὲν ἑλλείπωσιν οὕτω δὲ μεταφέροντες καὶ ἐπὶ τῶν κακῶν λέγομεν συκοφάντην τέλειον καὶ κλέπτην τέλειον, ἐπειδὴ  
 20 καὶ ἀγαθοὺς λέγομεν αὐτούς, οἷον κλέπτην ἀγαθὸν καὶ συκοφάντην ἀγαθόν· καὶ ἡ ἀρετὴ τελείωσίς τις· ἕκαστον γὰρ τότε τέλειον καὶ οὐσία πᾶσα τότε τελεία, ὅταν κατὰ τὸ εἶδος τῆς οἰκείας ἀρετῆς μηδὲν ἑλλείπη μόριον τοῦ κατὰ φύσιν μεγέθους. ἔτι οἷς ὑπάρχει τὸ τέλος, σπουδαῖον <ὄν>,<sup>2</sup> ταῦτα λέγεται τέλεια· κατὰ γὰρ τὸ ἔχειν τὸ  
 25 τέλος τέλεια. ὥστ' ἐπεὶ τὸ τέλος τῶν ἐσχάτων τί ἐστι, καὶ ἐπὶ τὰ φαῦλα μεταφέροντες λέγομεν τελείως ἀπολωλέναι καὶ τελείως ἐφθάρθαι, ὅταν μηδὲν ἑλλείπη τῆς φθορᾶς καὶ τοῦ κακοῦ ἀλλ' ἐπὶ τῷ ἐσχάτῳ<sup>3</sup> ἤ. διὸ καὶ ἡ τελευτὴ κατὰ μεταφορὰν  
 30 λέγεται τέλος, ὅτι ἄμφω ἔσχατα. τέλος δὲ καὶ τὸ οὐ ἔνεκα ἔσχατον. Τὰ μὲν οὖν καθ' αὐτὰ λεγόμενα τέλεια τοσαυταχῶς λέγεται, τὰ μὲν τῷ κατὰ

<sup>1</sup> τὸ] τὸ τοῦ EJI.<sup>2</sup> ex Alexandro Ross.<sup>3</sup> τοῦ ἐσχάτου EJ Asclepius.

to be "double" something else, and "double" is a relative term; or "white" is relative if the same thing happens to be white as well as double.

XVI "Perfect" <or "complete"> means · (a) P  
 That outside which it is impossible to find even a single one of its parts; *e g.*, the complete time of each thing is that outside which it is impossible to find any time which is a part of it (b) That which, in respect of goodness or excellence, cannot be surpassed in its kind; *e g.*, a doctor and a musician are "perfect" when they have no deficiency in respect of the form of their peculiar excellence. And thus 2  
 by an extension of the meaning we use the term in a bad connexion, and speak of a "perfect" humbug and a "perfect" thief; since indeed we call them "good"—*e g.* a "good" thief and a "good" humbug. (c) And goodness is a kind of perfection. For 3  
 each thing, and every substance, is perfect when, and only when, in respect of the form of its peculiar excellence, it lacks no particle of its natural magnitude. (d) Things which have attained their end, if their end is good, are called "perfect"; for they are perfect in virtue of having attained the end. Hence, since the end is an ultimate thing, we extend 4  
 the meaning of the term to bad senses, and speak of perishing "perfectly" or being "perfectly" destroyed, when the destruction or calamity falls short in no respect but reaches its extremity. Hence, by an extension of the meaning, death is called an "end," because they are both ultimate things. And the ultimate object of action is also an end.

Things, then, which are called "perfect" in them- 5  
 selves are so called in all these senses; either because in respect of excellence they have no deficiency

121 b τὸ εὖ μηδὲν ἐλλείπειν μηδ' ἔχειν ὑπερβολὴν μηδὲ  
 ἔξω τι λαβεῖν, τὰ δ' ὅλως κατὰ τὸ μὴ ἔχειν ὑπερ-  
 22 a βολὴν ἐν ἐκάστῳ γένοι μὴδ' εἶναι τι ἔξω, τὰ δὲ  
 ἄλλα ἤδη κατὰ ταῦτα τῷ ἢ ποιεῖν τι τοιοῦτον ἢ  
 ἔχειν ἢ ἀρμόττειν τούτῳ ἢ ἀμῶς γέ πως λέγεσθαι  
 πρὸς τὰ πρῶτως λεγόμενα τέλεια.

XVII. Πέρασ λέγεται τό τε<sup>1</sup> ἔσχατον ἐκάστου καὶ  
 οὐ ἔξω μηδὲν ἔστι λαβεῖν πρῶτου, καὶ οὐ ἔσω  
 πάντα πρῶτου, καὶ ὃ ἂν ἦ εἶδος μεγέθους ἢ ἔχοντος  
 μέγεθος, καὶ τὸ τέλος ἐκάστου (τοιοῦτον δ' ἐφ' ὃ  
 ἢ κίνησις καὶ ἢ πρᾶξις, καὶ οὐκ ἀφ' οὐ· ὅτε δὲ  
 ἄμφω, καὶ ἀφ' οὐ καὶ ἐφ' ὃ καὶ τὸ οὐ ἔνεκα), καὶ  
 ἢ οὐσία ἢ ἐκάστου, καὶ τὸ τί ἦν εἶναι ἐκάστῳ· τῆς  
 10 γνώσεως γὰρ τοῦτο πέρας· εἰ δὲ τῆς γνώσεως, καὶ  
 τοῦ πράγματος. ὥστε φανερόν ὅτι ἴσαχῶς τε ἢ  
 ἀρχὴ λέγεται, τοσαυταχῶς καὶ τὸ πέρας, καὶ ἔτι  
 πλεοναχῶς· ἢ μὲν γὰρ ἀρχὴ πέρας τι, τὸ δὲ  
 πέρας οὐ πᾶν ἀρχή.

XVIII. Τὸ καθ' ὃ λέγεται πολλαχῶς, ἓνα μὲν  
 15 τρόπον τὸ εἶδος καὶ ἢ οὐσία ἐκάστου πράγματος,  
 οἷον καθ' ὃ ἀγαθός, αὐτὸ ἀγαθόν ἓνα δὲ ἐν ᾧ πρῶτω  
 πέφυκε γίνεσθαι, οἷον τὸ χρῶμα ἐν τῇ ἐπιφανείᾳ.  
 τὸ μὲν οὖν πρῶτως λεγόμενον καθ' ὃ τὸ εἶδος ἔστι,  
 δευτέρως δὲ ὡς ἢ ὕλη ἐκάστου καὶ τὸ ὑποκείμενον  
 ἐκάστῳ πρῶτον. ὅλως δὲ τὸ καθ' ὃ ἴσαχῶς καὶ

<sup>1</sup> τε om. EJ.

and cannot be surpassed, and because no part of them can be found outside them; or because, in general, they are unsurpassed in each particular class, and have no part outside. All other things are so called in virtue of these, because they either produce or possess something of this kind, or conform to it, or are referred in some way or other to things which are perfect in the primary sense.

XVII "Limit" means · (a) The furthest part <sup>of L</sup> of each thing, and the first point outside which no part of a thing can be found, and the first point within which all parts are contained. (b) Any form of magnitude or of something possessing magnitude. (c) The end of each thing (This end is that *to* which <sup>2</sup> motion and action proceed, and not the end *from* which. But sometimes it is both the end from which and the end to which, *i.e.* the final cause) (d) The reality or essence of each thing; for this is the limit of our knowledge of it, and if it is a limit of the knowledge, it is also a limit of the thing. Thus it is obvious that "limit" has not only as many senses as "beginning" but even more; because the beginning is a kind of limit, but not every limit is a beginning.

XVIII. "That in virtue of which" has various <sup>"Th</sup> meanings <sup>virtu</sup> (a) The form or essence of each individual <sup>whic</sup> thing; *e.g.*, that in virtue of which a man is good is "goodness itself" (b) The immediate substrate in which a thing is naturally produced; as, *e.g.*, colour is produced in the surface of things. Thus "that in virtue of which" in the primary sense is the *form*, and in the secondary sense, as it were, the *matter* of each thing, and the immediate substrate. And in <sup>2</sup> general "that in virtue of which" will exist in the

22 a  
 20 τὸ αἴτιον ὑπάρξει· κατὰ τί γὰρ ἐλήλυθεν ἢ οὐ  
 εἶνεκα ἐλήλυθε λέγεται, καὶ κατὰ τί παραλελόγισται  
 ἢ συλλελόγισται, ἢ τί τὸ αἴτιον τοῦ συλλογισμοῦ  
 ἢ παραλογισμοῦ. ἔτι δὲ τὸ καθ' ὃ τὸ κατὰ θέσιν  
 λέγεται, καθ' ὃ ἔστηκεν ἢ καθ' ὃ βαδίζει πάντα  
 γὰρ ταῦτα θέσιν σημαίνει καὶ τόπον. Ὡστε

25 καὶ τὸ καθ' αὐτὸ πολλαχῶς ἀνάγκη λέγεσθαι. ἐν  
 μὲν γὰρ καθ' αὐτὸ τὸ τί ἦν εἶναι ἐκάστω, οἷον ὁ  
 Καλλίας καθ' αὐτὸν Καλλίας, καὶ τὸ τί ἦν εἶναι Καλ-  
 λία· ἐν δὲ ὅσα ἐν τῷ τί ἐστὶν ὑπάρχει, οἷον ζῶον  
 ὁ Καλλίας καθ' αὐτόν· ἐν γὰρ τῷ λόγῳ ἐνυπάρχει  
 30 τὸ ζῶον ζῶον γάρ τι ὁ Καλλίας ἔτι δὲ εἰ ἐν αὐτῷ  
 δέδεκται πρῶτῳ ἢ τῶν αὐτοῦ<sup>1</sup> τινί, οἷον ἡ ἐπιφανεία  
 λευκὴ καθ' αὐτήν, καὶ ζῆ ὁ ἄνθρωπος καθ' αὐτόν ἢ  
 γὰρ ψυχὴ μέρος τι τοῦ ἀνθρώπου, ἐν ἣ πρώτῃ τὸ ζῆν.  
 ἔτι οὐ μὴ ἐστὶν ἄλλο αἴτιον· τοῦ γὰρ ἀνθρώπου πολλὰ  
 αἴτια, τὸ ζῶον, τὸ δίπουν· ἀλλ' ὅμως καθ' αὐτόν  
 35 ἄνθρωπος ὁ ἄνθρωπος ἐστίν. ἔτι ὅσα μόνῳ ὑπάρχει,  
 καὶ ἡ μόνον· διὸ τὸ<sup>2</sup> κεχωρισμένον καθ' αὐτό.

2 b XIX. Διάθεσις λέγεται τοῦ ἔχοντος μέρη τάξις,  
 ἢ κατὰ τόπον ἢ κατὰ δύναμιν ἢ κατ' εἶδος θέσιν  
 γὰρ δεῖ τινὰ εἶναι, ὥσπερ καὶ τοῦνομα δηλοῖ ἡ  
 διάθεσις

XX Ἐξίς δὲ λέγεται ἓνα μὲν τρόπον οἷον ἐνέργειά  
 5 τις τοῦ ἔχοντος καὶ ἐχομένου, ὥσπερ πρᾶξις τις ἢ  
 κίνησις· ὅταν γὰρ τὸ μὲν ποιῆ τὸ δὲ ποιῆται, ἔστι

<sup>1</sup> Christ αὐτοῦ.

<sup>2</sup> διὸ τὸ E Alexander: ὁίῃτι A<sup>b</sup>J γρ E· δι' αὐτὸ Ross

<sup>a</sup> This seems to be a slightly irrelevant reference to καθ' αὐτό in the sense of "independent"; but corruption in the text has made the true reading uncertain.

<sup>b</sup> ἔξις means not only "having" but "habit" or "state." Cf. Latin *habitus*.



same number of senses as “cause” For we say indifferently “in virtue of what has he come<sup>2</sup>” or “for what reason has he come<sup>2</sup>” and “in virtue of what has he inferred or inferred falsely<sup>2</sup>” or “what is the cause of his inference or false inference<sup>2</sup>” (And further, there is the positional sense of καθ’ ὅ, “in which he stands.” or “in which he walks”, all these examples denote place or position)

Hence “in virtue of itself” must also have various <sup>3</sup> meanings It denotes (a) The essence of each particular, *e g*, Callias is in virtue of himself Callias <sup>In of it</sup> and the essence of Callias (b) Everything contained in the definition, *e g*, Callias is in virtue of himself an animal, because “animal” is present in the definition, since Callias is a kind of animal (c) Any <sup>4</sup> attribute which a thing has received directly in itself or in any of its parts, *e g*, the surface is white in virtue of itself; and man lives in virtue of himself, because the soul is a part of the man, and life is directly contained in it (d) That which has no other cause Man has many causes “animal,” “two-footed,” etc, but nevertheless man is in virtue of himself man (e) All things which belong to a thing alone and *qua* alone; and hence that which is separate is “in virtue of itself”<sup>a</sup>

XIX “Disposition” means arrangement of that <sup>“D tion</sup> which has parts, either in space or in potentiality or in form. It must be a kind of position, as indeed is clear from the word, “disposition.”

XX. “Having”<sup>b</sup> means (a) In one sense an <sup>“H or ‘</sup> activity, as it were, of the haver and the thing had, as in the case of an action or motion; for when one thing makes and another is made, there is between

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ποίησις μεταξύ. οὕτω καὶ τοῦ ἔχοντος ἐσθῆτα καὶ τῆς ἐχομένης ἐσθῆτος ἔστι μεταξύ ἕξις. ταύτην μὲν οὖν φανερόν ὅτι οὐκ ἐνδέχεται ἔχειν ἕξιν εἰς ἄπειρον γὰρ βαδιεῖται, εἰ τοῦ ἐχομένου ἔσται ἔχειν τὴν ἕξιν ἄλλον δὲ τρόπον ἕξις λέγεται διάθεσις καθ' ἣν εὖ ἢ κακῶς διακείται τὸ διακείμενον, καὶ ἢ καθ' αὐτὸ ἢ πρὸς ἄλλο, οἷον ἢ ὑγίεια ἕξις τις· διάθεσις γάρ ἐστι τοιαύτη. ἔτι ἕξις λέγεται ἂν ἢ μόριον διαθέσεως τοιαύτης διὸ καὶ ἢ τῶν μερῶν ἀρετὴ ἕξις τίς ἐστι.

15 XXI. Πάθος λέγεται ἓνα μὲν τρόπον ποιότης καθ' ἣν ἀλλοιοῦσθαι ἐνδέχεται, οἷον τὸ λευκὸν καὶ τὸ μέλαν, καὶ γλυκὺ καὶ πικρὸν, καὶ βαρύτης καὶ κουφότης, καὶ ὅσα ἄλλα τοιαῦτα ἓνα δὲ αἰ τούτων ἐνέργειαι καὶ ἀλλοιώσεις ἤδη ἔτι τούτων μᾶλλον  
20 αἰ βλαβεραὶ ἀλλοιώσεις καὶ κινήσεις, καὶ μάλιστα αἰ λυπηραὶ βλάβαι ἔτι τὰ μεγέθη τῶν συμφορῶν καὶ λυπηρῶν πάθη λέγεται

XXII. Στέρησις λέγεται ἓνα μὲν τρόπον ἂν μὴ ἔχη  
τι τῶν πεφυκότων ἔχουσαι, καὶ μὴ αὐτὸ ἢ πεφυ-  
κὸς ἔχειν, οἷον φυτὸν ὀμμάτων ἐστερηθῆναι λέγεται  
25 ἓνα δὲ ἂν πεφυκὸς ἔχειν, ἢ αὐτὸ ἢ τὸ γένος, μὴ ἔχη, οἷον ἄλλως ἄνθρωπος ὁ τυφλὸς ὄψεως ἐστερηται καὶ ἀσπάλαξ, τὸ μὲν κατὰ τὸ γένος, τὸ δὲ καθ' αὐτό. ἔτι ἂν πεφυκὸς καὶ ὅτε πέφυκεν

<sup>a</sup> The English equivalent for πάθος in this sense would be "calamity" or "disaster."

<sup>b</sup> This is not a proper sense of privation, as Aristotle implies by choosing an example from everyday speech.

<sup>c</sup> i.e., a mole is blind as being a member of a blind genus, whereas a man is blind only as an individual. Of course moles are not really blind, but we still speak as though they were.

them an act of making. In this way between the man who has a garment and the garment which is had, there is a "having." Clearly, then, it is impossible to *have* a "having" in this sense; for there will be an infinite series if we can have the having of what we have. But (b) there is another sense of "having" which means a disposition, in virtue of which the thing which is disposed is disposed well or badly, and either independently or in relation to something else. *E.g.*, health is a state, since it is a disposition of the kind described. Further, any part of such a disposition is called a state; and hence the excellence of the parts is a kind of state.

XXI "Affection" means (a) In one sense, a quality in virtue of which alteration is possible. *e.g.*, whiteness and blackness, sweetness and bitterness, heaviness and lightness, etc. (b) The actualizations of these qualities; *i.e.* the alterations already realized. (c) More particularly, hurtful alterations and motions, and especially hurts which cause suffering. (d) Extreme cases of misfortune and suffering are called "affections."<sup>a</sup>

XXII. We speak of "privation." (a) In one sense, if a thing does not possess an attribute which is a natural possession, even if the thing itself would not naturally possess it<sup>b</sup>; *e.g.*, we say that a vegetable is "deprived" of eyes. (b) If a thing does not possess an attribute which it or its genus would naturally possess. *E.g.*, a blind man is not "deprived" of sight in the same sense that a mole is; the latter is "deprived" in virtue of its genus, but the former in virtue of himself.<sup>c</sup> (c) If a thing has not an attribute<sup>2</sup> which it would naturally possess, and when it would

22 b

ἔχειν μὴ ἔχη (ἢ γὰρ τυφλότης στέρησις τις, τυφλὸς δ' οὐ κατὰ πᾶσαν ἡλικίαν, ἀλλ' ἐν ἣ  
 30 πέφυκεν ἔχειν, ἂν μὴ ἔχη), ὁμοίως δὲ καὶ ἐν ᾧ  
 ἂν ἦ <πεφυκός><sup>1</sup> καὶ καθ' ὃ καὶ πρὸς ὃ καὶ ὡς,  
 ἂν μὴ ἔχη [πεφυκός] ἔτι ἢ βιαία ἐκάστου ἀφ-  
 αίρεσις στέρησις λέγεται καὶ ὁσαυχῶς δὲ αἱ ἀπὸ  
 τοῦ ᾧ ἀποφάσεις λέγονται, τοσαυταυχῶς καὶ αἱ  
 35 στερήσεις λέγονται· ἄνισον μὲν γὰρ τῷ μὴ ἔχειν  
 ἰσότητα πεφυκὸς λέγεται, ἀόρατον δὲ καὶ τῷ  
 ὄλως μὴ ἔχειν χρῶμα καὶ τῷ φαύλως, καὶ ἄπουν  
 καὶ τῷ μὴ ἔχειν ὄλως πόδας καὶ τῷ φαύλους.  
 23 a ἔτι καὶ τῷ μικρὸν ἔχειν, οἶον τὸ ἀπύρηνον· τοῦτο  
 δ' ἐστὶ τὸ φαύλως πως ἔχειν. ἔτι τῷ μὴ ῥαδίως  
 ἢ τῷ μὴ καλῶς, οἶον τὸ ἄτμητον οὐ μόνον τῷ  
 μὴ τέμνεσθαι ἀλλὰ καὶ τῷ μὴ ῥαδίως ἢ μὴ  
 5 καλῶς. ἔτι τῷ πάντῃ μὴ ἔχειν· τυφλὸς γὰρ οὐ  
 λέγεται ὁ ἑτερόφθαλμος ἀλλ' ὁ ἐν ἀμφοῖν μὴ  
 ἔχων ὄψιν διὸ οὐ πᾶς ἀγαθὸς ἢ κακός, ἢ δίκαιος  
 ἢ ἄδικος, ἀλλὰ καὶ τὸ μεταξύ.

XXIII. Τὸ ἔχειν λέγεται πολλαυχῶς, ἓνα μὲν τρόπον  
 τὸ ἄγειν κατὰ τὴν αὐτοῦ φύσιν ἢ κατὰ τὴν αὐτοῦ  
 10 ὁρμὴν, διὸ λέγεται πυρετός τε ἔχειν τὸν ἄνθρωπον  
 καὶ οἱ τύραννοι τὰς πόλεις καὶ τὴν ἐσθῆτα οἱ  
 ἀμπεχόμενοι· ἓνα δ' ἐν ᾧ ἂν τι ὑπάρχη ὡς δε-

<sup>1</sup> transposuit Jaeger.

<sup>a</sup> The qualification refers, I suppose, to the fact that an embryo does not naturally possess sight.

<sup>b</sup> The subject seems to be indefinite, but no doubt Aristotle is thinking primarily of the particular example which he has just given. A man "is not called blind if he does not see in the dark, or if he does not see with his ears, or if he does not see sound, or if he does not see what is behind him or too far away" (Ross).

naturally possess it (for blindness is a form of privation; but a man is not blind at *any* age, but only if he lacks sight at the age when he would naturally possess it <sup>a</sup>). and similarly if it <sup>b</sup> lacks an attribute in the medium and organ and relation and manner in which it would naturally possess it. (d) The forcible removal of anything is called privation. (e) Privation has as many senses as there are senses of negation derived from the negative affix (*â-*). For we call a thing "unequal" because it does not possess equality (though it would naturally do so); and "invisible" either because it has no colour at all or because it has only a faint one; and "footless" either because it has no feet at all or because it has rudimentary feet. Again, a negative affix may mean "having something in a small degree"—*e g* "stoneless"—that is, having it in some rudimentary manner. Again, it may mean having it "not easily" or "not well", *e g*, "uncutable" means not only that which cannot be cut, but that which cannot be cut easily or well. And again, it may mean not having a thing at all, for it is not the one-eyed man, but the man who lacks sight in both eyes, who is called blind. Hence not every man is good or bad, moral or immoral; there is also the intermediate state.

XXIII. "To have" <or "possess"> is used in various senses. (a) To direct in accordance with one's own nature or impulse; whence we say that fever "possesses" a man, and despots "possess" cities, and people who wear clothes "possess" them. (b) We speak of anything as "having" in which, as receptive material, something is present. *E g*, the

i a κτικῶ, οἷον ὁ χαλκὸς ἔχει τὸ εἶδος τοῦ ἀνδριάντος  
 καὶ τὴν νόσον τὸ σῶμα· ἓνα δ' ὡς τὸ περιέχον τὰ  
 περιεχόμενα· ἐν ᾧ γάρ ἐστι περιεχόμενον τι,  
 15 ἔχεσθαι ὑπὸ τούτου λέγεται, οἷον τὸ ἀγγεῖον  
 ἔχειν τὸ ὑγρὸν φάμεν καὶ τὴν πόλιν ἀνθρώπους  
 καὶ τὴν ναῦν ναύτας· οὕτω δὲ καὶ τὸ ὄλον ἔχειν  
 τὰ μέρη ἔτι τὸ κωλύον κατὰ τὴν αὐτοῦ ὀρμὴν  
 τι κινεῖσθαι ἢ πράττειν ἔχειν λέγεται τοῦτο αὐτό,  
 οἷον καὶ οἱ κίονες τὰ ἐπικείμενα βάρη, καὶ ὡς οἱ  
 20 ποιηταὶ τὸν Ἄτλαντα ποιοῦσι τὸν οὐρανὸν ἔχειν  
 ὡς συμπεσόντ' ἂν ἐπὶ τὴν γῆν, ὥσπερ καὶ τῶν  
 φυσιολόγων τινὲς φασιν. τοῦτον δὲ τὸν τρόπον  
 καὶ τὸ συνέχον λέγεται ἂ συνέχει ἔχειν, ὡς δια-  
 χωρισθέντα ἂν κατὰ τὴν αὐτοῦ ὀρμὴν ἕκαστον.

Καὶ τὸ ἐν τινι δὲ εἶναι ὁμοτρόπως<sup>1</sup> λέγεται καὶ  
 25 ἐπομένως τῷ ἔχειν.

XXIV. Τὸ ἕκ τινος εἶναι λέγεται ἓνα μὲν τρόπον ἐξ  
 οὐ ἐστὶν ὡς ὕλης, καὶ τοῦτο διχῶς, ἢ κατὰ τὸ πρῶτον  
 γένος ἢ κατὰ τὸ ὑστατον εἶδος, οἷον ἐστὶ μὲν ὡς  
 ἅπαντα τὰ τηκτὰ ἐξ ὕδατος, ἐστὶ δ' ὡς ἐκ χαλκοῦ  
 30 ὁ ἀνδριάς· ἓνα δ' ὡς ἐκ τῆς πρώτης κινήσεως  
 ἀρχῆς, οἷον ἐκ τίνος ἢ μάχης; ἐκ λαιδορίας, ὅτι  
 αὕτη ἀρχὴ τῆς μάχης ἓνα δ' ἐκ τοῦ συνθέτου  
 ἐκ τῆς ὕλης καὶ τῆς μορφῆς, ὥσπερ ἐκ τοῦ ὄλου  
 τὰ μέρη καὶ ἐκ τῆς Ἰλιάδος τὸ ἔπος καὶ ἐκ τῆς  
 οἰκίας οἱ λίθοι· τέλος μὲν γάρ ἐστιν ἡ μορφή,  
 35 τέλειον δὲ τὸ ἔχον τέλος. τὰ δὲ ὡς ἐκ τοῦ μέρους

<sup>1</sup> ὁμοιτρόπως recs.

<sup>a</sup> Cf Hesiod, *Theogony* 517.

<sup>b</sup> e.g., Empedocles held that the heavens were kept in place by the velocity of their rotation; *De Caelo* 284 a 24, 295 a 16 (Ritter and Preller, 170 b).

bronze "has" the shape of the statue, and the body "has" the disease (c) In the sense that the container holds the contained; for when A is contained in B, we say that A is held by B *Eg*, we say that the vessel holds the liquid, and the city holds men, and the ship holds sailors, and so too that the whole "holds" the parts. (d) The same term is applied to that which prevents anything from moving or acting in accordance with its own impulse; as pillars hold <sup>up</sup> the weights which are imposed upon them, and as the poets make Atlas<sup>a</sup> hold up the heaven, because otherwise it would fall upon the earth (as some of the physicists<sup>b</sup> maintain also) It is in this sense that we say that "that which holds together" holds what it holds together; because otherwise the latter would disperse, each part in accordance with its own impulse.

"To be in a thing" is used similarly in senses corresponding to those of "to have"

XXIV "To come from something" means: (a) In one sense, to come from something as matter, and this in two ways: in respect either of the primary genus or of the ultimate species *Eg*, in the one sense everything liquefiable comes from water, and in the other the statue comes from bronze (b) To come from something as the first moving principle; *eg*, "from what comes fighting" From abuse; because this is the beginning of a fight (c) To come from the combination of matter and form (as the parts come from the whole, and the verse from the *Iliad*, and the stones from the house); for the shape is an end, and that is a complete thing which has attained its end. (d) In the sense that the form is made out of the part of its definition; as, *eg*, "man"

<sup>a</sup> τὸ εἶδος, οἷον ὁ ἄνθρωπος ἐκ τοῦ δίποδος καὶ ἡ  
<sup>b</sup> συλλαβὴ ἐκ τοῦ στοιχείου· ἄλλως γὰρ τοῦτο καὶ  
ὁ ἀνδριάς ἐκ τοῦ χαλκοῦ, ἐκ τῆς αἰσθητῆς γὰρ  
ὑλης ἢ συνθετῆ οὐσία, ἀλλὰ καὶ τὸ εἶδος ἐκ τῆς  
τοῦ εἶδους ὑλης. τὰ μὲν οὖν οὕτω λέγεται, τὰ  
δ' εἶναι κατὰ μέρος τι τούτων τις ὑπάρχη τῶν  
τρόπων, οἷον ἐκ πατρὸς καὶ μητρὸς τὸ τέκνον  
<sup>5</sup> καὶ ἐκ γῆς τὰ φυτά, ὅτι ἐκ τινος μέρους αὐτῶν  
ἓνα δὲ μεθ' ὃ τῷ χρόνῳ, οἷον ἐξ ἡμέρας νύξ καὶ  
ἐξ εὐδίας χειμῶν, ὅτι τοῦτο μετὰ τοῦτο. τούτων  
δὲ τὰ μὲν τῷ ἔχειν μεταβολὴν εἰς ἄλληλα οὕτω  
λέγεται, ὥσπερ καὶ τὰ νῦν εἰρημένα, τὰ δὲ τῷ  
κατὰ τὸν χρόνον ἐφεξῆς μόνον, οἷον ἐξ ἰσημερίας  
<sup>10</sup> ἐγένετο ὁ πλοῦς, ὅτι μετ' ἰσημερίαν ἐγένετο, καὶ  
ἐκ Διονυσίων Θαργῆλια, ὅτι μετὰ τὰ Διονύσια

XXV Μέρος λέγεται ἓνα μὲν τρόπον εἰς ὃ διαιρε-  
θείη ἂν τὸ ποσὸν ὅπως οὖν· αἰεὶ γὰρ τὸ ἀφαιρούμενον  
τοῦ ποσοῦ ἢ ποσὸν μέρος λέγεται ἐκείνου, οἷον  
<sup>15</sup> τῶν τριῶν τὰ δύο μέρος λέγεται πως ἄλλον δὲ  
τρόπον τὰ καταμετροῦντα τῶν τοιούτων μόνον·  
διὸ τὰ δύο τῶν τριῶν ἔστι μὲν ὡς λέγεται μέρος  
ἔστι δ' ὡς οὐ. ἔτι εἰς ἃ τὸ εἶδος διαιρεθείη ἂν  
ἀνευ τοῦ ποσοῦ, καὶ ταῦτα μόρια λέγεται τούτου  
διὸ τὰ εἶδη τοῦ γένους φασὶν εἶναι μόρια. ἔτι  
<sup>20</sup> εἰς ἃ διαιρεῖται<sup>1</sup> ἢ ἐξ ὧν σύγκειται τὸ ὅλον, ἢ τὸ  
εἶδος ἢ τὸ ἔχον τὸ εἶδος, οἷον τῆς σφαίρας τῆς  
χαλκῆς ἢ τοῦ κύβου τοῦ χαλκοῦ καὶ ὁ χαλκός

<sup>1</sup> διαιρεῖται τι EJ<sup>2</sup>G.

<sup>a</sup> In the sense that στοιχείον ("letter") forms part of the definition of "syllable."

<sup>b</sup> The (city) Dionysia were celebrated in March; the Thargelia (a festival in honour of Apollo and Artemis) at the end of May.



is made out of "two-footed" and the syllable out of its element <sup>a</sup> (this is a different way from that in which the statue is made out of the bronze: for the composite entity is made out of perceptible material, but the form is also made out of the material of the form). These, then, are some of the meanings of <sup>4</sup> "from" <or "out of">, but (e) sometimes one of these senses only partially applies, e.g., the child comes from the father and mother, and plants from the earth, because they come from some part of those things. (f) It means "after" in time: e.g., we say that night comes from day, and storm from fine weather, because one comes after the other. And <sup>5</sup> we speak thus of some of these things in view of their alternation with each other, as in the examples just mentioned, and of others in view merely of their succession in time: e.g., "the voyage was made from the equinox," meaning that it was made after it; and "the Thargelia are 'from' the Dionysia," meaning after the Dionysia <sup>b</sup>

XXV "Part" means (a) That into which a <sup>"P</sup> quantity can be in any way divided; for that which is taken from a quantity *qua* quantity is always called a part of that quantity—e.g., we call 2 part (in a sense) of 3. (b) In another sense the term is only applied to those "parts" in sense (a) which *measure* the whole; hence in one sense we call 2 part of 3, and in another not. Again, (c) those divi-<sup>2</sup> sions into which the form, apart from quantity, can be divided, are also called parts of the form. Hence species are called parts of their genus. (d) That into which the whole (either the form or that which contains the form) is divided, or of which it is composed. *E.g.*, of a bronze sphere or cube not only is the bronze

<sup>b</sup> μέρος (τοῦτο δ' ἐστὶν ἢ ὕλη ἐν ἧ τὸ εἶδος) καὶ ἡ  
γωνία μέρος. ἔτι τὰ ἐν τῷ λόγῳ τῷ δηλοῦντι  
ἕκαστον, καὶ ταῦτα μόρια τοῦ ὅλου. διὸ τὸ γένος  
<sup>15</sup> τοῦ εἶδους καὶ μέρος λέγεται, ἄλλως δὲ τὸ εἶδος  
τοῦ γένους μέρος

XXVI Ὅλον λέγεται οὐ τε μὴθὲν ἄπεισι μέρος ἐξ  
ᾧν λέγεται ὅλον φύσει, καὶ τὸ περιέχον τὰ περι-  
εχόμενα ὥστε ἐν τι εἶναι ἐκεῖνα· τοῦτο δὲ διχῶς ἢ  
γὰρ ὡς ἕκαστον ἐν, ἢ ὡς ἐκ τούτων τὸ ἐν τὸ  
<sup>0</sup> μὲν γὰρ καθόλου καὶ τὸ ὅλως λεγόμενον ὡς  
ὅλον τι ὄν, οὕτως ἐστὶ καθόλου ὡς πολλὰ περιέχον  
τῷ κατηγορεῖσθαι καθ' ἑκάστου καὶ ἐν ἅπαντα  
εἶναι ὡς ἕκαστον, οἷον ἄνθρωπον, ἵππον, θεόν,  
ὅτι ἅπαντα ζῶα τὸ δὲ συνεχές καὶ πεπερασμένον,  
ὅταν ἐν τι ἐκ πλειόνων ἢ ἐνυπαρχόντων, μάλιστα  
<sup>5</sup> μὲν δυνάμει, εἰ δὲ μὴ, ἐνεργείᾳ τούτων δ'  
αὐτῶν μᾶλλον τὰ φύσει ἢ τέχνῃ τοιαῦτα, ὥσπερ  
καὶ ἐπὶ τοῦ ἐνὸς ἐλέγομεν<sup>1</sup> ὡς οὕσης τῆς ὁλότητος  
<sup>1</sup> ἐνότητός τινος Ἐπι τοῦ ποσοῦ ἔχοντος ἀρχὴν  
καὶ μέσον καὶ ἔσχατον, ὅσων μὲν μὴ ποιεῖ ἢ θέσις  
διαφορὰν, πᾶν λέγεται, ὅσων δὲ ποιεῖ, ὅλον ὅσα  
δὲ ἄμφω ἐνδέχεται, καὶ ὅλα καὶ πάντα· ἔστι δε  
ταῦτα ὅσων ἢ μὲν φύσις ἢ αὐτὴ μένει τῇ μετα-  
θέσει ἢ δὲ μορφῇ οὐ, οἷον κηρὸς καὶ ἱμάτιον· καὶ

<sup>1</sup> ἐλέγομεν A<sup>b</sup> et fort. Alexander· λέγομεν E.J.

(*i e* the material which contains the form) a part, but 3  
 also the angle (*e*) The elements in the definition of  
 each thing are also called parts of the whole. Hence  
 the genus is even called a part of the species, whereas  
 in another sense the species is part of the genus

XXVI. "Whole" means (*a*) That from which no "Wh  
 part is lacking of those things as composed of which  
 it is called a natural whole (*b*) That which so con-  
 tains its contents that they form a unity; and this  
 in two ways, either in the sense that each of them is a  
 unity, or in the sense that the unity is composed of  
 them For (*i*) the universal, or term generally 2  
 applied as being some whole thing, is universal in the  
 sense that it contains many particulars: because it is  
 predicated of each of them, and each and all of them  
 (*e g.* man, horse, god) are one; because they are all  
 living things And (*ii*) that which is continuous and  
 limited is a whole when it is a unity composed of  
 several parts (especially if the parts are only po-  
 tentially present in it; but otherwise even if they  
 are present actually) And of these things them- 3  
 selves, those which are so naturally are more truly  
 wholes than those which are so artificially; just as  
 we said of "the one," because "wholeness" is a  
 kind of "oneness."

Again, since a quantity has a beginning, middle "All  
 and end, those to which position makes no difference  
 we describe as "all," and those to which position  
 makes a difference we describe as "whole," and  
 those to which both descriptions can be applied, as  
 both "all" and "whole." These are all things 4  
 whose nature remains the same in transposition,  
 but whose shape does not; *e g.* wax or a coat. They  
 are described as both "whole" and "all"; for

τ<sup>a</sup> γὰρ ὄλον καὶ πᾶν λέγεται· ἔχει γὰρ ἄμφω. ὕδωρ δὲ καὶ ὅσα ὑγρά καὶ ἀριθμὸς πᾶν μὲν λέγεται, ὄλος δ' ἀριθμὸς καὶ ὄλον ὕδωρ οὐ λέγεται, ἂν μὴ μεταφορᾶ. πάντα δὲ λέγεται ἐφ' οἷς τὸ πᾶν ὡς ἐφ'  
 10 ἐνί, ἐπὶ τούτοις τὸ<sup>1</sup> πάντα ὡς ἐπὶ διηρημένοις πᾶς οὗτος ὁ ἀριθμὸς, πᾶσαι αὐταὶ αἱ μονάδες.

XXVII Κολοβὸν δὲ λέγεται τῶν ποσῶν οὐ τὸ τυχόν, ἀλλὰ μεριστόν τε δεῖ αὐτὸ εἶναι καὶ ὄλον τά τε γὰρ δύο οὐ κολοβά θατέρου ἀφαιρουμένου ἑνός (οὐ γὰρ ἴσον τὸ κολόβωμα καὶ τὸ λοιπὸν οὐδέποτ'  
 15 ἐστίν), οὐδ' ὅλως ἀριθμὸς οὐδεὶς· καὶ γὰρ τὴν οὐσίαν δεῖ μένειν· εἰ κύλιξ κολοβός, ἔτι εἶναι κύλικα· ὁ δὲ ἀριθμὸς οὐκέτι ὁ αὐτός. πρὸς δὲ τούτοις κἂν ἀνομοιομερῆ ἦ, οὐδὲ ταῦτα πάντα· ὁ γὰρ ἀριθμὸς ἔστιν ὡς<sup>2</sup> καὶ ἀνόμοια ἔχει μέρη, οἷον δυάδα, τριάδα· ἀλλ' ὅλως ὦν<sup>3</sup> μὴ ποιεῖ ἢ θέσις διαφορὰν οὐδὲν κολοβόν, οἷον ὕδωρ ἢ πῦρ,  
 20 ἀλλὰ δεῖ τοιαῦτα εἶναι ἅ κατὰ τὴν οὐσίαν θέσιν ἔχει. ἔτι συνεχῆ· ἢ γὰρ ἀρμονία ἐξ ἀνομοίων<sup>4</sup> μὲν καὶ θέσιν ἔχει, κολοβὸς δὲ οὐ γίγνεται πρὸς δὲ τούτοις οὐδ' ὅσα ὅλα, οὐδὲ ταῦτα ὄτουοῦν μορίου στερήσει κολοβά οὐ γὰρ δεῖ οὔτε τὰ κύρια τῆς οὐσίας οὔτε τὰ ὄπουοῦν ὄντα· οἷον ἂν τρυπηθῆ ἢ  
 25 κύλιξ, οὐ κολοβός, ἀλλ' ἂν τὸ οὖς ἢ ἀκρωτήριον τι· καὶ ὁ ἄνθρωπος οὐκ ἔαν σάρκα ἢ τὸν σπλήνα, ἀλλ' ἔαν ἀκρωτήριον, καὶ τοῦτο οὐ πᾶν ἀλλ' ὁ μὴ ἔχει γένεσιν ἀφαιρεθὲν ὄλον. διὰ τοῦτο οἱ φαλακροὶ οὐ κολοβοί.

<sup>1</sup> τὸ ex Alexandro Christ: τὰ A<sup>b</sup> om ce.

<sup>2</sup> ὡς: ὅς E.

<sup>3</sup> ὦν: ὅσων A<sup>b</sup>.

<sup>4</sup> ἀνομοιομερῶν EJ comm.

they have both characteristics. Water, however, and all liquids, and number, are described as "all"; we do not speak of a "whole number" or "whole water" except by an extension of meaning. Things are described as "all" in the plural *qua* differentiated which are described as "all" in the singular *qua* one; all this number, all these units.

XXVII We do not describe any chance quantity as "mutilated"; it must have parts, and must be a whole. The number 2 is not mutilated if one of its 1's is taken away—because the part lost by mutilation is never equal to the remainder—nor in general is any number mutilated; because the essence must persist. If a cup is mutilated, it must still be a cup; but the number is no longer the same. Moreover, 2 not even all things which have dissimilar parts are mutilated; for a number has in a sense dissimilar as well as similar parts—*e.g.* 2, 3. But in general of things whose position makes no difference, *e.g.* water or fire, none is mutilated;—to be mutilated, things must be such as have their position according to their essence. Further, they must be continuous; 3 for a musical scale is composed of dissimilar parts, and has position; but it does not become mutilated. Moreover, even things which are wholes are not mutilated by the removal of *any* of their parts; the parts removed must be neither proper to their essence nor in any chance location. *E.g.*, a cup is not mutilated if a hole is made in it, but only if the handle or some projection is broken; and a man is not 4 mutilated if he loses flesh or his spleen, but if he loses some extremity; and not every extremity, but only such as cannot grow again when completely removed. Hence bald people are not mutilated.

- 24 a XXVIII Γένος λέγεται τὸ μὲν εἶναι ἢ ἢ γένεσις  
 30 συνεχῆς τῶν τὸ εἶδος ἔχόντων τὸ αὐτό, οἷον λέγεται  
 ἕως ἂν ἀνθρώπων γένος ἦ, ὅτι ἕως ἂν ἦ ἢ γένεσις  
 συνεχῆς αὐτῶν τὸ δὲ ἀφ' οὗ ἂν ὦσι πρώτου κινή-  
 σαντος εἰς τὸ εἶναι οὕτω γὰρ λέγονται "Ἕλληνες  
 τὸ γένος οἱ δὲ "Ἰωνες, τῷ οἱ μὲν ἀπὸ "Ἑλλήνος  
 οἱ δὲ ἀπὸ "Ἰωνος εἶναι πρώτου γεννήσαντος  
 35 καὶ μᾶλλον οἱ ἀπὸ τοῦ γεννήσαντος ἢ τῆς ὕλης·  
 λέγονται γὰρ καὶ ἀπὸ τοῦ θήλεος τὸ γένος, οἷον οἱ  
 4 b ἀπὸ Πύρρας. ἔτι δὲ ὡς τὸ ἐπίπεδον τῶν σχη-  
 μάτων γένος τῶν ἐπιπέδων, καὶ τὸ στερεὸν τῶν  
 στερεῶν ἕκαστον γὰρ τῶν σχημάτων τὸ μὲν  
 ἐπίπεδον τοιονδί, τὸ δὲ στερεὸν ἐστὶ τοιονδί τοῦτο  
 δ' ἐστὶ τὸ ὑποκείμενον ταῖς διαφοραῖς ἔτι ὡς ἐν  
 5 τοῖς λόγοις τὸ πρῶτον ἐνυπάρχον, ὃ λέγεται ἐν τῷ  
 τί ἐστὶ, τοῦτο γένος, οὗ διαφοραὶ λέγονται αἱ  
 ποιότητες. τὸ μὲν οὖν γένος τοσαυταχῶς λέγεται,  
 τὸ μὲν κατὰ γένεσιν συνεχῆ τοῦ αὐτοῦ εἶδους, τὸ  
 δὲ κατὰ τὸ πρῶτον κινήσαν ὁμοειδές, τὸ δ' ὡς  
 ὕλη· οὗ γὰρ ἡ διαφορὰ καὶ ἡ ποιότης ἐστὶ, τοῦτ'  
 10 ἐστὶ τὸ ὑποκείμενον, ὃ λέγομεν ὕλην "Ἔτερα δὲ  
 τῷ γένει λέγεται ὧν ἕτερον τὸ πρῶτον ὑποκείμενον  
 καὶ μὴ ἀναλύεται θάτερον εἰς θάτερον μηδ' ἄμφω  
 εἰς ταυτόν, οἷον τὸ εἶδος καὶ ἡ ὕλη ἕτερον τῷ γένει,  
 καὶ ὅσα καθ' ἕτερον σχῆμα κατηγορίας τοῦ ὄντος  
 λέγεται· τὰ μὲν γὰρ τί ἐστὶ σημαίνει τῶν ὄντων,  
 15 τὰ δὲ ποιόν τι, τὰ δ' ὡς διήρηται πρότερον·

<sup>a</sup> Aristotle regards the mother as providing the material, and the father the formal element of the child. Cf. I. vi. 8, VIII. iv. 5.

<sup>b</sup> Wife of Deucalion, the Greek Noah.

XXVIII. The term "genus" <or "race"> is used: "Gen  
 (a) When there is a continuous generation of things of  
 the same type, *e g*, "as long as the human *race*  
 exists" means "as long as the generation of human  
 beings is continuous" (b) Of anything from which  
 things derive their being as the prime mover of them  
 into being Thus some are called Hellenes by race,  
 and others Ionians, because some have Hellen and  
 others Ion as their first ancestor (Races are called 2  
 after the male ancestor rather than after the  
 material<sup>a</sup> Some derive their race from the female  
 as well; *e g*. "the descendants of Pyrrha<sup>b</sup>") (c) In  
 the sense that the plane is the "genus" of plane  
 figures, and the solid of solids (for each one of the  
 figures is either a particular plane or a particular  
 solid), *i e*, that which underlies the differentiae  
 (d) In the sense that in formulae the first component, 3  
 which is stated as part of the essence, is the genus,  
 and the qualities are said to be its differentiae The  
 term "genus," then, is used in all these senses—(a)  
 in respect of continuous generation of the same type;  
 (b) in respect of the first mover of the same type as  
 the things which it moves; (c) in the sense of  
 material. For that to which the differentia or  
 quality belongs is the substrate, which we call  
 material.

Things are called "generically different" whose 4  
 immediate substrates are different and cannot be  
 resolved one into the other or both into the same  
 thing. *E g*, form and matter are generically differ-  
 ent, and all things which belong to different cate-  
 gories of being; for some of the things of which  
 being is predicated denote the essence, others a  
 quality, and others the various other things which

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οὐδὲ γὰρ ταῦτα ἀναλύεται οὐτ' εἰς ἄλληλα οὐτ' εἰς ἓν τι.

XXIX. Τὸ ψεῦδος λέγεται ἄλλον μὲν τρόπον ὡς πρᾶγμα ψεῦδος, καὶ τούτου τὸ μὲν τῷ μὴ συγκείσθαι ἢ ἀδύνατον εἶναι συντεθῆναι (ὥσπερ λέγεται τὸ τὴν  
 20 διάμετρον εἶναι σύμμετρον, ἢ τὸ σὲ καθῆσθαι· τούτων γὰρ ψεῦδος τὸ μὲν αἰεὶ, τὸ δὲ ποτέ· οὕτω γὰρ οὐκ ὄντα ταῦτα), τὰ δὲ ὅσα ἔστι μὲν ὄντα, πέφυκε μέντοι φαίνεσθαι ἢ μὴ οἰά εἶστιν ἢ ἃ μὴ ἔστιν, οἷον ἢ σκιαγραφία καὶ τὰ ἐνύπνια· ταῦτα γὰρ ἔστι μὲν τι, ἀλλ' οὐχ ὧν ἐμποιεῖ τὴν φαντασίαν

25 Πράγματα μὲν οὖν ψευδῆ οὕτω λέγεται, ἢ τῷ μὴ εἶναι αὐτά, ἢ τῷ τὴν ἀπ' αὐτῶν φαντασίαν μὴ ὄντος εἶναι· λόγος δὲ ψευδῆς ὁ τῶν μὴ ὄντων ἢ ψευδῆς· διὸ πᾶς λόγος ψευδῆς ἑτέρου ἢ οὐ ἔστιν ἀληθῆς, οἷον ὁ τοῦ κύκλου ψευδῆς τριγώνου. ἐκάστου δὲ λόγος ἔστι μὲν ὡς εἰς ὁ τοῦ τί ἦν  
 30 εἶναι, ἔστι δ' ὡς πολλοί, ἐπεὶ ταυτό πως αὐτὸ καὶ αὐτὸ πεπονθός, οἷον Σωκράτης καὶ Σωκράτης μουσικός· ὁ δὲ ψευδῆς λόγος οὐθενός ἐστιν ἀπλῶς λόγος· διὸ Ἀντισθένης ᾤετο εὐήθως μηδὲν ἀξιῶν λέγεσθαι πλὴν τῷ οἰκείῳ λόγῳ, ἐν ἐφ' ἐνός ἐξ ὧν συνέβαινε μὴ εἶναι ἀντιλέγειν, σχεδὸν δὲ μηδὲ

<sup>a</sup> Here Aristotle is using the word *λόγος* not in the strict sense of "definition" but in the looser sense of "a statement about something"

<sup>b</sup> The Cynic, contemporary and renegade "disciple" of Socrates. He taught that definition, and even predication, are strictly speaking impossible. A simple entity can only be named, a complex entity can only be "defined" by naming its simple constituents. Cf. VIII iii. 7, 8; Plato, *Theaetetus* 201 D-202 C, *Sophist* 251 B, C.

<sup>c</sup> Cf. *Topica* 104 b 21, Isocrates, *Helena* 10, 1; Plato, *Euthydemus* 285 E-286 B.



have already been distinguished. For these also cannot be resolved either into each other or into any one thing

XXIX "False" means (1) false as a *thing*, (a) <sup>2</sup> "Fal- because it is not or cannot be substantiated; such are the statements that the diagonal of a square is commensurable, or that you are sitting. Of these one is false always, and the other sometimes; it is in these senses that these things are not facts. (b) <sup>2</sup> Such things as really exist, but whose nature it is to seem either such as they are not, or like things which are unreal; *e g* chiaroscuro and dreams. For these are really something, but not that of which they create the impression. Things, then, are called false in these senses: either because they themselves are unreal, or because the impression derived from them is that of something unreal.

(ii) A false statement is the statement of *what is* <sup>3</sup> *not*, in so far as the statement is false. Hence every definition is untrue of anything other than that of which it is true; *e g*, the definition of a circle is untrue of a triangle. Now in one sense there is only one definition of each thing, namely that of its essence; but in another sense there are many definitions,<sup>a</sup> since the thing itself, and the thing itself qualified (*e g*. "Socrates" and "cultured Socrates") are in a sense the same. But the false definition is <sup>4</sup> not strictly a definition of anything. Hence it was foolish of Antisthenes <sup>b</sup> to insist that nothing can be described except by its proper definition. one predicate for one subject; from which it followed that contradiction <sup>c</sup> is impossible, and falsehood <sup>d</sup> nearly

<sup>a</sup> Cf. Isocrates, *loc. cit.*, *Euthydemus* 283 E-284 C, 286 C, D.

<sup>l b</sup>  
 35 ψεύδεσθαι. ἔστι δ' ἕκαστον λέγειν οὐ μόνον τῷ  
 αὐτοῦ λόγῳ ἀλλὰ καὶ τῷ ἑτέρου, ψευδῶς μὲν καὶ  
 , a παντελῶς, ἔστι δ' ὡς καὶ ἀληθῶς, ὥσπερ τὰ ὀκτῶ  
 διπλάσια τῷ τῆς δυάδος λόγῳ. Τὰ μὲν οὖν οὕτω  
 λέγεται ψευδῆ, ἄνθρωπος δὲ ψευδῆς ὁ εὐχερῆς καὶ  
 προαιρετικὸς τῶν τοιούτων λόγων, μὴ δι' ἕτερόν  
 τι ἀλλὰ δι' αὐτό, καὶ ὁ ἄλλοις ἐμπορητικὸς τῶν  
 5 τοιούτων λόγων, ὥσπερ καὶ τὰ πράγματα φαμεν  
 ψευδῆ εἶναι ὅσα ἐμποιεῖ φαντασίαν ψευδῆ. διὸ  
 ὁ ἐν τῷ Ἰππία λόγος παρακρούεται ὡς ὁ αὐτὸς  
 ψευδῆς καὶ ἀληθῆς. τὸν δυνάμενον γὰρ ψεύσασθαι  
 λαμβάνει ψευδῆ, οὗτος δ' ὁ εἰδὼς καὶ ὁ φρόνιμος·  
 ἔτι τὸν ἐκόντα φαῦλον βελτίω. τοῦτο δὲ ψεῦδος  
 10 λαμβάνει διὰ τῆς ἐπαγωγῆς—ὁ γὰρ ἐκὼν χωλαίνων  
 τοῦ ἄκοντος κρείττων—τὸ χωλαίνειν τὸ μιμεῖσθαι  
 λέγων, ἐπεὶ εἴ γε χωλὸς ἐκὼν, χείρων ἴσως, ὥσπερ  
 ἐπὶ τοῦ ἦθους, καὶ οὗτος

XXX. Συμβεβηκὸς λέγεται ὁ ὑπάρχει μὲν τινὶ καὶ  
 15 ἀληθῆς εἰπεῖν, οὐ μέντοι οὔτ' ἐξ ἀνάγκης οὔτε  
 <ὡς><sup>1</sup> ἐπὶ τὸ πολὺ, οἷον εἴ τις ὀρύττων φυτῶ  
 βόθρον εὔρε θησαυρόν τοῦτο τοίνυν συμβεβηκὸς  
 τῷ ὀρύττῳ τὸν βόθρον, τὸ εὔρεῖν θησαυρόν· οὔτε  
 γὰρ ἐξ ἀνάγκης τοῦτο ἐκ τούτου ἢ μετὰ τοῦτο,  
 οὔθ' ὡς ἐπὶ τὸ πολὺ ἂν τις φυτεύῃ θησαυρόν  
 20 εὐρίσκει. καὶ μουσικὸς γ' ἂν τις εἴη λευκός· ἀλλ'  
 ἐπεὶ οὔτε ἐξ ἀνάγκης οὔθ' ὡς ἐπὶ τὸ πολὺ τοῦτο  
 γίγνεται, συμβεβηκὸς αὐτὸ λέγομεν. ὥστ' ἐπεὶ  
 ἔστιν ὑπάρχον τι καὶ τινί, καὶ ἕνια τούτων καὶ πού  
 καὶ ποτέ, ὁ τι ἂν ὑπάρχη μὲν, ἀλλὰ μὴ διότι τοδὶ

<sup>1</sup> ὡς Asclepius, Eucken· δὲ A<sup>b</sup> om EJ.

so. But it is possible to describe everything not only by its own definition but by that of something else ; quite falsely, and yet also in a sense truly—e g., 8 may be described as “ double ” by the definition of 2.

Such are the meanings of “ false ” in these cases. 5  
 (iii) A false man is one who readily and deliberately makes such statements, for the sake of doing so and for no other reason ; and one who induces such statements in others—just as we call things false which induce a false impression. Hence the proof in the *Hippias*<sup>a</sup> that the same man is false and true is misleading ; for it assumes (a) that the false man 6 is he who is *able* to deceive, i.e. the man who knows and is intelligent, (b) that the man who is willingly bad is better. This false assumption is due to the induction ; for when he says that the man who limps willingly is better than he who does so unwillingly, he means by limping *pretending* to limp. For if he is willingly lame, he is presumably worse in this case just as he is in the case of moral character.

XXX. “ Accident ” <or “ attribute ”> means that which applies to something and is truly stated, but neither necessarily nor usually ; as if, for example, while digging a hole for a plant one found a treasure. Then the finding of treasure is an accident to the man who is digging the hole ; for the one thing is not a necessary consequence or sequel of the other, nor does one usually find treasure while planting. And a cultured man might be white ; but since this 2 does not happen necessarily or usually, we call it an accident. Thus since there are attributes and subjects, and some attributes apply to their subjects only at a certain place and time, any attribute which applies to a subject, but not because it was a parti-

“ Acci  
 of “ at  
 bute.”

<sup>1 a</sup> ἦν ἢ νῦν ἢ ἐνταῦθα, συμβεβηκός ἐσται οὐδὲ δὴ  
 25 αἴτιον ὠρισμένον οὐδὲν τοῦ συμβεβηκότος ἀλλὰ  
 τὸ τυχόν τοῦτο δ' ἀόριστον. συνέβη τῷ εἰς Αἴγιαν  
 ἐλθεῖν, εἰ μὴ διὰ τοῦτο ἀφίκετο ὅπως ἐκεῖ ἔλθῃ,  
 ἀλλ' ὑπὸ χειμῶνος ἐξωσθεῖς ἢ ὑπὸ ληστῶν ληφθεῖς  
 γέγονε μὲν δὴ καὶ<sup>1</sup> ἐστι τὸ συμβεβηκός, ἀλλ' οὐχ  
 ἦ αὐτὸ ἀλλ' ἦ ἕτερον· ὁ γὰρ χειμῶν αἴτιος τοῦ μὴ  
 30 ὅπου ἔπλει ἐλθεῖν, τοῦτο δ' ἦν Αἴγινα. Λέγεται  
 δὲ καὶ ἄλλως συμβεβηκός, οἷον ὅσα ὑπάρχει ἐκάστω  
 καθ' αὐτὸ μὴ ἐν τῇ οὐσίᾳ ὄντα, οἷον τῷ τριγώνῳ  
 τὸ δύο ὀρθὰς ἔχειν. καὶ ταῦτα μὲν ἐνδέχεται  
 αἰδία εἶναι, ἐκείνων δὲ οὐδέν. λόγος δὲ τούτου ἐν  
 ἑτέροις.

<sup>1</sup> καὶ ΕΓ Asclepius: om. J: ἢ A<sup>b</sup> ἢ Alexander, Ross

cular subject or time or place, will be an accident. Nor is there any definite cause for an accident, but 3 only a chance, *i e* indefinite. cause. It was by accident that X went to Aegina if he arrived there, not because he intended to go there but because he was carried out of his course by a storm, or captured by pirates. The accident has happened or exists, but 4 in virtue not of itself but of something else; for it was the storm which was the cause of his coming to a place for which he was not sailing—*i e* Aegina.

“Accident” has also another sense,<sup>a</sup> namely, whatever belongs to each thing in virtue of itself, but is not in its essence; *e g* as having the sum of its angles equal to two right angles belongs to the triangle. Accidents of this kind may be eternal, but none of the former kind can be. There is an account of this elsewhere.<sup>b</sup>

<sup>a</sup> *i e* “property.”

<sup>b</sup> The reference is probably to the *Analytica Posteriora* 75 a 18, 39-41.

## Ε

I. Αἱ ἀρχαὶ καὶ τὰ αἷτια ζητεῖται τῶν ὄντων, δῆλον δὲ ὅτι ἦ ὄντα. ἔστι γάρ τι αἷτιον ὑγιείας καὶ εὐεξίας, καὶ τῶν μαθηματικῶν εἰσὶν ἀρχαὶ καὶ στοιχεῖα καὶ αἷτια, καὶ ὅλως δὲ πᾶσα ἐπιστήμη διανοητικὴ ἢ μετέχουσά τι διανοίας περὶ αἷτίας καὶ ἀρχάς ἐστιν ἢ ἀκριβεστέρας ἢ ἀπλουστέρας. ἀλλὰ πᾶσαι αὗται περὶ ὄν<sup>1</sup> τι καὶ γένος τι περιγραφάμεναι περὶ τούτου πραγματεύονται, ἀλλ' οὐχὶ περὶ ὄντος ἀπλῶς οὐδὲ ἦ ὄν, οὐδὲ τοῦ τί ἐστιν οὐθένε λόγον ποιοῦνται· ἀλλ' ἐκ τούτου αἱ μὲν αἰσθήσει ποιήσασαι αὐτὸ δῆλον, αἱ δ' ὑπόθεσιν λαβοῦσαι τὸ τί ἐστιν, οὕτω τὰ καθ' αὐτὰ ὑπάρχοντα τῷ γένει περὶ ὃ εἰσὶν ἀποδεικνύουσιν ἢ ἀναγκαιότερον ἢ μαλακώτερον· διόπερ φανερόν ὅτι οὐκ ἔστιν ἀπόδειξις οὐσίας οὐδὲ τοῦ τί ἐστιν ἐκ τῆς τοιαύτης ἐπαγωγῆς, ἀλλὰ τις ἄλλος τρόπος τῆς δηλώσεως. ὁμοίως δὲ οὐδ' εἰ ἔστιν ἢ μὴ ἔστι τὸ γένος περὶ ὃ πραγματεύονται οὐδὲν λέγουσι, διὰ τὸ τῆς αὐτῆς εἶναι διανοίας τό τε τί ἐστι δῆλον ποιεῖν καὶ εἰ ἔστιν. ἐπεὶ δὲ καὶ ἡ φυσικὴ ἐπιστήμη τυγχάνει οὐσα περὶ γένος τι τοῦ ὄντος (περὶ γὰρ τὴν τοιαύτην ἐστὶν οὐσίαν ἐν ἣ ἢ ἀρχὴ τῆς κινήσεως καὶ

<sup>1</sup> ἐν ΕΙΓ.

## BOOK VI

I. It is the principles and causes of the *things which are* that we are seeking; and clearly of the things which are *qua* being. There is a cause of health and physical fitness, and mathematics has principles and elements and causes; and in general every intellectual science or science which involves intellect deals with causes and principles, more or less exactly or simply considered. But all these sciences single out some existent thing or class, and concern themselves with that; not with Being unqualified, nor *qua* Being, nor do they give any account of the essence; but starting from it, some making it clear to perception, and others assuming it as a hypothesis, they demonstrate, more or less cogently, the essential attributes of the class with which they are dealing. Hence obviously there is no demonstration of substance or essence from this method of approach, but some other means of exhibiting it. And similarly they say nothing as to whether the class of objects with which they are concerned exists or not; because the demonstration of its essence and that of its existence belong to the same intellectual process. And since physical science also happens to deal with a genus of Being (for it deals with the sort of substance which contains in itself the principle of motion and rest), obviously

στάσεως ἐν αὐτῇ), δῆλον ὅτι οὔτε πρακτικὴ ἐστὶν οὔτε ποιητικὴ τῶν μὲν γὰρ ποιητῶν<sup>1</sup> ἐν τῷ ποιοῦντι ἢ ἀρχή, ἢ νοῦς ἢ τέχνη ἢ δύνάμις τις, τῶν δὲ πρακτῶν<sup>2</sup> ἐν τῷ πράττοντι ἢ προαίρεσις τὸ αὐτὸ γὰρ τὸ πρακτὸν καὶ τὸ προαιρετὸν ὥστε εἰ πᾶσα διάνοια ἢ πρακτικὴ ἢ ποιητικὴ ἢ θεωρητικὴ, ἢ φυσικὴ θεωρητικὴ τις ἂν εἴη, ἀλλὰ θεωρητικὴ περὶ τοιοῦτον ὃν ὁ ἐστὶ δυνατὸν κινεῖσθαι, καὶ περὶ οὐσίαν τὴν κατὰ τὸν λόγον ὡς ἐπὶ τὸ πολὺ ὡς οὐ<sup>3</sup> χωριστὴν μόνον. δεῖ δὲ τὸ τί ἦν εἶναι καὶ τὸν λόγον πῶς ἐστὶ μὴ λανθάνειν, ὡς ἄνευ γε τούτου τὸ ζητεῖν μηδὲν ἐστὶ ποιεῖν. Τῶν δ'<sup>4</sup> ὀριζομένων καὶ τῶν τί ἐστὶ τὰ μὲν οὕτως ὑπάρχει<sup>5</sup> ὡς τὸ σιμόν, τὰ δ' ὡς τὸ κοῖλον. διαφέρει δὲ ταῦτα ὅτι τὸ μὲν σιμόν συνειλημμένον ἐστὶ μετὰ τῆς ὕλης (ἐστὶ γὰρ τὸ<sup>6</sup> σιμόν κοιλῆ ρίς), ἢ δὲ κοιλότης ἄνευ ὕλης αἰσθητῆς. εἰ δὴ πάντα τὰ φυσικὰ ὁμοίως τῷ σιμῷ λέγονται, οἷον ρίς ὀφθαλμὸς πρόσωπον σὰρξ ὄστούνη, ὄλως ζῶον, φύλλον ρίζα φλοιός, ὄλως φυτόν (οὐθενὸς γὰρ ἄνευ κινήσεως ὁ λόγος αὐτῶν, ἀλλ' αἰεὶ ἔχει ὕλην), δῆλον πῶς δεῖ ἐν τοῖς φυσικοῖς τὸ τί ἐστὶ ζητεῖν καὶ ὀρίζεσθαι, καὶ διότι καὶ περὶ ψυχῆς ἐνίας θεωρῆσαι τοῦ φυσικοῦ, ὅση μὴ ἄνευ τῆς ὕλης ἐστίν.

Ἔστι μὲν οὖν ἢ φυσικὴ θεωρητικὴ τίς ἐστὶ, φανερόν ἐκ τούτων· ἀλλ' ἐστὶ καὶ ἢ μαθηματικὴ θεωρητικὴ· ἀλλ' εἰ ἀκινήτων καὶ χωριστῶν ἐστὶ, νῦν ἄδηλον, ὅτι μέντοι ἔνια μαθήματα ἢ ἀκίνητα

<sup>1</sup> ποιητῶν A<sup>b</sup>. ποιητικῶν.

<sup>2</sup> πρακτῶν EA<sup>b</sup> Alexander. πρακτικῶν.

<sup>3</sup> ὡς οὐ ET: οὐ.

<sup>4</sup> τῶν δ' E J Γ τῶν δὴ γρ. E· ἐστὶ δὲ τῶν A<sup>b</sup> Alexander.

<sup>5</sup> οὕτως ὑπάρχει om. A<sup>b</sup> Alexander (?).

<sup>6</sup> τὸ: τὸ μὲν A<sup>b</sup>.



it is neither a practical nor a productive science. For in the case of things produced the principle of motion (either mind or art or some kind of potency) is in the producer; and in the case of things done the will is the agent—for the thing done and the thing willed are the same. Thus if every intellectual activity is either practical or productive or speculative, physics will be a speculative science; but speculative about that kind of Being which can be moved, and about formulated substance for the most part only *qua* inseparable from matter. But we must not fail to observe *how* the essence and the formula exist, since without this our inquiry is ineffectual.

Now of things defined, *i e* of essences, some apply in the sense that “snub” does, and some in the sense that “concave” does. The difference is that “snub” is a combination of form with matter; because “the snub” is a concave *nose*, whereas concavity is independent of sensible matter. Now if all physical terms are used in the same sense as “snub”—*e g* nose, eye, face, flesh, bone, and in general animal; leaf, root, bark, and in general vegetable (for not one of these has a definition without motion; the definition invariably includes matter)—it is clear how we should look for and define the essence in physical things, and why it is the province of the physicist to study even some aspects of the soul, so far as it is not independent of matter.

It is obvious, then, from these considerations, that physics is a form of speculative science. And mathematics is also speculative; but it is not clear at present whether its objects are immutable and separable from matter; it is clear, however, that some

καὶ ἡ χωριστὰ θεωρεῖ, δῆλον. εἰ δέ τί ἐστιν αἰδιον καὶ ἀκίνητον καὶ χωριστόν, φανερόν ὅτι θεωρητικῆς τὸ γνῶναι οὐ μέντοι φυσικῆς γε (περὶ κινήτων γάρ τινων ἢ φυσικῆ), οὐδὲ μαθηματικῆς, ἀλλὰ προτέρας ἀμφοῖν. ἡ μὲν γὰρ φυσικὴ περὶ χωριστὰ<sup>1</sup> μὲν ἀλλ' οὐκ ἀκίνητα, τῆς δὲ μαθηματικῆς ἕνια περὶ ἀκίνητα μὲν οὐ χωριστὰ δ' ἴσως, ἀλλ' ὡς ἐν ὕλῃ· ἡ δὲ πρώτη καὶ περὶ χωριστὰ καὶ ἀκίνητα. ἀνάγκη δὲ πάντα μὲν τὰ αἷτια αἰδία εἶναι, μάλιστα δὲ ταῦτα· ταῦτα γὰρ αἷτια τοῖς φανεροῖς τῶν θείων. ὥστε τρεῖς ἂν εἶεν φιλοσοφίαι θεωρητικαί, μαθηματικὴ, φυσικὴ, θεολογικὴ (οὐ γὰρ ἄδηλον ὅτι, εἴ που τὸ θεῖον ὑπάρχει, ἐν τῇ τοιαύτῃ φύσει ὑπάρχει), καὶ τὴν τιμιωτάτην δεῖ περὶ τὸ τιμιώτατον γένος εἶναι. Αἱ μὲν οὖν θεωρητικαὶ τῶν ἄλλων ἐπιστημῶν αἰρετώτεραι, αὕτη δὲ τῶν θεωρητικῶν. ἀπορήσειε γὰρ ἂν τις πότερόν ποθ' ἡ πρώτη φιλοσοφία καθόλου ἐστίν, ἢ περὶ τι γένος καὶ φύσιν τινὰ μίαν. οὐ γὰρ ὁ αὐτὸς τρόπος οὐδ' ἐν ταῖς μαθηματικαῖς, ἀλλ' ἡ μὲν γεωμετρία καὶ ἀστρολογία περὶ τινα φύσιν εἰσίν, ἢ δὲ καθόλου πασῶν κοινή. εἰ μὲν οὖν μὴ ἔστι τις ἕτερα οὐσία παρὰ τὰς φύσει συνεστηκυίας, ἢ φυσικὴ ἂν εἴη πρώτη ἐπιστήμη· εἰ δ' ἔστι τις οὐσία ἀκίνητος, αὕτη προτέρα καὶ φιλοσοφία

<sup>1</sup> χωριστὰ Schwegler ἀχώριστα.

branches of mathematics study their objects *qua* immutable and *qua* separable from matter. Obviously it is the province of a speculative science to discover whether a thing is eternal and immutable and separable from matter; not, however, of physics (since physics deals with mutable objects) nor of mathematics, but of a science prior to both. For physics deals with things which exist separately but are not immutable; and some branches of mathematics deal with things which are immutable, but presumably not separable, but present in matter; but the primary science treats of things which are both separable and immutable. Now all causes must be eternal, but these especially: since they are the causes of what is visible of things divine. Hence there will be three speculative philosophies. mathematics, physics, and theology—since it is obvious that if the divine is present anywhere, it is present in this kind of entity; and also the most honourable science must deal with the most honourable class of subject.

The speculative sciences, then, are to be preferred to the other sciences, and “theology” to the other speculative sciences. One might indeed raise the question whether the primary philosophy is universal or deals with some one genus or entity; because even the mathematical sciences differ in this respect—geometry and astronomy deal with a particular kind of entity, whereas universal mathematics applies to all kinds alike. Then if there is not some other substance besides those which are naturally composed, physics will be the primary science; but if there is a substance which is immutable, the science which studies this will be prior to physics,

<sup>a</sup> πρώτη, καὶ καθόλου οὕτως ὅτι πρώτη καὶ περὶ τοῦ ὄντος ἢ ὄν, ταύτης ἂν εἴη θεωρῆσαι, καὶ τί ἐστὶ καὶ τὰ ὑπάρχοντα ἢ ὄν.

II Ἄλλ' ἐπεὶ τὸ ὄν τὸ ἀπλῶς λεγόμενον λέγεται πολλαχῶς, ὧν ἓν μὲν ἦν τὸ κατὰ συμβεβηκός, ἕτερον δὲ τὸ ὡς ἀληθές, καὶ τὸ μὴ ὄν ὡς τὸ ψεῦδος, παρὰ ταῦτα δ' ἐστὶ τὰ σχήματα τῆς κατηγορίας, οἷον τὸ μὲν τί, τὸ δὲ ποιόν, τὸ δὲ ποσόν, τὸ δὲ πού, τὸ δὲ ποτέ, καὶ εἴ τι ἄλλο σημαίνει τὸν τρόπον τοῦτον· ἐτι παρὰ ταῦτα πάντα τὸ δυνάμει καὶ ἐνεργείᾳ — ἐπεὶ δὴ<sup>1</sup> πολλαχῶς λέγεται τὸ ὄν, πρῶτον περὶ τοῦ κατὰ συμβεβηκός λεκτέον, ὅτι οὐδεμία ἐστὶ περὶ αὐτὸ θεωρία σημείον δὲ οὐδεμιᾶ γὰρ ἐπιστήμη ἐπιμελὲς περὶ αὐτοῦ οὔτε πρακτικῇ οὔτε ποιητικῇ οὔτε θεωρητικῇ. οὔτε γὰρ ὁ ποιῶν οἰκίαν ποιεῖ ὅσα συμβαίνει ἅμα τῇ οἰκίᾳ γιγνομένη· ἄπειρα γὰρ ἐστὶν· τοῖς μὲν γὰρ ἡδεῖαν τοῖς δὲ βλαβερὰν τοῖς δ' ὠφέλιμον οὐδὲν εἶναι κωλύει τὴν ποιηθεῖσαν, καὶ ἑτέραν ὡς εἰπεῖν πάντων τῶν ὄντων ὧν οὐθενός ἐστὶν ἢ οἰκοδομικῇ ποιητικῇ τὸν αὐτὸν δὲ τρόπον οὐδ' ὁ γεωμέτρης θεωρεῖ τὰ οὕτω συμβεβηκότα τοῖς σχήμασιν, οὐδ' εἰ ἕτερόν ἐστὶ τρίγωνον καὶ τρίγωνον δύο ὀρθὰς ἔχον. καὶ τοῦτο εὐλόγως συμπίπτει· ὥσπερ γὰρ ὄνομά τι<sup>2</sup> μόνον τὸ συμβεβηκός ἐστὶν διὸ Πλάτων τρόπον τινὰ οὐ κακῶς τὴν σοφιστικὴν περὶ τὸ μὴ ὄν ἔταξεν. εἰσὶ γὰρ οἱ τῶν σοφιστῶν λόγοι περὶ τὸ συμβεβηκός ὡς εἰπεῖν μάλιστα πάντων,

<sup>1</sup> ἐπεὶ δὲ A<sup>b</sup>.

<sup>2</sup> ὄνομά τι Alexander, Asclepius: ὄνοματι codd.

and will be primary philosophy, and universal in this sense, that it is primary. And it will be the province of this science to study Being *qua* Being; what it is, and what the attributes are which belong to it *qua* Being.

II But since the simple term "being" is used in various senses, of which we saw that one was *accidental*, and another *true* (not-being being used in the sense of "false"); and since besides these there are the categories, *e g* the "what." quality, quantity, place, time, and any other similar meanings; and further besides all these the *potential* and *actual* since the term "being" has various senses, it must first be said of what "is" accidentally, that there can be no speculation about it. This is shown by the fact that no science, whether practical, productive or speculative, concerns itself with it. The man who produces a house does not produce all the attributes which are accidental to the house in its construction; for they are infinite in number. There is no reason why the house so produced should not be agreeable to some, injurious to others, and beneficial to others, and different perhaps from every other existing thing; but the act of building is productive of none of these results. In the same way the geometrician does not study the accidental attributes of his figures, nor whether a triangle is different from a triangle the sum of whose angles is equal to two right angles. And this accords with what we should reasonably expect, because "accident" is only, as it were, a sort of name. Hence in a way Plato<sup>a</sup> was not far wrong in making sophistry deal with what is non-existent; because the sophists discuss the accident more, perhaps, than any other people—whether

<sup>b</sup> πότερον ἕτερον ἢ ταυτὸν μουσικὸν καὶ γραμματικόν,  
καὶ μουσικὸς Κορίσκος καὶ Κορίσκος, καὶ εἰ πᾶν  
ὃ ἂν ᾖ, μὴ αἰεὶ δέ, γέγονεν, ὥστ' εἰ μουσικὸς ὢν  
20 γραμματικὸς γέγονε, καὶ γραμματικὸς ὢν μου-  
σικὸς, καὶ ὅσοι δὴ ἄλλοι τοιοῦτοι τῶν λόγων εἰσίν·  
φαίνεται γὰρ τὸ συμβεβηκὸς ἐγγύς τι τοῦ μὴ  
ὄντος. δῆλον δὲ καὶ ἐκ τῶν τοιούτων λόγων·  
τῶν μὲν γὰρ ἄλλον τρόπον ὄντων ἔστι γένεσις καὶ  
φθορά, τῶν δὲ κατὰ συμβεβηκὸς οὐκ ἔστιν. ἀλλ'  
25 ὅμως λεκτέον ἔτι περὶ τοῦ συμβεβηκότος ἐφ'  
ὅσον ἐνδέχεται, τίς ἢ φύσις αὐτοῦ καὶ διὰ τίν'  
αἰτίαν ἐστίν· ἅμα γὰρ δῆλον ἴσως ἔσται καὶ διὰ  
τί ἐπιστήμη οὐκ ἔστιν αὐτοῦ. Ἐπεὶ οὖν ἐστὶν  
ἐν τοῖς οὔσι τὰ μὲν αἰεὶ ὡσαύτως ἔχοντα καὶ ἐξ  
ἀνάγκης, οὐ τῆς κατὰ τὸ βίαιον λεγομένης ἀλλ'  
10 ἣν λέγομεν τῷ μὴ ἐνδέχεσθαι ἄλλως, τὰ δ' ἐξ  
ἀνάγκης μὲν οὐκ ἔστιν οὐδ' αἰεὶ, ὡς δ' ἐπὶ τὸ  
πολύ, αὕτη ἀρχὴ καὶ αὕτη αἰτία ἐστὶ τοῦ εἶναι τὸ  
συμβεβηκὸς ὃ γὰρ ἂν ᾖ μῆτ' αἰεὶ μῆθ' ὡς ἐπὶ  
τὸ πολύ, τοῦτό φαμεν συμβεβηκὸς εἶναι. οἷον  
ἐπὶ κυνὶ ἂν χειμῶν γένηται καὶ ψῦχος, τοῦτο  
συμβῆναί φαμεν, ἀλλ' οὐκ ἂν πνίγος καὶ ἀλέα,

<sup>a</sup> i.e. able to read and write. The sophistic argument is given by Alexander as follows: A is grammatical; ∴ grammatical A = A. A is cultured; ∴ cultured A = A. ∴ Grammatical = cultured, and he who is grammatical must be cultured. But B, though grammatical, is not cultured. ∴ The grammatical is not the same as the cultured.

<sup>b</sup> If Coriscus is the same as cultured Coriscus, he is the same as cultured cultured Coriscus, and so *ad infinitum*. Cf. *Soph. Elench.* 173 a 34.

<sup>c</sup> If A, being cultured, has become grammatical, then being cultured he is grammatical. Then being grammatical he is cultured. But he has not always, being grammatical, been cultured. So if that which is but has not always been

“cultured” and “grammatical.”<sup>a</sup> and “cultured Coriscus” and “Coriscus.”<sup>b</sup> are the same or different; and whether everything that is, but has not always been, has come into being, so that if a man who is cultured has become grammatical, he has also, being grammatical, become cultured<sup>c</sup>; and all other such discussions. Indeed it seems that the accidental is something closely akin to the non-existent. This is clear too from such considerations as the following of things which *are* in other senses there is generation and destruction, but of things which *are* accidentally there is not<sup>d</sup>. Nevertheless we must state further, so far as it is possible, with regard to the accidental, what its nature is and through what cause it exists. At the same time it will doubtless also appear why there is no science of it.

Since, then, there are among existing things some which are invariable and of necessity (not necessity in the sense of compulsion,<sup>e</sup> but that by which we mean that it cannot be otherwise<sup>f</sup>), and some which are not necessarily so, nor always, but usually. this is the principle and this the cause of the accidental. For whatever is neither always nor usually so, we call an accident. *E.g.*, if in the dog-days<sup>g</sup> we have storm and cold, we call it an accident; but not if we have

must have come to be, then being grammatical he has become cultured, *i.e.*, he must have been both grammatical before he was cultured and cultured before he was grammatical, which is absurd (Ross).

<sup>a</sup> *i.e.*, the process of becoming or change takes place in the subject—the *man*, who is accidentally cultured, becomes grammatical, and when the process is complete “the cultured” is accidentally grammatical, but it does not become so. <sup>e</sup> *Cf.* V. v. 2. <sup>f</sup> *Ibid.* § 3.

<sup>g</sup> The period from July 3 to August 11, during which the dog-star Sirius rises and sets with the sun.

<sup>1 b</sup>  
<sup>35</sup> ὅτι τὸ μὲν αἰεὶ ἢ ὡς ἐπὶ τὸ πολὺ, τὸ δ' οὐ καὶ τὸν  
 ἄνθρωπον λευκὸν εἶναι συμβέβηκεν (οὔτε γὰρ αἰεὶ  
 οὔθ' ὡς ἐπὶ τὸ πολὺ), ζῶον δ' οὐ κατὰ συμβεβη-  
<sup>a</sup> κός καὶ τὸ ὑγιάζειν δὲ τὸν οἰκοδόμον<sup>1</sup> κατὰ<sup>2</sup>  
 συμβεβηκός, ὅτι οὐ πέφυκε τοῦτο ποιεῖν οἰκοδόμος  
 ἀλλ' ἰατρός, ἀλλὰ συνέβη ἰατρὸν εἶναι τὸν οἰκο-  
 δόμον. καὶ ὀψοποιὸς ἡδονῆς στοχαζόμενος ποιή-  
 σειεν ἄν τι ὑγιεινόν, ἀλλ' οὐ κατὰ τὴν ὀψοποιη-  
<sup>5</sup> τικὴν· διὸ συνέβη, φαμέν, καὶ ἔστιν ὡς ποιεῖ,  
 ἀπλῶς δ' οὐ. τῶν μὲν γὰρ ἄλλων<sup>3</sup> [ἐνίστε]<sup>4</sup>  
 δυνάμεις εἰσὶν αἰ<sup>5</sup> ποιητικαί, τῶν δ' οὐδεμία  
 τέχνη οὐδὲ δύναμις ὠρισμένη· τῶν γὰρ κατὰ  
 συμβεβηκός ὄντων ἢ γιγνομένων καὶ τὸ αἰτιὸν  
 ἔστι κατὰ συμβεβηκός ὥστ' ἐπεὶ<sup>6</sup> οὐ πάντα ἔστιν  
 ἐξ ἀνάγκης καὶ αἰεὶ ἢ ὄντα ἢ γιγνόμενα, ἀλλὰ τὰ  
<sup>10</sup> πλεῖστα ὡς ἐπὶ τὸ πολὺ, ἀνάγκη εἶναι τὸ κατὰ  
 συμβεβηκός ὄν· οἷον οὔτ' αἰεὶ οὔθ' ὡς ἐπὶ τὸ πολὺ  
 ὁ λευκὸς μουσικὸς ἔστιν, ἐπεὶ δὲ γίνεταί ποτε,  
 κατὰ συμβεβηκός ἔσται· εἰ δὲ μή, πάντ' ἔσται  
 ἐξ ἀνάγκης ὥστε ἢ ὕλη ἔσται αἰτία ἢ ἐνδεχομένη  
<sup>15</sup> παρὰ τὸ ὡς ἐπὶ τὸ πολὺ ἄλλως τοῦ συμβεβηκόςτος  
 Ἄρχῃν δὲ τῆνδὲ ληπτέον, πότερον οὐδέν ἔστιν  
 οὔτ' αἰεὶ οὔθ' ὡς ἐπὶ τὸ πολὺ, ἢ τοῦτο ἀδύνατον.  
 ἔστιν ἄρα τι παρὰ ταῦτα, τὸ ὁπότερ' ἔτυχε  
 καὶ κατὰ συμβεβηκός. ἀλλὰ πότερον τὸ ὡς ἐπὶ  
 τὸ πολὺ, τὸ δ' αἰεὶ οὐθενὶ ὑπάρχει, ἢ ἔστιν ἅττα  
 αἰδία; περὶ μὲν οὖν τούτων ὕστερον σκεπτέον,

<sup>1</sup> τὸ . . . οἰκοδόμον: τὸ τὸν οἰκοδόμον ὑγίαν ποιῆσαι EJ Asclepius.

<sup>2</sup> κατὰ om. EJ.

<sup>3</sup> ἄλλαι A<sup>b</sup>J.

<sup>4</sup> secl. Ross, om. fort. comm.

<sup>5</sup> αἰ scripsi: αἰ.

<sup>6</sup> ἐπειδὴ EJ.



stifling and intense heat, because the latter always or usually comes at this time, but not the former. It is accidental for a man to be white (since this is neither always nor usually so), but it is not accidental for him to be an animal. It is by accident that a builder restores to health, because it is not a builder but a doctor who naturally does this: but the builder happened accidentally to be a doctor. A confectioner, aiming at producing enjoyment, may produce something health-giving, but not in virtue of his confectioner's art. Hence, we say, it was accidental: and he produces it in a sense, but not in an unqualified sense. For there are potencies which produce other things, but there is no art or determinate potency of accidents, since the cause of things which exist or come to be by accident is also accidental. Hence, since not everything is or comes to be of necessity and always, but most things happen usually, the accidental must exist. *E.g.* the white man is neither always nor usually cultured; but since this sometimes happens, it must be regarded as accidental. Otherwise, everything must be regarded as of necessity. Therefore the cause of the accidental is the matter, which admits of variation from the usual. 8 9 10 11

We must take this as our starting-point: Is everything either "always" or "usually"? This is surely impossible. Then besides these alternatives there is something else: the fortuitous and accidental. But again, are things *usually* so, but nothing *always*, or are there things which are eternal? These questions must be inquired into later<sup>a</sup>; but 12

<sup>a</sup> Cf. XII. vi-viii.

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<sup>a</sup>  
 20 ὅτι δ' ἐπιστήμη οὐκ ἔστι τοῦ συμβεβηκότος φανερόν· ἐπιστήμη μὲν γὰρ πᾶσα ἢ τοῦ ἀεὶ ἢ τοῦ ὡς ἐπὶ τὸ πολὺ. πῶς γὰρ ἢ μαθήσεται ἢ διδάξει ἄλλον; δεῖ γὰρ ὠρίσθαι ἢ τῷ ἀεὶ ἢ τῷ ὡς ἐπὶ τὸ πολὺ, οἷον ὅτι ὠφέλιμον τὸ μελίκρατον τῷ πυρέττοντι ὡς ἐπὶ τὸ πολὺ· τὸ δὲ παρὰ τοῦτο  
 25 οὐχ ἔξει λέγειν πότε οὐ, οἷον νουμηνία· ἢ γὰρ ἀεὶ ἢ ὡς ἐπὶ τὸ πολὺ καὶ τὸ τῇ νουμηνία· τὸ δὲ συμβεβηκός ἐστι παρὰ ταῦτα. τί μὲν οὖν ἐστὶ τὸ συμβεβηκός καὶ διὰ τίν' αἰτίαν, καὶ ὅτι ἐπιστήμη οὐκ ἔστιν αὐτοῦ, εἴρηται.

III. Ὅτι δ' εἰσὶν ἀρχαὶ καὶ αἷτια γεννητὰ καὶ  
 10 φθαρτὰ ἄνευ τοῦ γίνεσθαι καὶ φθειρεσθαι, φανερόν. εἰ γὰρ μὴ τοῦτ', ἐξ ἀνάγκης πάντ' ἔσται, εἰ τοῦ γιγνομένου καὶ φθειρομένου μὴ κατὰ συμβεβηκός αἰτιόν τι ἀνάγκη εἶναι πότερον γὰρ ἔσται τοδὶ ἢ οὐ; ἐάν γε τοδὶ γένηται· εἰ δὲ μὴ, οὐ. τοῦτο δὲ ἐάν<sup>1</sup> ἄλλο. καὶ οὕτω δῆλον ὅτι ἀεὶ  
 b χρόνου ἀφαιρουμένου ἀπὸ πεπερασμένου χρόνου ἤξει ἐπὶ τὸ νῦν· ὥστε ὀδὶ ἀποθανεῖται νόσω ἢ<sup>2</sup> βία, ἐάν γε ἐξέλθῃ· τοῦτο δὲ ἐάν διψήσῃ· τοῦτο δὲ ἐάν ἄλλο· καὶ οὕτως ἤξει εἰς ὃ νῦν ὑπάρχει, ἢ εἰς τῶν γεγονότων τι. οἷον ἐάν διψήσῃ· τοῦτο δ' εἰ ἐσθίει  
 5 δριμέα· τοῦτο δ' ἦτοι ὑπάρχει ἢ οὐ· ὥστ' ἐξ ἀνάγκης ἀποθανεῖται ἢ οὐκ ἀποθανεῖται. ὁμοίως δὲ κἂν ὑπερπηδήσῃ τις εἰς τὰ γενόμενα, ὃ αὐτὸς λόγος· ἥδη γὰρ ὑπάρχει τοῦτο ἐν τινι,

<sup>1</sup> ἐάν om. EJ Asclepius.

<sup>2</sup> νόσω ἢ secl. Ross.

<sup>a</sup> On the analogy of accidental events; see II. 5.

it is clear that there is no science of the accidental—because all scientific knowledge is of that which is *always* or *usually* so. How else indeed can one learn it or teach it to another? For a fact must be defined by being so always or usually; *e.g.*, honey-water is usually beneficial in case of fever. But science will not be able to state the exception to the rule—when it is not beneficial—*e.g.* at the new moon, because that which happens at the new moon also happens either always or usually; but the accidental is contrary to this. We have now explained the nature and cause of the accidental, and that there is no science of it.

III. It is obvious that there are principles and causes which are generable and destructible apart from the actual processes of generation and destruction<sup>a</sup>; for if this is not true, everything will be of necessity—that is, if there must necessarily be some cause, other than accidental, of that which is generated and destroyed. Will A be, or not? Yes, if B happens; otherwise not. And B will happen if C does. It is clear that in this way, as time is continually subtracted from a limited period, we shall come to the present. Accordingly So-and-so will die by disease or violence if he goes out; and this if he gets thirsty; and this if something else happens; and thus we shall come to what is the case now, or to something which has already happened. *E.g.* “if he is thirsty”; this will happen if he is eating pungent food, and this is either the case or not. Thus of necessity he will either die or not die. And similarly if one jumps over to the past, the principle is the same; for this—I mean that which has just happened—is already present in something. Every-

1027 b

λέγω δὲ τὸ γεγονός· ἐξ ἀνάγκης ἄρα πάντα ἔσται  
 τὰ ἐσόμενα, οἷον τὸ ἀποθανεῖν τὸν ζῶντα· ἤδη γάρ  
 10 τι γέγονεν, οἷον τὰ ἐναντία ἐν τῷ αὐτῷ σώματι·  
 ἀλλ' εἰ νόσω ἢ βία, οὐπω, ἀλλὰ ἐὰν τοδὶ γένηται.  
 δῆλον ἄρα ὅτι μέχρι τινὸς βαδίζει ἀρχῆς, αὕτη δ'  
 οὐκέτι εἰς ἄλλο. ἔσται οὖν ἡ τοῦ ὁπότερ' ἔτυχεν  
 αὕτη, καὶ αἴτιον τῆς γενέσεως αὐτῆς ἄλλο οὐθέν.  
 ἀλλ' εἰς ἀρχὴν ποίαν καὶ αἴτιον ποῖον ἢ ἀναγωγῆ  
 15 ἢ τοιαύτη, πότερον ὡς εἰς ὕλην ἢ ὡς εἰς τὸ οὐ  
 ἔνεκα ἢ ὡς εἰς τὸ κινήσαν, μάλιστα σκεπτέον

IV. Περὶ μὲν οὖν τοῦ κατὰ συμβεβηκὸς ὄντος  
 ἀφείσθω· διώριστα γὰρ ἱκανῶς· τὸ δὲ ὡς ἀληθὲς  
 ὄν, καὶ μὴ ὄν ὡς ψεῦδος, ἐπειδὴ παρὰ<sup>1</sup> σύνθεσιν  
 20 ἔστι καὶ διαίρεσιν, τὸ δὲ σύνολον περὶ μερισμὸν  
 ἀντιφάσεως (τὸ μὲν γὰρ ἀληθὲς τὴν κατάφασιν  
 ἐπὶ τῷ συγκειμένῳ ἔχει, τὴν δ' ἀπόφασιν ἐπὶ τῷ  
 διηρημένῳ, τὸ δὲ ψεῦδος τούτου τοῦ μερισμοῦ  
 τὴν ἀντίφασιν· πῶς δὲ τὸ ἅμα ἢ τὸ χωρὶς νοεῖν  
 συμβαίνει, ἄλλος λόγος λέγω δὲ τὸ ἅμα καὶ τὸ  
 25 χωρὶς ὥστε μὴ τὸ ἐφεξῆς ἀλλ' ἐν τι γίνεσθαι).  
 οὐ γάρ ἐστι τὸ ψεῦδος καὶ τὸ ἀληθὲς ἐν τοῖς  
 πράγμασιν, οἷον τὸ μὲν ἀγαθὸν ἀληθές, τὸ δὲ  
 κακὸν εὐθὺς ψεῦδος, ἀλλ' ἐν διανοίᾳ περὶ δὲ τὰ  
 ἀπλᾶ καὶ τὰ τί ἐστίν οὐδ' ἐν τῇ διανοίᾳ—ὅσα  
 μὲν οὖν δεῖ θεωρῆσαι περὶ τὸ οὕτως ὄν καὶ μὴ  
 30 ὄν, ὕστερον ἐπισκεπτέον. ἐπεὶ δὲ ἡ συμπλοκὴ  
 ἔστιν καὶ ἡ διαίρεσις ἐν διανοίᾳ ἀλλ' οὐκ ἐν τοῖς  
 πράγμασι, τὸ δ' οὕτως ὄν ἕτερον ὄν τῶν κυρίως

<sup>1</sup> περὶ recc.

<sup>a</sup> sc., "or not as a unity but as a succession" (this is separating in thought).

thing, then, which is to be, will be of necessity; e.g., he who is alive must die—for some stage of the process has been reached already. e.g., the contraries are present in the same body—but whether by disease or violence is not yet determined; it depends upon whether so-and-so happens. Clearly, then, the series goes back to some starting-point, which does not go back to something else. This, therefore, will be the starting-point of the fortuitous, and nothing else is the cause of its generation. But to what sort of starting-point and cause this process of tracing back leads, whether to a material or final or moving cause, is a question for careful consideration.

IV So much, then, for the accidental sense of “being”; we have defined it sufficiently. As for “being” *qua* truth, and “not-being” *qua* falsity, since they depend upon combination and separation, and taken together are concerned with the arrangement of the parts of a contradiction (since the true has affirmation when the subject and predicate are combined, and negation where they are divided; but the false has the contrary arrangement. How it happens that we combine or separate in thought is another question. By “combining or separating in thought” I mean thinking them not as a succession but as a unity<sup>a</sup>); for “falsity” and “truth” are not in *things*—the good, for example, being true, and the bad false—but in *thought*; and with regard to simple concepts and essences there is no truth or falsity even in thought;—what points we must study in connexion with being and not-being in this sense, we must consider later. But since the combination and separation exists in thought and not in things, and this sense of “being” is different from the proper

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- <sup>7 b</sup> (ἢ γὰρ τὸ τί ἐστὶν ἢ ὅτι ποιὸν ἢ ὅτι ποσὸν ἢ εἴ τι ἄλλο συνάπτει ἢ ἀφαιρεῖ ἢ διάνοια), τὸ μὲν ὡς συμβεβηκὸς καὶ τὸ ὡς ἀληθὲς ὄν ἀφετέον· τὸ
- <sup>3 a</sup> γὰρ αἴτιον τοῦ μὲν ἀόριστον, τοῦ δὲ τῆς διανοίας τι πάθος, καὶ ἀμφοτέρω περὶ τὸ λοιπὸν γένος τοῦ ὄντος, καὶ οὐκ ἔξω δηλοῦσιν οὐσάν τινα φύσιν τοῦ ὄντος· διὸ ταῦτα μὲν ἀφείσθω, σκεπτέον δὲ τοῦ ὄντος αὐτοῦ τὰ αἴτια καὶ τὰς ἀρχὰς ἧ ὄν.
- <sup>5</sup> [φανερὸν δ' ἐν οἷς διωρισάμεθα περὶ τοῦ ποσαχῶς λέγεται ἕκαστον, ὅτι πολλαχῶς λέγεται τὸ ὄν]<sup>1</sup>

<sup>1</sup> φανερὸν . . . ὅν damnant Christ.

METAPHYSICS, VI. IV. 3-4

senses (since thought attaches or detaches essence or quality or quantity or some other category). we may dismiss the accidental and real senses of "being" For the cause of the one is indeterminate, 4 and of the other an affection of thought ; and both are connected with the remaining genus of "being," and do not indicate any objective reality Let us therefore dismiss them, and consider the causes and principles of Being itself *qua* Being. [We have made it clear in our distinction of the number of senses in which each term is used that "being" has several senses ]<sup>a</sup>

<sup>a</sup> This sentence is almost certainly a later and clumsy addition to show the connexion with the following book

3 a

10 I. Τὸ ὄν λέγεται πολλαχῶς, καθάπερ διειλόμεθα  
 πρότερον ἐν τοῖς περὶ τοῦ ποσαχῶς σημαίνει  
 γὰρ τὸ μὲν τί ἐστί καὶ τόδε τι, τὸ δὲ<sup>1</sup> ποιὸν ἢ  
 ποσὸν ἢ τῶν ἄλλων ἕκαστον τῶν οὕτω κατηγο-  
 ρουμένων. τοσαυταχῶς δὲ λεγομένου τοῦ ὄντος  
 φανερόν ὅτι τούτων πρῶτον ὄν τὸ τί ἐστίν, ὅπερ  
 15 σημαίνει τὴν οὐσίαν· ὅταν μὲν γὰρ εἴπωμεν ποιὸν  
 τι τόδε, ἢ ἀγαθὸν λέγομεν ἢ κακόν, ἀλλ' οὐ  
 τρίπηχυ ἢ ἄνθρωπον· ὅταν δὲ τί ἐστίν, οὐ λευκὸν  
 οὐδὲ θερμὸν οὐδὲ τρίπηχυ, ἀλλὰ ἄνθρωπον ἢ θεόν.  
 τὰ δ' ἄλλα λέγεται ὄντα τῷ τοῦ οὕτως ὄντος τὰ μὲν  
 ποσότητες εἶναι, τὰ δὲ ποιότητες,<sup>2</sup> τὰ δὲ πάθη, τὰ  
 20 δὲ ἄλλο τι τοιοῦτον Διὸ καὶ ἀπορήσειέ τις  
 πρότερον τὸ βαδίζειν καὶ τὸ ὑγιαίνειν καὶ τὸ καθ-  
 ἦσθαι ἕκαστον αὐτῶν ὄν σημαίνει,<sup>3</sup> ὁμοίως δὲ καὶ ἐπὶ  
 τῶν ἄλλων ὁτουοῦν τῶν τοιούτων· οὐδὲν γὰρ αὐτῶν  
 ἐστὶν οὔτε καθ' αὐτὸ πεφυκὸς οὔτε χωρίζεσθαι  
 δυνατὸν τῆς οὐσίας, ἀλλὰ μᾶλλον, εἴπερ, τὸ βαδίζον  
 25 τῶν ὄντων τι<sup>4</sup> καὶ τὸ καθήμενον καὶ τὸ ὑγιαῖνον.  
 ταῦτα δὲ μᾶλλον φαίνεται ὄντα, διότι ἐστὶ τι τὸ

<sup>1</sup> δὲ ὅτι EJT.<sup>2</sup> ποσότητας . . . ποιότητας EJ.<sup>3</sup> σημαίνει A<sup>b</sup>· ἢ μὴ ὄν.<sup>4</sup> τι om. A<sup>b</sup> Alexander.



## BOOK VII

I The term "being" has several senses, which we have classified in our discussion<sup>a</sup> of the number of senses in which terms are used. It denotes first the "*what*" of a thing, *i.e.* the individuality: and then the quality or quantity or any other such category. Now of all these senses which "being" has, the primary sense is clearly the "what," which denotes the *substance* (because when we describe the quality of a particular thing we say that it is "good" or "bad," and not "five feet high" or "a man"; but when we describe *what* it is, we say not that it is "white" or "hot" or "five feet high," but that it is "a man" or "a god"), and all other things are said to "be" because they are either quantities or qualities or affections or some other such thing.

Hence one might raise the question whether the terms "to walk" and "to be well" and "to sit" signify each of these things as "being," or not; and similarly in the case of any other such terms; for not one of them by nature has an independent existence or can be separated from its substance. Rather, if anything it is the *thing* which walks or sits or is well that is existent. The reason why these things are more truly existent is because their subject

<sup>a</sup> V. vii

<sup>3 a</sup> ὑποκείμενον αὐτοῖς ὠρισμένον· τοῦτο δ' ἐστὶν ἡ οὐσία καὶ τὸ καθ' ἕκαστον, ὅπερ ἐμφαίνεται ἐν τῇ κατηγορίᾳ τῇ τοιαύτῃ τὸ ἀγαθὸν γὰρ ἢ τὸ καθήμενον οὐκ ἄνευ τούτου λέγεται. δῆλον οὖν ὅτι διὰ  
<sup>30</sup> ταύτην κακείνων ἕκαστον ἐστὶν, ὥστε τὸ πρῶτως ὄν καὶ οὐ τί ὄν ἀλλ' ὄν ἀπλῶς ἢ οὐσία ἂν εἴη Πολλαχῶς μὲν οὖν λέγεται τὸ πρῶτον ὅμως δὲ πάντως<sup>1</sup> ἢ οὐσία πρῶτον καὶ λόγῳ καὶ γνώσει καὶ χρόνῳ. τῶν μὲν γὰρ ἄλλων κατηγορημάτων οὐθέν χωριστόν, αὕτη δὲ μόνη· καὶ τῷ λόγῳ δὲ τοῦτο πρῶτον· ἀνάγκη γὰρ ἐν τῷ ἐκάστου λόγῳ τὸν τῆς οὐσίας ἐνυπάρχειν· καὶ εἰδέναι δὲ<sup>2</sup> τότ' οἴομεθα ἕκαστον μάλιστα, ὅταν τί ἐστὶν ὁ ἄνθρωπος γινώμεν ἢ τὸ  
<sup>b</sup> πῦρ, μᾶλλον ἢ τὸ ποιὸν ἢ τὸ ποσὸν ἢ τὸ πού, ἐπεὶ καὶ αὐτῶν τούτων τότε ἕκαστον ἴσμεν ὅταν τί ἐστὶ τὸ ποσὸν ἢ τὸ ποιὸν γινώμεν. καὶ δὴ καὶ τὸ πάλα τε καὶ νῦν καὶ αἰεὶ ζητούμενον καὶ αἰεὶ ἀπορούμενον, τί τὸ ὄν, τοῦτό ἐστι, τίς ἢ οὐσία· τοῦτο γὰρ οἱ μὲν  
<sup>5</sup> ἐν εἶναί φασιν, οἱ δὲ πλείω ἢ ἐν, καὶ οἱ μὲν πεπερασμένα, οἱ δὲ ἄπειρα· διὸ καὶ ἡμῖν καὶ μάλιστα καὶ πρῶτον καὶ μόνον ὡς εἰπεῖν περὶ τοῦ οὕτως ὄντος θεωρητέον τί ἐστὶν.

II. Δοκεῖ δ' ἡ οὐσία ὑπάρχειν φανερώτατα μὲν τοῖς σώμασιν· διὸ τὰ τε ζῶα καὶ τὰ φυτὰ καὶ τὰ μόρια  
<sup>10</sup> αὐτῶν οὐσίας εἶναί φασιν, καὶ τὰ φυσικὰ σώματα, οἶον πῦρ καὶ ὕδωρ καὶ γῆν καὶ τῶν τοιούτων ἕκαστον, καὶ ὅσα ἢ μόρια τούτων ἢ ἐκ τούτων ἐστίν, ἢ μορίων ἢ πάντων, οἶον ὁ τε οὐρανὸς καὶ τὰ μόρια

<sup>1</sup> πάντως A<sup>b</sup> γρ E: πάντων.

<sup>2</sup> δὲ om. A<sup>b</sup>.

<sup>a</sup> The Milesians and Eleatics.

<sup>b</sup> The Pythagoreans and Empedocles

<sup>c</sup> Anaxagoras and the Atomists.

is something definite; i.e. the substance and the individual, which is clearly implied in a designation of this kind, since apart from it we cannot speak of "the good" or "the sitting." Clearly then it is by reason of the substance that each of the things referred to exists. Hence that which is primarily, 5 not in a qualified sense but absolutely, will be substance.

Now "primary" has several meanings: but nevertheless substance is primary in all senses, both in definition and in knowledge and in time. For none of the other categories can exist separately, but substance alone; and it is primary also in definition, 6 because in the formula of each thing the formula of substance must be inherent; and we assume that we know each particular thing most truly when we know *what* "man" or "fire" is—rather than its quality or quantity or position, because we know each of these points too when we know *what* the quantity or quality is. Indeed, the question which 7 was raised long ago, is still and always will be, and which always baffles us—"What is Being?"—is in other words "What is substance?" Some say that it is one<sup>a</sup>; others, more than one; some, finite<sup>b</sup>; others, infinite.<sup>c</sup> And so for us too our chief and primary and practically our only concern is to investigate the nature of "being" in the sense of substance. S. b-t line  
PRIMARY  
all sense  
the word  
  
Hence s  
stance i  
the man  
subject  
our inq

II Substance is thought to be present most obviously in bodies. Hence we call animals and plants and their parts substances, and also natural bodies, such as fire, water, earth, etc., and all things which are parts of these or composed of these, either of parts of them or of their totality; e.g. the visible Differen  
views a  
substan

αὐτοῦ, ἄστροι καὶ σελήνη καὶ ἥλιος πότερον δὲ αὐταὶ μόναι οὐσίαι εἰσὶν ἢ καὶ ἄλλαι, ἢ τούτων  
 15 τινὲς ἢ καὶ ἄλλαι,<sup>1</sup> ἢ τούτων μὲν οὐθὲν ἕτεροι δέ τινες, σκεπτέον δοκεῖ δὲ τισὶ τὰ τοῦ σώματος πέρατα, οἷον ἐπιφάνεια καὶ γραμμὴ καὶ στιγμή καὶ μονάς, εἶναι οὐσίαι, καὶ μᾶλλον ἢ τὸ σῶμα καὶ τὸ στερεόν. ἔτι παρὰ τὰ αἰσθητὰ οἱ μὲν οὐκ οἴονται εἶναι οὐδὲν τοιοῦτον, οἱ δὲ πλείω καὶ  
 20 μᾶλλον ὄντα αἰδία, ὥσπερ Πλάτων τά τε εἶδη καὶ τὰ μαθηματικὰ δύο οὐσίας, τρίτην δὲ τὴν τῶν αἰσθητῶν σωμάτων οὐσίαν, Σπεύσιππος δὲ καὶ πλείους οὐσίας ἀπὸ τοῦ ἐνὸς ἀρξάμενος, καὶ ἀρχὰς ἐκάστης οὐσίας ἄλλην μὲν ἀριθμῶν, ἄλλην δὲ μεγεθῶν, ἔπειτα ψυχῆς· καὶ τοῦτον δὴ τὸν τρόπον  
 25 ἐπεκτείνει τὰς οὐσίας. ἔνιοι δὲ τὰ μὲν εἶδη καὶ τοὺς ἀριθμοὺς τὴν αὐτὴν ἔχειν φασὶ φύσιν, τὰ δὲ ἄλλα ἐχόμενα, γραμμὰς καὶ ἐπίπεδα, μέχρι πρὸς τὴν τοῦ οὐρανοῦ οὐσίαν καὶ τὰ αἰσθητὰ. περὶ δὲ τούτων τί λέγεται καλῶς ἢ μὴ καλῶς, καὶ τινες εἰσὶν οὐσίαι, καὶ πότερον εἰσὶ τινες παρὰ τὰς αἰσθητὰς  
 30 ἢ οὐκ εἰσὶ, καὶ αὐταὶ πῶς εἰσὶ, καὶ πότερόν ἐστι τις χωριστὴ οὐσία, καὶ διὰ τί καὶ πῶς, ἢ οὐδεμία παρὰ τὰς αἰσθητὰς, σκεπτέον, ὑποτυπωσαμένοις τὴν οὐσίαν πρῶτον τί ἐστίν.

III. Λέγεται δ' ἡ οὐσία, εἰ μὴ πλεοναχῶς, ἀλλ' ἐν τέτταρσί γε μάλιστα· καὶ γὰρ τὸ τί ἦν εἶναι καὶ τὸ  
 35 καθόλου καὶ τὸ γένος οὐσία δοκεῖ εἶναι ἐκάστου,

<sup>1</sup> ἢ τούτων τινὲς ἢ καὶ ἄλλαι T: ἢ . . . ἄλλων EJ Asclepius. ἢ τούτων τινὲς καὶ ἄλλων A<sup>b</sup>. om. Γ Alexander.

<sup>a</sup> The Pythagoreans

<sup>b</sup> The pre-Socratics.

<sup>c</sup> Plato's nephew and successor as head of the Academy.

<sup>d</sup> The followers of Xenocrates, successor to Speusippus.

universe and its parts, the stars and moon and sun. We must consider whether (a) these are the only 2 substances, or (b) these and some others, or (c) some of these, or (d) some of these and some others, or (e) none of these, but certain others. Some <sup>a</sup> hold that the bounds of body—*i. e.* the surface, line, point and unit—are substances, and in a truer sense than body or the solid. Again, some <sup>b</sup> believe that there is 3 nothing of this kind besides sensible things, while others believe in eternal entities more numerous and more real than sensible things. Thus Plato posited the Forms and the objects of mathematics as two kinds of substance, and as a third the substance of 4 sensible bodies; and Speusippus <sup>c</sup> assumed still more 4 kinds of substances, starting with “the One,” and positing principles for each kind. one for numbers, another for magnitudes, and then another for the soul. In this way he multiplies the kinds of substance. Some <sup>d</sup> again hold that the Forms and numbers have the same nature, and that other things—lines and planes—are dependent upon them; and so on back to the substance of the visible universe and sensible things. We must consider, then, with 5 regard to these matters, which of the views expressed is right and which wrong; and what things are substances, and whether there are any substances besides the sensible substances, or not; and how sensible substances exist; and whether there is any separable substance (and if so, why and how) or no substance besides the sensible ones. We must first give a rough sketch of what substance is.

III. The term “substance” is used, if not in more, <sup>The</sup> at least in four principal cases; for both the essence <sup>“soul”</sup> and the universal and the genus are held to be <sup>is of</sup> to <sup>e</sup>

28 b

καὶ τέταρτον τούτων τὸ ὑποκείμενον. τὸ δ' ὑπο-  
 κείμενόν ἐστι καθ' οὗ τὰ ἄλλα λέγεται, ἐκείνο δὲ  
 19 a αὐτὸ μηκέτι καθ' ἄλλον· διὸ πρῶτον περὶ τούτου  
 διοριστέον μάλιστα γὰρ δοκεῖ εἶναι οὐσία τὸ ὑπο-  
 κείμενον πρῶτον. Τοιοῦτον δὲ τρόπον μὲν τινα  
 ἢ ὕλη λέγεται, ἄλλον δὲ τρόπον ἢ μορφή, τρίτον  
 δὲ τὸ ἐκ τούτων· λέγω δὲ τὴν μὲν ὕλην οἶον τὸν  
 5 χαλκόν, τὴν δὲ μορφήν τὸ σχῆμα τῆς ιδέας, τὸ δ'  
 ἐκ τούτων τὸν ἀνδριάντα τὸ σύνολον· ὥστε εἰ τὸ  
 εἶδος τῆς ὕλης πρότερον καὶ μᾶλλον ὄν, καὶ τοῦ  
 ἐξ ἀμφοῖν πρότερον ἔσται διὰ τὸν αὐτὸν λόγον.

Νῦν μὲν οὖν τύπῳ εἴρηται τί ποτ' ἐστὶν ἡ οὐσία,  
 ὅτι τὸ μὴ καθ' ὑποκειμένου ἀλλὰ καθ' οὗ τὰ ἄλλα  
 10 δεῖ δὲ μὴ μόνον οὕτως· οὐ γὰρ ἰκανόν αὐτό τε γὰρ  
 τοῦτο ἄδηλον, καὶ ἔτι ἡ ὕλη οὐσία γίγνεται εἰ  
 γὰρ μὴ αὕτη οὐσία, τίς ἐστὶν ἄλλη διαφεύγει  
 περιαιρουμένων γὰρ τῶν ἄλλων οὐ φαίνεται οὐδὲν  
 ὑπομένον. τὰ μὲν γὰρ ἄλλα τῶν σωμάτων πάθη  
 καὶ ποιήματα καὶ δυνάμεις, τὸ δὲ μῆκος καὶ  
 15 πλάτος καὶ βάθος ποσότητές τινες ἀλλ' οὐκ οὐσῖαι·  
 τὸ γὰρ ποσὸν οὐκ οὐσία, ἀλλὰ μᾶλλον ὧ ὑπάρχει  
 ταῦτα πρῶτῳ, ἐκείνό ἐστὶν οὐσία.<sup>1</sup> ἀλλὰ μὴν  
 ἀφαιρουμένου μήκους καὶ πλάτους καὶ βάθους  
 οὐδὲν ὀρώμεν ὑπολειπόμενον, πλὴν εἴ τί ἐστι τὸ  
 ὀριζόμενον ὑπὸ τούτων, ὥστε τὴν ὕλην ἀνάγκη  
 20 φαίνεσθαι μόνην οὐσίαν οὕτω σκοπούμενοις. λέγω  
 δ' ὕλην ἢ καθ' αὐτὴν μήτε τί μήτε ποσὸν μήτε

<sup>1</sup> ἡ οὐσία E.J.

the substance of the particular, and fourthly the substrate. The substrate is that of which the rest are predicated, while it is not itself predicated of anything else. Hence we must first determine its nature, for the primary substrate is considered to be in the truest sense substance.

Now in one sense we call the *matter* the substrate; 2 in another, the *shape*; and in a third, the combination of the two. By matter I mean, for instance, bronze; by shape, the arrangement of the form; and by the combination of the two, the concrete thing: the statue. Thus if the form is prior to the matter and more truly existent, by the same argument it will also be prior to the combination.

We have now stated in outline the nature of substance—that it is not that which is predicated of a subject, but that of which the other things are predicated. But we must not merely define it so, for it is not enough. Not only is the statement itself obscure, but also it makes matter substance; for if matter is not substance, it is beyond our power to say what else is. For when everything else is removed, 4 clearly nothing but matter remains; because all the other things are affections, products and potencies of bodies, and length, breadth and depth are kinds of quantity, and not substances. For quantity is not a substance; rather the substance is that to which these affections primarily belong. But when we take 5 away length and breadth and depth we can see nothing remaining, unless it be the something bounded by them; so that on this view matter must appear to be the only substance. By matter I mean that which in itself is neither a particular thing nor a quantity nor designated by any of the categories

29 a ἄλλο μηδὲν λέγεται οἷς ὄρισται τὸ ὄν. ἔστι γάρ  
 τι καθ' οὗ κατηγορεῖται τούτων ἕκαστον, ὧ τὸ  
 εἶναι ἕτερον καὶ τῶν κατηγοριῶν ἑκάστη τὰ μὲν  
 γὰρ ἄλλα τῆς οὐσίας κατηγορεῖται, αὕτη δὲ τῆς  
 25 ποσὸν οὔτε ἄλλο οὐδὲν ἔστιν οὐδὲ δὴ αἱ ἀπο-  
 φάσεις· καὶ γὰρ αὗται ὑπάρξουσι κατὰ συμβεβηκός.

Ἐκ μὲν οὖν τούτων θεωροῦσι συμβαίνει οὐσίαν  
 εἶναι τὴν ὕλην· ἀδύνατον δὲ καὶ γὰρ τὸ χωριστὸν  
 καὶ τὸ τόδε τι ὑπάρχειν δοκεῖ μάλιστα τῇ οὐσία,  
 διὸ τὸ εἶδος καὶ τὸ ἐξ ἀμφοῖν οὐσία δόξειεν ἂν  
 30 εἶναι μᾶλλον τῆς ὕλης. τὴν μὲν τοίνυν ἐξ ἀμφοῖν  
 οὐσίαν, λέγω δὲ τὴν ἐκ τε τῆς ὕλης καὶ τῆς μορφῆς,  
 ἀφετέον· ὑστέρα γὰρ καὶ δῆλη· φαιερὰ δὲ πως καὶ  
 ἡ ὕλη· περὶ δὲ τῆς τρίτης σκεπτέον, αὕτη γὰρ  
 ἀπορωτάτη.

Ἄομολογοῦνται δ' οὐσίαι εἶναι τῶν αἰσθητῶν  
 29 b τινες, ὥστε ἐν ταύταις ζητητέον πρῶτον IV. «πρὸ  
 3 ἔργου γὰρ τὸ μεταβαίνειν εἰς τὸ γνωριμώτερον ἢ  
 γὰρ μάθησις οὕτω γίνεταί πασι διὰ τῶν ἡττων  
 5 γνωρίμων φύσει εἰς τὰ γνώριμα μᾶλλον καὶ τοῦτο  
 ἔργον ἔστιν, ὥσπερ ἐν ταῖς πράξεσι τὸ ποιῆσαι  
 ἐκ τῶν ἐκάστῳ ἀγαθῶν τὰ ὅλως ἀγαθὰ ἐκάστῳ  
 ἀγαθὰ, οὕτως ἐκ τῶν αὐτῶ γνωριμωτέρων τὰ τῇ  
 φύσει γνώριμα αὐτῶ γνώριμα τὰ δ' ἐκάστοις  
 γνώριμα καὶ πρῶτα πολλάκις ἡρέμα ἔστι γνώριμα,

<sup>a</sup> sc. by nature All learning proceeds by induction from that which is intelligible to us (i.e., the complex facts and objects of our experience, which are bound up with sensation and therefore less intelligible in themselves), to that which is intelligible in itself (i.e., the simple universal principles of scientific knowledge).



which define Being. For there is something of which 6  
 each of these is predicated, whose being is different  
 from that of each one of the categories; because all  
 other things are predicated of substance, but this is  
 predicated of matter. Thus the ultimate substrate  
 is in itself neither a particular thing nor a quantity  
 nor anything else. Nor indeed is it the negations  
 of these; for the negations too will only apply to it  
 accidentally.

If we hold this view, it follows that matter is sub- 7  
 stance. But this is impossible. for it is accepted But si  
 that separability and individuality belong especially stances  
 to substance. Hence it would seem that the form not be  
 and the combination of form and matter are more a thing  
 truly substance than matter is. The substance, then, is not 8  
 which consists of both—I mean of matter and form to be  
 —may be dismissed, since it is posterior and obvious.  
 Matter too is in a sense evident. We must consider  
 the third type, for this is the most perplexing.

Now it is agreed that some sensible things are sub-  
 stances, and so we should begin our inquiry in con-  
 nexion with these. IV It is convenient to advance to 2  
 the more intelligible<sup>a</sup>; for learning is always acquired  
 in this way, by advancing through what is less in-  
 telligible by nature to what is more so. And just as  
 in actions it is our function to start from the good of  
 the individual and make absolute good good for the  
 individual,<sup>b</sup> so it is our function to start from what  
 is more intelligible to oneself and make what is by  
 nature intelligible intelligible to oneself. Now that 3  
 which is intelligible and primary to individuals is  
 often but slightly intelligible, and contains but little

<sup>b</sup> Cf. *Ethics* 1129 b 5.

29 b

10 καὶ μικρὸν ἢ οὐθὲν ἔχει τοῦ ὄντος ἀλλ' ὁμως ἐκ  
 11 τῶν φαύλως μὲν γνωστῶν, αὐτῷ δὲ γνωστῶν, τὰ  
 12 ὅλως γνωστὰ γινῶναι πειρατέον, μεταβαίνοντας,  
 ὡσπερ εἶρηται, διὰ τούτων αὐτῶν.»<sup>1</sup>

1 Ἐπεὶ δ' ἐν ἀρχῇ διειλόμεθα πόσοις ὀρίζομεν τὴν  
 2 οὐσίαν, καὶ τούτων ἓν τι ἐδόκει εἶναι τὸ τί ἦν εἶναι,  
 13 θεωρητέον περὶ αὐτοῦ. καὶ πρῶτον εἴπωμεν ἓνα  
 περὶ αὐτοῦ λογικῶς, ὅτι ἐστὶ τὸ τί ἦν εἶναι ἐκάστου<sup>2</sup>  
 ὃ λέγεται καθ' αὐτό. οὐ γὰρ ἐστὶ τὸ σοὶ εἶναι τὸ  
 15 μουσικῶ εἶναι· οὐ γὰρ κατὰ σαυτὸν εἶ μουσικός.  
 ὃ ἄρα κατὰ σαυτόν. οὐδὲ δὴ τοῦτο πᾶν οὐ γὰρ τὸ  
 οὕτως καθ' αὐτὸ ὡς ἐπιφανεία<sup>3</sup> λευκόν, ὅτι οὐκ  
 ἐστὶ τὸ ἐπιφανεία εἶναι τὸ λευκῶ εἶναι. ἀλλὰ μὴν  
 οὐδὲ τὸ ἐξ ἀμφοῖν τὸ ἐπιφανεία λευκῆ εἶναι. διὰ  
 20 τί,<sup>4</sup> ὅτι πρόσσεστιν αὐτό. ἐν ᾧ ἄρα μὴ ἐνέσται  
 λόγῳ αὐτό, λέγοντι αὐτό, οὗτος ὁ λόγος τοῦ τί ἦν  
 εἶναι ἐκάστῳ· ὡστ' εἰ τὸ ἐπιφανεία λευκῆ εἶναι  
 ἐστὶ τὸ ἐπιφανεία εἶναι λεία, τὸ λευκῶ καὶ λείῳ  
 εἶναι τὸ αὐτὸ καὶ ἓν. Ἐπεὶ δ' ἐστὶ καὶ κατὰ  
 τὰς ἄλλας κατηγορίας σύνθετα (ἐστὶ γὰρ τι ὑπο-  
 κείμενον ἐκάστῳ, οἷον τῷ ποιῶ καὶ τῷ ποσῶ καὶ  
 25 τῷ ποτὲ καὶ τῷ πού καὶ τῇ κινήσει), σκεπτέον ἄρ'  
 ἐστὶ λόγος τοῦ τί ἦν εἶναι ἐκάστῳ αὐτῶν, καὶ  
 ὑπάρχει καὶ τούτοις τὸ τί ἦν εἶναι, οἷον λευκῶ

<sup>1</sup> πρὸ ἔργου . . . αὐτῶν hic ponenda censuit Bonitz · habent codd. post περὶ αὐτοῦ infra.

<sup>2</sup> Ross · ἐκάστῳ Bonitz ἐλαστον.

<sup>3</sup> ἐπιφάνεια A<sup>b</sup>.

<sup>4</sup> διὰ τί, om. A<sup>b</sup> Alexander.

<sup>a</sup> c. iii 1.

<sup>b</sup> Cf. V. xviii 3, 4.

<sup>c</sup> The statement that "to be a white surface" is the same as "to be a smooth surface" tells us nothing fresh

reality ; but nevertheless, starting from that which is imperfectly intelligible but intelligible to oneself, we must try to understand the absolutely intelligible ; advancing, as we have said, by means of these very things which are intelligible to us

Since we distinguished at the beginning<sup>a</sup> the number of ways in which substance is defined and since one of these appeared to be essence, we must investigate this First, let us make certain linguistic statements about it

The essence of each thing is that which it is said to be *per se*. "To be you" is not "to be cultured," because you are not of your own nature cultured. Your essence, then, is that which you are said to be of your own nature But not even all of this is the essence ; for the essence is not that which is said to be *per se* in the sense that whiteness is said to belong to a surface,<sup>b</sup> because "being a surface" is not "being white" Nor is the essence the combination of both, "being a white surface" Why ? Because the word itself is repeated Hence the formula of the essence of each thing is that which defines the term but does not contain it Thus if "being a white surface" is the same as "being a smooth surface," "white" and "smooth" are one and the same<sup>c</sup>

But since in the other categories too there are compounds with substance (because there is a substrate for each category, *e.g.* quality, quantity, time, place and motion), we must inquire whether there is a formula of the essence of each one of them ; whether about surface, it simply identifies "white" with "smooth." Aristotle has in mind Democritus's theory of colour (that it is an impression conveyed to our eyes from the superficial texture of the object ; Theophrastus, *De Sensu* 73-75), *cf.* *De Sensu* 442 b 11, *De Gen et Corr* 316 a 1.

<sup>b</sup> ἀνθρώπῳ [τί ἦν λευκῶ ἀνθρώπῳ].<sup>1</sup> ἔστω δὴ ὄνομα αὐτῷ ἱμάτιον τί ἐστι τὸ ἱματίῳ εἶναι,  
 Ἄλλὰ μὴν οὐδὲ τῶν καθ' αὐτὸ λεγομένων οὐδὲ  
 10 τοῦτο. ἢ τὸ οὐ καθ' αὐτὸ λέγεται διχῶς, καὶ τούτου  
 ἐστὶ τὸ μὲν ἐκ προσθέσεως, τὸ δὲ οὐ. τὸ μὲν  
 γὰρ τῷ αὐτὸ ἄλλῳ προσκειῖσθαι λέγεται ὃ ὀρίζεται,  
 οἷον εἰ τὸ λευκῶ εἶναι ὀριζόμενος λέγοι λευκοῦ  
 ἀνθρώπου λόγον· τὸ δὲ τῷ ἄλλο αὐτῷ, οἷον εἰ  
 σημαῖνοι τὸ ἱμάτιον λευκὸν ἀνθρωπον, ὃ δὲ ὀρίζοιτο  
 α τὸ<sup>2</sup> ἱμάτιον ὡς λευκόν. τὸ δὴ λευκὸς ἀνθρωπός ἐστι  
 μὲν λευκόν, οὐ μέντοι <τὸ><sup>3</sup> τί ἦν εἶναι λευκῶ  
 εἶναι. ἀλλὰ τὸ ἱματίῳ εἶναι ἄρα ἔστι τί ἦν εἶναί  
 τι [ἦ]<sup>4</sup> ὅλως; ἢ οὐ; ὅπερ γὰρ τί<sup>5</sup> ἐστι τὸ τί  
 ἦν εἶναι· ὅταν δ' ἄλλο κατ' ἄλλου λέγηται, οὐκ  
 5 ἔστιν ὅπερ τόδε τι, οἷον ὃ λευκὸς ἀνθρωπος οὐκ  
 ἔστιν ὅπερ τόδε τι, εἴπερ τὸ τόδε τι ταῖς οὐσίαις  
 ὑπάρχει μόνον· ὥστε τὸ τί ἦν εἶναί ἐστιν ὅσων ὃ  
 λόγος ἐστὶν ὀρισμός· ὀρισμός δ' ἐστὶν οὐκ ἂν  
 ὄνομα λόγῳ ταῦτό σημαίνῃ (πάντες γὰρ ἂν εἶεν οἱ  
 λόγοι ὄροι· ἔσται γὰρ ὄνομα ὁτῶοῦν λόγῳ,<sup>6</sup> ὥστε  
 10 καὶ ἡ Ἰλιάς ὀρισμός ἐσται), ἀλλ' εἰάν πρῶτου τινὸς  
 ἦ· τοιαῦτα δ' ἐστὶν ὅσα λέγεται μὴ τῷ ἄλλο κατ'  
 ἄλλου λέγεσθαι. οὐκ ἔσται ἄρα οὐδενὶ τῶν μὴ  
 γένους εἰδῶν ὑπάρχον τὸ τί ἦν εἶναι, ἀλλὰ τούτοις  
 μόνον· ταῦτα γὰρ δοκεῖ οὐ κατὰ μετοχὴν λέγεσθαι  
 καὶ πάθος, οὐδ' ὡς συμβεβηκός· ἀλλὰ λόγος μὲν  
 5 ἔσται ἐκάστου καὶ τῶν ἄλλων τί σημαίνει, εἰάν ἦ

<sup>1</sup> om. A<sup>b</sup>.<sup>2</sup> ὀρίζοιτο τὸ E<sup>2</sup>. ὀρίζοι τὸ E<sup>1</sup>: ὀρίζοιτο cet<sup>3</sup> Ross.<sup>4</sup> Bonitz<sup>5</sup> τί: τι ἦν εἶναι EJ.<sup>6</sup> λόγῳ ταῦτόν EJΓ.

<sup>a</sup> Literally "cloak," but the word is chosen quite arbitrarily. Cf. VIII. vi. 4.

these compounds, *e g* "white man," also have an essence. Let the compound be denoted by X.<sup>a</sup> 7  
 What is the essence of X?

"But this is not even a *per se* expression." We <sup>Com</sup> reply that there are two ways in which a definition <sup>expre</sup> can be not *per se* true of its subject. (a) by an addition <sup>have</sup>, and (b) by an omission. In one case the defini- <sup>essen</sup> tion is not *per se* true because the term which is being 8 defined is combined with something else, as if, *e g*, in defining whiteness one were to state the definition of a white man. In the other, because something else (which is not in the definition) is combined with the subject; as if, *e g*, X were to denote "white man," and X were defined as "white." "White man" is white, but its essence is not "to be white." But is "to be X" an essence at all? Surely not. 9  
 The essence is an individual type; but when a subject has something distinct from it predicated of it, it is not an individual type. *E g*, "white man" is not an individual type; that is, assuming that individuality belongs only to substances. Hence essence belongs to all things the account of which is a definition. We have a definition, not if the name and 10 the account signify the same (for then all accounts would be definitions; because any account can have a name, so that even "the *Iliad*" will be a definition), but if the account is of something primary. Such are all statements which do not involve the predication of one thing of another. Hence essence will belong 11 to nothing except species of a genus, but to these <sup>Esse</sup> only; for in these the predicate is not considered to <sup>longs</sup> be related to the subject by participation or affec- <sup>specie</sup> tion, nor as an accident. But of everything else as <sup>a gen</sup> well, if it has a name, there will be a formula of *what*

<sup>a</sup> ὄνομα ὅτι τόδε τῶδε ὑπάρχει, ἢ ἀντὶ λόγου ἀπλοῦ ἀκριβέστερος ὀρισμὸς δ' οὐκ ἔσται οὐδὲ τὸ τί ἦν εἶναι.

Ἡ καὶ ὁ ὀρισμὸς ὡσπερ καὶ τὸ τί ἐστὶ πλεοναχῶς λέγεται, καὶ γὰρ τὸ τί ἐστὶν ἓνα μὲν τρόπον σημαίνει τὴν οὐσίαν καὶ τὸ τόδε τι, ἄλλον δὲ ἕκαστον τῶν κατηγορουμένων, ποσόν, ποιὸν καὶ ὅσα ἄλλα τοιαῦτα ὡσπερ γὰρ καὶ τὸ ἐστὶν ὑπάρχει πᾶσιν, ἀλλ' οὐχ ὁμοίως ἀλλὰ τῶ μὲν πρώτῳ τοῖς δ' ἐπομένῳ, οὕτω καὶ τὸ τί ἐστὶν ἀπλῶς μὲν τῇ οὐσίᾳ, πῶς δὲ τοῖς ἄλλοις καὶ γὰρ τὸ ποιὸν ἐροίμεθ' ἂν τί ἐστὶν, ὥστε καὶ τὸ ποιὸν τῶν τί ἐστὶν,<sup>1</sup> ἀλλ' οὐχ ἀπλῶς, ἀλλ' ὡσπερ ἐπὶ τοῦ μὴ ὄντος λογικῶς φασὶ τινες εἶναι τὸ μὴ ὄν, οὐχ ἀπλῶς ἀλλὰ μὴ ὄν, οὕτω καὶ τὸ ποιὸν Δεῖ μὲν οὖν σκοπεῖν καὶ τὸ πῶς δεῖ λέγειν περὶ ἕκαστον, οὐ μὴν μᾶλλον γε ἢ τὸ πῶς ἔχει· διὸ καὶ νῦν ἐπεὶ τὸ λεγόμενον φανερόν, καὶ τὸ τί ἦν εἶναι ὁμοίως ὑπάρξει πρώτῳ μὲν καὶ ἀπλῶς τῇ οὐσίᾳ, εἶτα καὶ τοῖς ἄλλοις, ὡσπερ καὶ τὸ τί ἐστὶν οὐχ ἀπλῶς τί ἦν εἶναι, ἀλλὰ ποιῶ ἢ ποσῶ τί ἦν εἶναι· δεῖ γὰρ ἢ ὁμωνύμως ταῦτα φάναι εἶναι ὄντα, ἢ προστιθέντας καὶ ἀφαιροῦντας, ὡσπερ καὶ τὸ μὴ ἐπιστητὸν ἐπιστητόν, ἐπεὶ τό γε ὀρθόν ἐστὶ μήτε ὁμωνύμως φάναι μήτε ὡσαύτως, ἀλλ' ὡσπερ τὸ ἱατρικὸν τῶ πρὸς τὸ αὐτὸ μὲν καὶ ἔν, οὐ τὸ αὐτὸ δὲ καὶ ἔν, οὐ μέντοι οὐδὲ ὁμωνύμως· οὐδὲν γὰρ ἱατρικὸν σῶμα καὶ ἔργον καὶ σκεῦος λέγεται οὔτε ὁμωνύμως

<sup>1</sup> ἐστὶ μὲν E.J.

<sup>a</sup> sc. to be unknowable.

*it means*—that X belongs to Y ; or instead of a simple formula one more exact—but no definition, nor essence

Or perhaps “definition,” like the “what,” has 12 more than one sense. For the “what” in one sense means the substance and the individual, and in another each one of the categories: quantity, quality, etc. Just as “is” applies to everything, although not 13 in the same way, but primarily to one thing and secondarily to others; so “what it is” applies in an unqualified sense to substance, and to other things in a qualified sense. For we might ask also what quality “is,” so that quality also is a ‘what it is’; not however without qualification, but just as in the case of not-being some say by a verbal quibble that not-being “is”—not in an unqualified sense, but “is” not-being—so too with quality.

Now although we must also consider how we should 14 express ourselves in each particular case, it is still more important to consider what the facts are. Hence now, since the language which we are using is clear, similarly essence also will belong primarily and simply to substance, and secondarily to other things as well; just as the “what it is” is not essence simply, but the essence of a quality or quantity. For it must be either by equivocation that we 15 say that these things *are*, or by adding and subtracting qualifications, as we say that the unknowable is known<sup>a</sup>, since the truth is that we use the terms neither equivocally nor in the same sense, but just as we use the term “medical” in *relation* to one and the same thing, but not *of* one and the same thing, nor yet equivocally. The term “medical” is applied to a body and a function and an instrument,

<sup>1</sup><sup>b</sup> οὔτε καθ' ἓν, ἀλλὰ πρὸς ἓν. Ἄλλα ταῦτα μὲν  
 ὁποτέρως τις ἐθέλει λέγειν διαφέρει οὐδὲν ἐκεῖνο  
 5 δὲ φανερόν ὅτι ὁ πρῶτως καὶ ἀπλῶς ὀρισμὸς καὶ  
 τὸ τί ἦν εἶναι τῶν οὐσιῶν ἐστίν οὐ μὴν ἀλλὰ καὶ  
 τῶν ἄλλων ὁμοίως ἐστί, πλὴν οὐ πρῶτως οὐ γὰρ  
 ἀνάγκη, ἂν τοῦτο τιθῶμεν, τούτου ὀρισμὸν εἶναι  
 ὃ ἂν λόγῳ τὸ αὐτὸ σημαίνει, ἀλλὰ τινὶ λόγῳ.  
 τοῦτο δ' ἐὰν ἐνὸς ἦ, μὴ τῷ συνεχεῖ ὡσπερ ἡ Ἰλιάς  
 10 ἢ ὅσα συνδέσμων, ἀλλ' ἐὰν ὁσαχῶς λέγεται τὸ ἓν·  
 τὸ δ' ἓν λέγεται ὡσπερ τὸ ὄν· τὸ δὲ ὄν τὸ μὲν τόδε  
 τι, τὸ δὲ ποσόν, τὸ δὲ ποιόν τι σημαίνει. διὸ καὶ  
 λευκοῦ ἀνθρώπου ἔσται λόγος καὶ ὀρισμὸς· ἄλλον  
 δὲ τρόπον καὶ τοῦ λευκοῦ καὶ οὐσίας.

V. Ἐχει δ' ἀπορίαν, ἐὰν τις μὴ φῆ ὀρισμὸν εἶναι  
 5 τὸν ἐκ προσθέσεως λόγον, τίνος ἔσται ὀρισμὸς τῶν  
 οὐχ ἀπλῶν ἀλλὰ συνδεδυασμένων· ἐκ προσθέσεως  
 γὰρ ἀνάγκη δηλοῦν λέγω δ' οἶον ἔστι ρίς καὶ  
 κοιλότης, καὶ σιμότης τὸ ἐκ τῶν δυοῖν λεγόμενον,  
 τῷ τόδε ἐν τῷδε, καὶ οὐ κατὰ συμβεβηκός γε οὔθ'  
 ἢ κοιλότης οὔθ' ἢ σιμότης πάθος τῆς ρίνος, ἀλλὰ  
 10 καθ' αὐτήν· οὐδ' ὡς τὸ λευκὸν Καλλία ἢ ἀνθρώπῳ,  
 ὅτι Καλλίας λευκὸς ᾧ συμβέβηκεν ἀνθρώπῳ εἶναι,  
 ἀλλ' ὡς τὸ ἄρρεν τῷ ζώῳ καὶ τὸ ἴσον τῷ ποσῷ  
 καὶ πάντα ὅσα λέγεται καθ' αὐτὰ ὑπάρχειν. ταῦτα

<sup>a</sup> Cf IV. ii. 2

<sup>b</sup> Snubness is a *per se* affection of the nose, because it applies only to the nose and cannot be explained apart from it, but the same can hardly be said of concavity. Aristotle himself uses the word (κοιλότης) elsewhere in other connexions



neither equivocally nor in one sense, but in relation to one thing <sup>a</sup>

However, in whichever way one chooses to speak 16  
 of these things, it matters nothing: but this point is clear. that the primary and unqualified definition, and the essence, belong to substances. It is true that they belong equally to other things too, but not *primarily*. For if we assume this, it does not necessarily follow that there is a definition of anything which means the same as any formula: it must mean the same as a particular kind of formula, *i.e.* the formula of one thing—one not by continuity, 17  
 like the *Iliad*, or things which are arbitrarily combined, but in one of the proper senses of “one” And “one” has the same variety of senses as “being” “Being” means sometimes the individual thing, sometimes the quantity, sometimes the quality. Hence even “white man” will have a formula and definition; but in a different sense from the definition of “whiteness” and “substance”

V The question arises. If one denies that a formula involving an added determinant is a definition, how can there be a definition of terms which are not simple but coupled? Because they can only be explained by adding a determinant. I mean, *e.g.*, 2  
 there is “nose” and “concavity” and “snubness,” the term compounded of the two, because the one is present in the other. Neither “concavity” nor “snubness” is an accidental, but a *per se* affection of the nose <sup>b</sup> Nor are they attributes in the sense that “white” is of Callias or a man, because Callias is white and is by accident a man; but in the sense that “male” is an attribute of animal, and equality of quantity, and all other attributes which we say

Definit  
 and es  
 belong  
 mainly  
 substa

There  
 definit  
 in the  
 sense,  
 couple  
 terms.

<sup>1</sup> b δ' ἐστὶν ἐν ὅσοις ὑπάρχει ἢ ὁ λόγος ἢ τοῦνομα οὐ  
 ἐστὶ τοῦτο τὸ πάθος, καὶ μὴ ἐνδέχεται δηλωσαι  
 25 χωρὶς, ὡσπερ τὸ λευκὸν ἄνευ τοῦ ἀνθρώπου ἐν-  
 δέχεται, ἀλλ' οὐ τὸ θῆλυ ἄνευ τοῦ ζώου. ὡστε  
 τούτων τὸ τί ἦν εἶναι καὶ ὁ ὀρισμὸς ἢ οὐκ ἔστιν  
 οὐδενὸς ἢ, εἰ<sup>1</sup> ἔστιν, ἄλλως, καθάπερ εἰρήκαμεν.

Ἔστι δ' ἀπορία καὶ ἑτέρα περὶ αὐτῶν. εἰ μὲν γὰρ  
 τὸ αὐτὸ ἐστὶ σιμῆ ρίς καὶ κοίλη ρίς, τὸ αὐτὸ ἔσται  
 30 τὸ σιμὸν καὶ τὸ κοῖλον εἰ δὲ μὴ, διὰ τὸ ἀδύνατον  
 εἶναι εἰπεῖν τὸ σιμὸν ἄνευ τοῦ πράγματος οὐ ἐστὶ  
 πάθος καθ' αὐτό (ἔστι γὰρ τὸ σιμὸν κοιλότης ἐν  
 ῥίνι), τὸ ῥίνα σιμῆν εἰπεῖν ἢ οὐκ ἔστιν ἢ δις τὸ  
 αὐτὸ ἔσται εἰρημένον, ρίς ρίς κοίλη (ἢ γὰρ ρίς ἢ  
 σιμῆ, ρίς ρίς κοίλη ἔσται), διὸ ἄτοπον τὸ ὑπάρχειν  
 35 τοῖς τοιοῦτοις τὸ τί ἦν εἶναι· εἰ δὲ μὴ, εἰς ἀπειρον  
 α εἰσιν· ῥίνι γὰρ ῥίνι σιμῆ ἔτι ἄλλο ἐνέσται. Δῆλον  
 τοίνυν ὅτι μόνης τῆς οὐσίας ἐστὶν ὁ ὀρισμὸς. εἰ  
 γὰρ καὶ τῶν ἄλλων κατηγοριῶν, ἀνάγκη ἐκ προσ-  
 θέσεως εἶναι, οἷον τοῦ ποιοῦ,<sup>2</sup> καὶ περιττοῦ οὐ  
 γὰρ ἄνευ ἀριθμοῦ, οὐδὲ τὸ θῆλυ ἄνευ ζώου· τὸ  
 5 δὲ ἐκ προσθέσεως λέγω ἐν οἷς συμβαίνει δις τὸ  
 αὐτὸ λέγειν, ὡσπερ ἐν τούτοις· εἰ δὲ τοῦτο ἀληθές,  
 οὐδὲ συνδυαζομένων ἔσται, οἷον ἀριθμοῦ περιττοῦ·  
 ἀλλὰ λανθάνει ὅτι οὐκ ἀκριβῶς λέγονται οἱ λόγοι  
 εἰ δ' εἰσὶ καὶ τούτων ὄροι, ἦτοι ἄλλον τρόπον εἰσὶν

<sup>1</sup> εἰ om A<sup>b</sup> Alexander.

<sup>2</sup> ποσοῦ Alexander: ἀρίτου Bonitz · πολλοῦ Goebel.

belong *per se*. That is, all things which involve the 3  
 formula or name of the subject of the affection, and  
 cannot be explained apart from it. Thus "white"  
 can be explained apart from "man," but not  
 "female" apart from "animal." Thus either these  
 terms have no essence or definition, or else they  
 have it in a different sense, as we have said.

But there is also another difficulty about them. 4  
 If "snub nose" is the same as "concave nose,"  
 "snub" will be the same as "concave." But if not,  
 since it is impossible to speak of "snub" apart from  
 the thing of which it is a *per se* affection (because  
 "snub" means a concavity in the nose), either it is  
 impossible to call the nose snub, or it will be a  
 tautology, "concave-nose nose" because "snub  
 nose" will equal "concave-nose nose." Hence it 5  
 is absurd that such terms as these should have an  
 essence. Otherwise there will be an infinite re-  
 gression; for in "snub-nose nose" there will be yet  
 another nose.

Clearly, then, there is definition of substance  
 alone. If there were definition of the other cate-  
 gories also, it would have to involve an added deter-  
 minant, as in the case of the qualitative: and of the  
 odd, for this cannot be defined apart from number;  
 nor can "female" apart from "animal." By "in- 6  
 volving an added determinant" I mean descrip-  
 tions which involve a tautology, as in the above  
 examples. Now if this is true, there will be no  
 definition of compound expressions either; *eg*,  
 "odd number." We fail to realize this because our  
 terms are not used accurately. If on the other hand  
 there are definitions of these too, either they are  
 defined in a different way, or, as we have said,

1<sup>a</sup> ἢ καθάπερ ἐλέχθη πολλαχῶς λεκτέον εἶναι τὸν  
 10 ὄρισμὸν καὶ τὸ τί ἦν εἶναι ὥστε ὡδὶ μὲν οὐδενὸς  
 ἔσται ὄρισμός, οὐδὲ τὸ τί ἦν εἶναι οὐδενὶ ὑπάρξει  
 πλὴν ταῖς οὐσίαις, ὡδὶ δ' ἔσται ὅτι μὲν οὖν ἔστιν  
 ὁ ὄρισμός ὁ τοῦ τί ἦν εἶναι λόγος, καὶ τὸ τί ἦν εἶναι  
 ἢ μόνων τῶν οὐσιῶν ἔστιν ἢ μάλιστα καὶ πρώτως  
 καὶ ἀπλῶς, δῆλον.

15 VI. Πότερον δὲ ταῦτόν ἐστιν ἢ ἕτερον τὸ τί ἦν  
 εἶναι καὶ ἕκαστον, σκεπτέον. ἔστι γάρ τι πρὸ ἔργου  
 πρὸς τὴν περὶ τῆς οὐσίας σκέψιν· ἕκαστόν τε γὰρ  
 οὐκ ἄλλο δοκεῖ εἶναι τῆς ἑαυτοῦ οὐσίας, καὶ τὸ τί  
 ἦν εἶναι λέγεται εἶναι ἢ ἐκάστου οὐσία. ἐπὶ μὲν  
 δὴ τῶν λεγομένων κατὰ συμβεβηκὸς δόξειεν ἂν  
 20 ἕτερον εἶναι, οἷον λευκὸς ἄνθρωπος ἕτερον καὶ τὸ  
 λευκῷ ἀνθρώπῳ εἶναι. εἰ γὰρ τὸ αὐτό, καὶ τὸ  
 ἀνθρώπῳ εἶναι καὶ τὸ λευκῷ ἀνθρώπῳ τὸ αὐτό·  
 τὸ αὐτὸ γὰρ ἄνθρωπος καὶ λευκὸς ἄνθρωπος, ὡς  
 φασίν, ὥστε καὶ τὸ λευκῷ ἀνθρώπῳ καὶ τὸ ἀν-  
 θρώπῳ. ἢ οὐκ ἀνάγκη ὅσα κατὰ συμβεβηκὸς  
 25 εἶναι ταῦτά· οὐ γὰρ ὡσαύτως τὰ ἄκρα γίγνεται  
 ταῦτά, ἀλλ' ἴσως γ' ἐκεῖνο δόξειεν ἂν συμβαίνειν,  
 τὰ ἄκρα γίγνεσθαι ταῦτά τὰ<sup>1</sup> κατὰ συμβεβηκός, οἷον  
 τὸ λευκῷ εἶναι καὶ τὸ μουσικῷ εἶναι· δοκεῖ δὲ οὐ

<sup>1</sup> τὰ A<sup>b</sup> Alexander: om. EJT Asclepius.

<sup>a</sup> The argument consists of two syllogisms.

White man = essence of white man

Man = white man

∴ man = essence of white man.

But essence of man = man.

∴ essence of man = essence of white man.

The conclusion is faulty because whereas the first identity is assumed to be absolute, the second is accidental

<sup>b</sup> Aristotle seems to mean that both "essence of white

“ definition ” and “ essence ” must be used in more than one sense ; thus in one sense there will be no definition of anything, and nothing will have an essence, except substances ; and in another those other things will have a definition and essence It is obvious, then, that the definition is the formula of the essence, and that the essence belongs either *only* to substances, or especially and primarily and simply.

VI We must inquire whether the essence is the same as the particular thing, or different. This is useful for our inquiry about substance ; because a particular thing is considered to be nothing other than its own substance, and the essence is called the substance of the thing In accidental predications, indeed, the thing itself would seem to be different from its essence ; *e.g.*, “ white man ” is different from “ essence of white man.” If it were the same, “ essence of man ” and “ essence of white man ” would be the same. For “ man ” and “ white man ” are the same, they say, and therefore “ essence of white man ” is the same as “ essence of man.” But perhaps it is not necessarily true that the essence of accidental combinations is the same as that of the simple terms ; because the extremes of the syllogism are not identical with the middle term in the same way.<sup>a</sup> Perhaps it might be thought to follow that the accidental extremes are identical ; *e.g.* “ essence of white ” and “ essence of cultured ” ; but this is not admitted.<sup>b</sup>

man ” and “ essence of cultured man ” might be proved by the former syllogism to be identical in the same way with the middle term ‘ man,’ in which case it would seem that “ essence of white ” and “ essence of cultured ” are the same. There is, however, the same fallacy as before

- 1 a Ἐπὶ δὲ τῶν καθ' αὐτὰ λεγομένων ἄρ' ἀνάγκη  
ταυτὸ εἶναι, οἷον εἴ τινες εἰσὶν οὐσίαι ὧν ἕτεραι  
30 μὴ εἰσὶν οὐσίαι μηδὲ φύσεις ἕτεραι πρότεραι, οἷας  
φασὶ τὰς ἰδέας εἶναι τινες; εἰ γὰρ ἔσται ἕτερον  
αὐτὸ τὸ ἀγαθὸν καὶ τὸ ἀγαθῶ εἶναι, καὶ ζῶον καὶ  
1 b τὸ ζῶον, καὶ τὸ ὄντι καὶ τὸ ὄν, ἔσονται ἄλλαι τε  
οὐσίαι καὶ φύσεις καὶ ἰδέαι παρὰ τὰς λεγομένας,  
καὶ πρότεραι οὐσίαι ἐκεῖναι, εἰ τὸ τί ἦν εἶναι  
οὐσία<sup>1</sup> ἐστίν. καὶ εἰ μὲν ἀπολελυμένοι ἀλλήλων,  
τῶν μὲν οὐκ ἔσται ἐπιστήμη, τὰ δ' οὐκ ἔσται ὄντα  
5 (λέγω δὲ τὸ ἀπολελυθῆναι, εἰ μήτε τῶ ἀγαθῶ αὐτῶ  
ὑπάρχει τὸ εἶναι ἀγαθῶ, μήτε τούτῳ τὸ εἶναι  
ἀγαθόν) ἐπιστήμη γὰρ<sup>2</sup> ἐκάστου ἐστίν ὅταν<sup>3</sup> τὸ  
τί ἦν ἐκείνῳ εἶναι γινώμεν<sup>4</sup> καὶ ἐπὶ ἀγαθοῦ καὶ  
τῶν ἄλλων ὁμοίως ἔχει· ὥστε εἰ μηδὲ τὸ<sup>5</sup> ἀγαθῶ  
εἶναι ἀγαθόν, οὐδὲ τὸ<sup>5</sup> ὄντι ὄν, οὐδὲ τὸ<sup>5</sup> ἐνὶ ἐν.  
10 ὁμοίως δὲ πάντα ἐστίν ἢ οὐθέν τὰ τί ἦν εἶναι.  
ὥστ' εἰ μηδὲ τὸ ὄντι ὄν, οὐδὲ τῶν ἄλλων οὐδέν.  
ἔτι ᾧ μὴ ὑπάρχει ἀγαθῶ εἶναι, οὐκ ἀγαθόν.  
ἀνάγκη ἄρα ἐν εἶναι τὸ ἀγαθόν καὶ ἀγαθῶ εἶναι καὶ  
καλὸν καὶ καλῶ εἶναι, <καὶ><sup>6</sup> ὅσα μὴ κατ' ἄλλο  
λέγεται, ἀλλὰ καθ' αὐτὰ καὶ πρῶτα· καὶ γὰρ  
15 τοῦτο ἱκανὸν ἐὰν ὑπάρχη, κἂν μὴ ἦ εἶδη· μᾶλλον  
δ' ἴσως κἂν ἦ εἶδη. ἅμα δὲ δηλὸν καὶ ὅτι εἴπερ  
εἰσὶν αἱ ἰδέαι οἷας τινὲς φασιν, οὐκ ἔσται τὸ ὑπο-  
κείμενον οὐσία· ταύτας γὰρ οὐσίας μὲν ἀναγκαῖον

<sup>1</sup> οὐσία A<sup>b</sup> comm . οὐσίας EJT.

<sup>2</sup> γὰρ A<sup>b</sup> Alexander . τε γὰρ cet

<sup>3</sup> ἐστίν ὅταν A<sup>b</sup> Alexander αὐτῆ EJ.

<sup>4</sup> γινώμεν A<sup>b</sup> Alexander om EJ.

<sup>5</sup> τῶ A<sup>b</sup>

<sup>6</sup> καὶ Alexander, Joachim.

<sup>a</sup> The example of the Ideas as *per se* terms is used by

But in *per se* expressions, is the thing necessarily 4  
the same as its essence, *e g*, if there are sub- A *per se*  
term is 1  
same as  
essence  
stances which have no other substances or entities  
prior to them, such as some hold the Ideas to be 2  
For if the Ideal Good is to be different from the 5  
essence of good, and the Ideal Animal and Being  
from the essence of animal and being, there will  
be other substances and entities and Ideas besides  
the ones which they describe; and prior to them, if  
essence is substance. And if they are separate from  
each other, there will be no knowledge of the Ideas,  
and the essences will not exist (by "being separate" 6  
I mean if neither the essence of good is present in the  
Ideal Good, nor "being good" in the essence of  
good); for it is when we know the essence of it that  
we have knowledge of a thing. And it is the same  
with other essences as with the essence of good,  
so that if the essence of good is not good, neither will  
the essence of being "be," nor the essence of one be  
one. Either all essences exist alike, or none of 7  
them; and so if not even the essence of being "is,"  
neither will any other essence exist. Again that to  
which "essentially good" does not apply cannot be  
good. Hence "the good" must be one with the  
essence of good, "the beautiful" with the essence  
of beauty, and so with all terms which are not de-  
pendent upon something else, but self-subsistent and  
primary.<sup>a</sup> For it is enough if this is so, even if they 8  
are not Forms; or perhaps rather even if they are  
(At the same time it is clear also that if the Ideas  
are such as some hold, the substrate will not be  
substance; for the Ideas must be substances, but

Aristotle to show incidentally the fallacy of the Ideal theory, there can be no self-subsistent entity apart from the essence.

1 b εἶναι, μὴ καθ' ὑποκειμένου δέ· ἔσονται γὰρ κατὰ μέθεξις.

Ἐκ τε δὴ τούτων τῶν λόγων ἐν καὶ ταῦτό οὐ  
 20 κατὰ συμβεβηκὸς αὐτὸ ἕκαστον καὶ τὸ τί ἦν εἶναι,  
 καὶ ὅτι γε τὸ ἐπίστασθαι ἕκαστον τοῦτό ἐστι, τὸ τί  
 ἦν εἶναι ἐπίστασθαι, ὥστε καὶ κατὰ τὴν ἔκθεσιν  
 ἀνάγκη ἐν τι εἶναι ἄμφω τὸ δὲ κατὰ συμβεβηκὸς  
 λεγόμενον, οἷον τὸ μουσικὸν ἢ λευκόν, διὰ τὸ  
 διττὸν σημαίνειν οὐκ ἀληθὲς εἰπεῖν ὡς ταῦτό τὸ  
 25 τί ἦν εἶναι καὶ αὐτό· καὶ γὰρ ᾧ συμβέβηκε λευκὸν  
 καὶ τὸ συμβεβηκός, ὡστ' ἔστι μὲν ὡς ταῦτόν, ἔστι  
 δὲ ὡς οὐ ταῦτό τὸ τί ἦν εἶναι καὶ αὐτό· τῷ μὲν  
 γὰρ ἀνθρώπῳ καὶ τῷ λευκῷ ἀνθρώπῳ οὐ ταῦτό,  
 τῷ πάθει δὲ ταῦτό. Ἄτοπον δ' ἂν φανείη κὰν εἴ  
 τις ἐκάστῳ ὄνομα θεῖτο τῶν τί ἦν εἶναι· ἔσται γὰρ  
 30 καὶ παρ' ἐκεῖνο ἄλλο, οἷον τῷ τί ἦν εἶναι ἵππῳ τί  
 ἦν εἶναι [ἵππῳ]<sup>1</sup> ἕτερον. καίτοι τί κωλύει καὶ νῦν  
 εἶναι ἓνα εὐθύς τί ἦν εἶναι, εἴπερ οὐσία τὸ τί ἦν  
 2 a εἶναι; ἀλλὰ μὴν οὐ μόνον ἐν, ἀλλὰ καὶ ὁ λόγος ὁ  
 αὐτὸς αὐτῶν, ὡς δῆλον καὶ ἐκ τῶν εἰρημένων· οὐ  
 γὰρ κατὰ συμβεβηκὸς ἐν τὸ ἐν εἶναι καὶ ἐν. ἔτι εἰ  
 ἄλλο ἔσται, εἰς ἄπειρον εἰσιν τὸ μὲν γὰρ ἔσται τί  
 ἦν εἶναι τοῦ ἐνός, τὸ δὲ τὸ ἐν, ὥστε καὶ ἐπ' ἐκείνων  
 5 ὁ αὐτὸς ἔσται λόγος. ὅτι μὲν οὖν ἐπὶ τῶν πρώτων  
 καὶ καθ' αὐτὰ λεγομένων τὸ ἐκάστῳ εἶναι καὶ

<sup>1</sup> secl. Bonitz.

<sup>a</sup> This criticism is irrelevant to the point under discussion. It simply points out that the Ideal theory conflicts with received opinion (cf. III. 1).

<sup>b</sup> *i.e.* to avoid the infinite series implied in the last sentence.

<sup>c</sup> *i.e.* since there is a distinct term "essence of one" besides "one," there will be a third distinct term "essence of essence of one"; and so on as in the case of "horse" above.



not involving a substrate, because if they did involve one they would exist in virtue of its participation in them.)<sup>a</sup>

That each individual thing is one and the same 9 with its essence, and not merely accidentally so, is apparent, not only from the foregoing considerations, but because to have knowledge of the individual is to have knowledge of its essence, so that by setting out examples it is evident that both must be identical. But as for the accidental term, *e.g.* "cultured" or 10 "white," since it has two meanings, it is not true to say that the term itself is the same as its essence; for both the accidental term and that of which it is an accident are "white," so that in one sense the essence and the term itself are the same, and in another they are not, because the essence is not the same as "the man" or "the white man," but it is the same as the affection.

The absurdity <of separating a thing from its 11 essence> will be apparent also if one supplies a name for each essence; for then there will be another essence besides the original one, *e.g.* the essence of "horse" will have a further essence. Yet why should not some things be identified with their essence from the outset,<sup>b</sup> if essence is substance? Indeed not only are the thing and its essence one, but their formula is the same, as is clear from what we have just stated; for it is not by accident that the essence of "one," and "the one," are one. Moreover, if they are different, there will be an 12 infinite series; for the essence of "one" and "the one" will both exist; so that in that case too the same principle will apply.<sup>c</sup> Clearly, then, in the case of primary and self-subsistent terms, the in-

32 a ἕκαστον τὸ αὐτὸ καὶ ἓν ἔστι, δῆλον. Οἱ δὲ σοφιστικοὶ ἔλεγχοι πρὸς τὴν θέσιν ταύτην φανερόν ὅτι τῇ αὐτῇ λύονται λύσει καὶ εἰ ταῦτὸ Σωκράτης καὶ Σωκράτει εἶναι· οὐδὲν γὰρ διαφέρει οὔτε ἐξ ὧν 10 ἐρωτήσκειν ἄν τις, οὔτε ἐξ ὧν λύων ἐπιτύχοι. πῶς μὲν οὖν τὸ τί ἦν εἶναι ταῦτὸν καὶ πῶς οὐ ταῦτὸν ἐκάστω, εἴρηται.

VII. Τῶν δὲ γιγνομένων τὰ μὲν φύσει γίγνεται, τὰ δὲ τέχνη, τὰ δὲ ἀπὸ ταυτομάτου, πάντα δὲ τὰ γιγνώμενα ὑπὸ τέ τινος γίγνεται καὶ ἕκ τινος καὶ 15 τί· τὸ δὲ τί λέγω καθ' ἑκάστην κατηγορίαν· ἢ γὰρ τόδε ἢ ποσὸν ἢ ποιὸν ἢ πού. Αἱ δὲ γενέσεις αἱ μὲν φυσικαὶ αὐταὶ εἰσι ὧν ἡ γένεσις ἐκ φύσεώς ἐστιν· τὸ δὲ ἐξ οὗ γίγνεται, ἦν λέγομεν ὕλην τὸ δὲ ὑφ' οὗ τῶν φύσει τι ὄντων τὸ δὲ τί ἄνθρωπος ἢ φυτὸν ἢ ἄλλο τι τῶν τοιούτων, ἃ δὴ μάλιστα 20 λέγομεν οὐσίας εἶναι. ἅπαντα δὲ τὰ γιγνώμενα ἢ φύσει ἢ τέχνῃ ἔχει ὕλην· δυνατὸν γὰρ καὶ εἶναι καὶ μὴ εἶναι ἕκαστον αὐτῶν, τοῦτο δ' ἐστὶν ἢ<sup>1</sup> ἐν τῷ ἐκάστω ὕλη. καθόλου δὲ καὶ ἐξ οὗ φύσις καὶ καθ' ὃ φύσις· τὸ γὰρ γιγνώμενον ἔχει φύσιν, οἷον φυτὸν ἢ ζῶον καὶ ὑφ' οὗ ἢ κατὰ τὸ 25 εἶδος λεγομένη φύσις ἢ ὁμοειδῆς (αὕτη δὲ ἐν

<sup>1</sup> ἢ om. A<sup>b</sup> Asclepius

dividual thing and its essence are one and the same

It is obvious that the sophistical objections to this thesis are met in the same way as the question whether "Socrates" is the same as "being Sociates"; for there is no difference either in the grounds for asking the question or in the means of meeting it successfully. We have now explained in what sense the essence is, and in what sense it is not, the same as the individual thing.

VII. Of things which are generated, some are generated naturally, others artificially, and others spontaneously; but everything which is generated is generated by something and from something and becomes something. When I say "becomes something" I mean in any of the categories; it may come to be either a particular thing or of some quantity or quality or in some place.

Natural generation is the generation of things whose generation is by nature. That from which they are generated is what we call matter, that by which, is something which exists naturally; and that which they become is a man or a plant or something else of this kind, which we call substance in the highest degree. All things which are generated naturally or artificially have matter; for it is possible for each one of them both to be and not to be, and this possibility is the matter in each individual thing. And in general both that from which and that in accordance with which they are generated, is nature; for the thing generated, e.g. plant or animal, has a nature. And that by which they are generated is the so-called "formal" nature, which has the same form as the thing generated

<sup>a</sup> ἄλλω). ἄνθρωπος γὰρ ἄνθρωπον γεννᾷ. Οὕτω  
 μὲν οὖν γίγνεται τὰ γιγνόμενα διὰ τὴν φύσιν, αἱ  
 δ' ἄλλαι γενέσεις λέγονται ποιήσεις πᾶσαι δὲ  
 εἰσὶν αἱ ποιήσεις ἢ ἀπὸ τέχνης ἢ ἀπὸ δυνάμεως  
 ἢ ἀπὸ διανοίας. τούτων δὲ τινες γίνονται καὶ  
 0 ἀπὸ ταυτομάτου καὶ ἀπὸ τύχης παραπλησίως  
 ὥσπερ ἐν τοῖς ἀπὸ φύσεως γιγνομένοις· ἔνια  
 γὰρ κακεῖ ταυτὰ καὶ ἐκ σπέρματος γίγνεται καὶ  
 ἄνευ σπέρματος περὶ μὲν οὖν τούτων ὕστερον  
 b ἐπισκεπτέον. Ἐκ τῆς τέχνης δὲ γίγνεται ὅσων  
 τὸ εἶδος ἐν τῇ ψυχῇ· εἶδος δὲ λέγω τὸ τί ἦν εἶναι  
 ἐκάστου καὶ τὴν πρώτην οὐσίαν καὶ γὰρ τῶν  
 ἐναντίων τρόπον τινὰ τὸ αὐτὸ εἶδος· τῆς γὰρ  
 στερήσεως οὐσία ἢ οὐσία ἢ ἀντικειμένη, οἷον  
 5 ὑγίεια νόσου· ἐκείνης γὰρ ἀπουσία<sup>1</sup> ἢ νόσος, ἢ δὲ  
 ὑγίεια ὁ ἐν τῇ ψυχῇ λόγος καὶ ἢ ἐπιστήμη<sup>2</sup>  
 γίγνεται δὴ<sup>3</sup> τὸ ὑγιὲς νοήσαντος οὕτως· ἐπειδὴ  
 τοδὶ ὑγίεια, ἀνάγκη, εἰ ὑγιὲς ἔσται, τοδὶ ὑπάρξει,  
 οἷον ὀμαλότητα, εἰ δὲ τοῦτο, θερμότητα· καὶ  
 οὕτως αἰεὶ νοεῖ ἕως ἂν ἀγάγη εἰς τοῦτο ὁ αὐτὸς  
 0 δύναιται ἔσχατον ποιεῖν. εἶτα ἤδη ἢ ἀπὸ τούτου  
 κίνησις ποιήσις καλεῖται, ἢ ἐπὶ τὸ ὑγιαίνειν.  
 ὥστε συμβαίνει τρόπον τινὰ τὴν ὑγίειαν ἐξ ὑγιείας<sup>4</sup>  
 γίνεσθαι καὶ τὴν οἰκίαν ἐξ οἰκίας, τῆς ἄνευ ὕλης  
 τὴν ἔχουσαν ὕλην· ἢ γὰρ ἰατρικὴ ἔστι καὶ ἢ  
 οἰκοδομικὴ τὸ εἶδος τῆς ὑγιείας καὶ τῆς οἰκίας·

<sup>1</sup> ἀπουσία A<sup>b</sup> ἀπουσία δηλοῦται

<sup>2</sup> ἢ ἐπιστήμη: ἐν τῇ ἐπιστήμῃ EJ.

<sup>3</sup> δὲ A<sup>b</sup> Asclepius.

<sup>4</sup> τὴν ὑγίειαν ἐξ ὑγιείας· ἐξ ὑγιείας τὴν ὑγίειαν EJ.

<sup>a</sup> e.g. fish (*Hist. An* 569 a 11) and insects (*ibid* 539 a 24).

<sup>b</sup> In c. ix.

<sup>c</sup> The logical connexion is It is sufficient to say that the

(although it is in something else); for man begets man

Such is the generation of things which are naturally generated; the other kinds of generation are called <sup>Produ</sup> productions. All productions proceed from either art or potency or thought. Some of them are also <sup>4</sup> generated spontaneously and by chance in much the same way as things which are naturally generated; for sometimes even in the sphere of nature the same things are generated both from seed and without it.<sup>a</sup> We shall consider cases of this kind later.<sup>b</sup>

Things are generated artificially whose form is contained in the soul (by "form" I mean the essence of each thing, and its primary substance); for even <sup>5</sup> contraries have in a sense the same form.<sup>c</sup> For the substance of the privation is the opposite substance; *e.g.*, health is the substance of disease; for disease is the absence of health, and health is the formula and knowledge in the soul. Now the healthy subject is produced as the result of this reasoning: since health is so-and-so, if the subject is to be healthy, it must have such-and-such a quality, *e.g.* homogeneity; and if so, it must have heat. And the physician <sup>6</sup> continues reasoning until he arrives at what he himself finally can do; then the process from this point onwards, *i.e.* the process towards health, is called "production." Therefore it follows in a sense that health comes from health and a house from a house; that which has matter from that which has not (for the art of medicine or of building is the *form* of health form of objects which are artificially produced is contained in the soul, for although artificial production can produce contrary effects, the form of the positive effect is the absence of the form of the negative effect, so that in a sense they have the same form.

ἔγω δὲ οὐσίαν ἄνευ ὕλης τὸ τί ἦν εἶναι. Τῶν  
 ἐ γενέσεων καὶ κινήσεων ἢ μὲν νόησις καλεῖται  
 ἢ δὲ ποίησις, ἢ μὲν ἀπὸ τῆς ἀρχῆς καὶ τοῦ εἶδους  
 ὁησις, ἢ δ' ἀπὸ τοῦ τελευταίου τῆς νοήσεως  
 ποίησις. ὁμοίως δὲ καὶ τῶν ἄλλων τῶν μεταξὺ  
 καστον γίγνεται. λέγω δ' οἶον εἰ ὑγιανεῖ, δέοι ἂν  
 ὀμαλυνθῆναι τί οὖν ἐστὶ τὸ ὀμαλυνθῆναι, τοδί  
 οὔτο δ' ἐσται εἰ θερμανθήσεται τοῦτο δὲ τί  
 ἐστι; τοδί· ὑπάρχει δὲ τοδί<sup>1</sup> δυνάμει, τοῦτο δὲ  
 ἤδη ἐπ' αὐτῷ. Τὸ δὴ ποιοῦν καὶ ὅθεν ἀρχεται  
 ἢ κίνησις τοῦ ὑγιαίνειν, ἐὰν μὲν ἀπὸ τέχνης, τὸ  
 ἴδος ἐστὶ τὸ ἐν τῇ ψυχῇ, ἐὰν δ' ἀπὸ ταυτομάτου,  
 ἢ πὸ τούτου ὃ ποτε τοῦ ποιεῖν ἀρχεῖ τῷ ποιοῦντι  
 ἢ πὸ τέχνης, ὥσπερ καὶ ἐν τῷ ἰατρεύειν ἴσως ἀπὸ  
 τοῦ θερμαίνειν ἢ ἀρχῇ· τοῦτο δὲ ποιεῖ τῇ τρίψει·  
 ἢ θερμότης τοίνυν ἢ ἐν τῷ σώματι ἢ μέρος τῆς  
 ὑγείας ἢ ἐπεταί τι αὐτῇ τοιοῦτον ὃ ἐστὶ μέρος  
 τῆς ὑγείας, ἢ διὰ πλειόνων τοῦτο δ' ἐσχατον, τὸ  
 τοιοῦν καὶ τὸ οὕτως μέρος<sup>2</sup> τῆς ὑγείας, — καὶ  
 τῆς οἰκίας, οἶον οἱ λίθοι, καὶ τῶν ἄλλων· ὥστε  
 καθάπερ λέγεται, ἀδύνατον γενέσθαι εἰ μηδὲν  
 τρουπάρχον ὅτι μὲν οὖν τι μέρος ἐξ ἀνάγκης  
 ὑπάρξει, φανερόν· ἢ γὰρ ὕλη μέρος ἐνυπάρχει γὰρ  
 καὶ γίγνεται αὕτη. ἀλλ' ἄρα<sup>3</sup> καὶ τῶν ἐν τῷ  
 λόγῳ; ἀμφοτέρως δὴ<sup>4</sup> λέγομεν τοὺς χαλκοῦς

<sup>1</sup> τοδί A<sup>b2</sup> γρ EJT Alexander: τῷδι EA<sup>b1</sup> Asclepius

<sup>2</sup> καὶ τὸ οὕτως μέρος Shute· καὶ τὸ οὕτως μέρος ἐστὶ EJT: καὶ  
 . . ἐστὶν ὕλη Christ: τὸ μέρος A<sup>b</sup> Alexander.

<sup>3</sup> ἄρα Asclepius, Bessarion: ἄρα.

<sup>4</sup> Bullinger: δὲ.

<sup>a</sup> There is no real analogy between the causal relationship of heat to health and of stones to a house. The former is both material and efficient; the latter only material. Cf. x. 1.

or the house). By substance without matter I mean the essence.

In generations and motions part of the process is called cogitation, and part production—that which proceeds from the starting-point and the form is cogitation, and that which proceeds from the conclusion of the cogitation is production. Each of the other intermediate measures is carried out in the same way. I mean, *e g.* that if A is to be healthy, his physical condition will have to be made uniform. What, then, does being made uniform entail? So-and-so; and this will be achieved if he is made hot. What does this entail? So-and-so; now this is potentially present, and the thing is now in his power.

The thing which produces, and from which the process of recovering health begins, is the form in the soul, if the process is artificial; if spontaneous, it is whatever is the starting-point of the production for the artificial producer; as in medical treatment the starting-point is, perhaps, the heating of the patient; and this the doctor produces by friction. Heat in the body, then, is either a part of health, or is followed (directly or through several intermediaries) by something similar which is a part of health. This is the ultimate thing, namely that produces, and in this sense is a part of, health—or of the house (in the form of stones)<sup>a</sup> or of other things. Therefore, as we say, generation would be impossible if nothing were already existent. It is clear, then, that some part must necessarily pre-exist; because the matter is a part, since it is matter which pre-exists in the product and becomes something. But then is matter part of the formula? Well, we define

κλους τί εἰσι, καὶ τὴν ὕλην λέγοντες ὅτι χαλκός, ἰ τὸ εἶδος ὅτι σχῆμα τοιόνδε, καὶ τοῦτό ἐστι γένος εἰς ὃ πρῶτον τίθεται. ὁ δὴ χαλκοῦς κλος ἔχει ἐν τῷ λόγῳ τὴν ὕλην ἐξ οὗ δὲ ὡς ἦς γίνεταί ἕνια λέγεται, ὅταν γένηται, οὐκ εἶνο ἀλλ' ἐκείνινον, οἷον ὁ ἀνδριάς οὐ λίθος ἀλλὰ ἴλιος ὁ δὲ ἄνθρωπος ὁ ὑγιαίνων οὐ λέγεται εἶνο ἐξ οὗ αἴτιον δὲ ὅτι γίνεταί ἐκ τῆς στεσεως καὶ τοῦ ὑποκειμένου ὃ λέγομεν τὴν ὕλην, οὐ καὶ ὁ ἄνθρωπος καὶ ὁ κάμνων γίνεταί κής· μᾶλλον μέντοι λέγεται γίνεσθαι ἐκ τῆς ἐρήσεως, οἷον ἐκ κάμνοντος ὑγιῆς, ἢ ἐξ ἀνθρώπου διὸ κάμνων μὲν ὁ<sup>1</sup> ὑγιῆς οὐ λέγεται, ἄνθρωπος, καὶ<sup>2</sup> ἄνθρωπος ὑγιῆς. ὦν δ' ἡ στέρησις ἴηλος καὶ ἀνώνυμος, οἷον ἐν χαλκῷ σχήματος τοιοῦτον ἢ ἐν πλίνθοις καὶ ξύλοις οἰκίας, ἐκ ἰύτων δοκεῖ γίνεσθαι ὡς ἐκεῖ ἐκ κάμνοντος. ὁ ὡσπερ οὐδ' ἐκεῖ ἐξ οὗ τοῦτο ἐκείνο οὐ λέγεται, ἰδ' ἐνταῦθα ὁ ἀνδριάς ξύλον, ἀλλὰ παράγεται ἴλιος, οὐ ξύλον, καὶ χαλκοῦς ἀλλ' οὐ χαλκός, οὐ λίθινος ἀλλ' οὐ λίθος, καὶ ἡ οἰκία πλινθίνη ἢ οὐ πλίνθοι, ἐπεὶ οὐδὲ ὡς ἐκ ξύλου γίνεταί ἀνδριάς ἢ ἐκ πλίνθων οἰκία, εἰάν τις ἐπιβλέπη βόδρα,<sup>3</sup> οὐκ ἂν ἀπλῶς εἴποι,<sup>4</sup> διὰ τὸ δεῖν μετα-

<sup>1</sup> ὁ om A<sup>v</sup> Asclepius

<sup>2</sup> καὶ Asclepius καὶ ὁ.

<sup>3</sup> ἐπιβλέπη σφύδρα σφύδρα ἐπιβλέπη A<sup>b</sup>Γ.

εἴποι Alexander, Asclepius· εἴποιε E εἴπειε J· εἶπε A<sup>b</sup>.



bronze circles in both ways ; we describe the matter as bronze, and the form as such-and-such a shape ; and this shape is the proximate genus in which the circle is placed The bronze circle, then, has its matter in its formula Now as for that from which, as matter, things are generated, some things when they are generated are called not "so-and-so," but "made of so-and-so" ; *e g* , a statue is not called stone, but made of stone. But the man who becomes healthy is not called after that from which he becomes healthy This is because the generation proceeds from the privation and the substrate, which we call matter (*e g* , both "the man" and "the invalid" become healthy), but it is more properly said to proceed from the privation ; *e g* , a man becomes healthy from being an invalid rather than from being a man Hence a healthy person is not called an invalid, but a man, and a healthy man But where the privation is obscure and has no name—*e g* in bronze the privation of any given shape, or in bricks and wood the privation of the shape of a house—the generation is considered to proceed from these materials, as in the former case from the invalid. Hence just as in the former case the subject is not called that from which it is generated, so in this case the statue is not called wood, but is called by a verbal change not wood, but wooden ; not bronze, but made of bronze ; not stone, but made of stone ; and the house is called not bricks, but made of bricks For if we consider the matter carefully, we should not even say without qualification that a statue is generated from wood, or a house from bricks ; because that from which a thing

But it is more properly said to p

11  
ceed from the privation

12

βάλλοντος γίνεσθαι ἐξ οὗ, ἀλλ' οὐχ ὑπομένοντος.  
διὰ μὲν οὖν τοῦτο οὕτως λέγεται.

VIII Ἐπεὶ δὲ ὑπὸ τινός τε γίνεται τὸ γιγνόμενον  
τοῦτο δὲ λέγω ὅθεν ἢ ἀρχὴ τῆς γενέσεώς ἐστι  
καὶ ἔκ τινος (ἔστω δὲ μὴ ἢ στέρησις τοῦτο ἀλλ'  
ἢ ὕλη· ἥδη γὰρ διώρισται ὃν τρόπον τοῦτο λέγομεν)  
καὶ τί<sup>1</sup> γίνεται (τοῦτο δ' ἐστὶν ἢ σφαῖρα ἢ κύκλος  
ἢ ὅ τι ἔτυχε τῶν ἄλλων), ὥσπερ οὐδὲ τὸ ὑποκεί-  
μενον ποιεῖ τὸν χαλκόν, οὕτως οὐδὲ τὴν σφαῖραν,  
εἰ μὴ κατὰ συμβεβηκός, ὅτι ἢ χαλκῇ σφαῖρα  
σφαῖρά ἐστιν, ἐκείνην δὲ ποιεῖ. τὸ γὰρ τότε τι  
ποιεῖν ἐκ τοῦ ὅλως ὑποκειμένου τότε τι ποιεῖν  
ἐστὶν λέγω δ' ὅτι τὸν χαλκόν στρογγύλον ποιεῖν  
ἐστὶν οὐ τὸ στρογγύλον ἢ τὴν σφαῖραν ποιεῖν,  
ἀλλὰ ἕτερόν τι, οἷον τὸ εἶδος τοῦτο ἐν ἄλλῳ. εἰ  
γὰρ ποιεῖ, ἔκ τινος ἂν ποιοίῃ ἄλλου· τοῦτο γὰρ  
ὑπέκειτο. οἷον ποιεῖ χαλκῇν σφαῖραν· τοῦτο δὲ  
οὕτως ὅτι ἐκ τουδί, ὃ ἐστὶ χαλκός, τοδὶ ποιεῖ, ὃ  
ἐστὶ σφαῖρα. εἰ οὖν καὶ τοῦτο ποιεῖ αὐτό, δῆλον  
ὅτι ὡσαύτως ποιήσει, καὶ βαδιοῦνται αἱ γενέσεις  
εἰς ἄπειρον. Φανερόν ἄρα ὅτι οὐδὲ τὸ εἶδος, ἢ  
ὀτιδὴποτε χρὴ καλεῖν τὴν ἐν τῷ αἰσθητῷ μορφήν,  
οὐ γίνεται, οὐδ' ἔστιν αὐτοῦ γένεσις, οὐδὲ τὸ τί  
ἦν εἶναι· τοῦτο γὰρ ἐστὶν ὃ ἐν ἄλλῳ γίνεται ἢ  
ὑπὸ τέχνης ἢ ὑπὸ φύσεως ἢ δυνάμεως. τὸ δὲ  
χαλκῇν σφαῖραν εἶναι ποιεῖ· ποιεῖ γὰρ ἐκ χαλκοῦ

<sup>1</sup> τί Alexander, Bonitz: δ.

is generated should not persist, but be changed. This, then, is why we speak in this way.

VIII. Now since that which is generated is generated *by* something (by which I mean the starting-point of the process of generation), and *from* something (by which let us understand not the privation but the matter; for we have already distinguished the meanings of these), and *becomes* something (*i.e.* a sphere or circle or whatever else it may be); just as the craftsman does not produce the substrate, *i.e.* the bronze, so neither does he produce the sphere; except accidentally, inasmuch as the bronze sphere is a sphere, and he makes the former. For to make an individual thing is to make it out of the substrate in the fullest sense. I mean that to make the bronze round is not to make the round or the sphere, but something else; *i.e.* to produce this form in another medium. For if we make the form, we must make it out of something else; for this has been assumed<sup>a</sup> *Eg*, we make a bronze sphere; we do this in the sense that from A, *i.e.* bronze, we make B, *i.e.* a sphere. If, then, we make the spherical form itself, clearly we shall have to make it in the same way; and the processes of generation will continue to infinity.

It is therefore obvious that the form (or whatever we should call the shape in the sensible thing) is not generated—generation does not apply to it—nor is the essence generated; for this is that which is induced in something else either by art or by nature or by potency. But we do cause a bronze sphere to be, for we produce it from bronze and a sphere; we induce the form into this particular matter, and the result is a bronze sphere. But if

Neither form nor matter generate but only combinations of the two

13 b

10 καὶ σφαίρας· εἰς τοδὶ γὰρ τὸ εἶδος ποιεῖ, καὶ ἔστι  
 τοῦτο σφαῖρα χαλκῆ τοῦ δὲ σφαῖρα εἶναι ὄλως  
 εἰ ἔστι γένεσις, ἔκ τινος τὶ ἔσται δεήσει γὰρ  
 διαιρετὸν εἶναι αἰεὶ τὸ γιγνόμενον, καὶ εἶναι τὸ  
 μὲν τόδε τὸ δὲ τόδε, λέγω δ' ὅτι τὸ μὲν ὕλην τὸ  
 δὲ εἶδος εἰ δὴ ἔστι σφαῖρα τὸ ἐκ τοῦ μέσου  
 15 σχῆμα ἴσον, τούτου τὸ μὲν ἐν ᾧ ἔσται ὃ ποιεῖ,  
 τὸ δ' ἐν ἐκείνῳ, τὸ δὲ ἅπαν τὸ γεγονός, οἷον ἢ  
 χαλκῆ σφαῖρα φανερόν δὴ ἐκ τῶν εἰρημένων  
 ὅτι τὸ μὲν ὡς εἶδος ἢ οὐσία λεγόμενον οὐ γίνεταί,  
 ἢ δὲ σύνολος<sup>1</sup> ἢ κατὰ ταύτην λεγομένη γίνεταί,  
 καὶ ὅτι ἐν παντὶ τῷ γεννωμένῳ<sup>2</sup> ὕλη ἔνεστι, καὶ  
 20 ἔστι τὸ μὲν τόδε τὸ δὲ τόδε. Πότερον οὖν ἔστι  
 τις σφαῖρα παρὰ τάσδε ἢ οἰκία παρὰ τὰς πλίνθους;  
 ἢ οὐδ' ἂν ποτε ἐγίγνετο, εἰ οὕτως ἦν, τόδε τι,  
 ἀλλὰ τὸ τοιόνδε σημαίνει, τόδε δὲ καὶ ὠρισμένον  
 οὐκ ἔστιν, ἀλλὰ ποιεῖ καὶ γεννᾷ ἐκ τοῦδε τοιόνδε  
 καὶ ὅταν γεννηθῆ, ἔστι τόδε τοιόνδε τὸ δὲ ἅπαν  
 25 τόδε Καλλίας ἢ Σωκράτης ἐστὶν ὥσπερ ἢ σφαῖρα  
 ἢ χαλκῆ ἠδί, ὃ δ' ἄνθρωπος καὶ τὸ ζῶον ὥσπερ  
 σφαῖρα χαλκῆ ὄλως Φανερόν ἄρα ὅτι ἢ τῶν  
 εἰδῶν αἰτία, ὡς εἰώθασί τινες λέγειν τὰ εἶδη, εἰ  
 ἔστιν ἅττα παρὰ τὰ καθ' ἕκαστα, πρὸς γε<sup>3</sup> τὰς  
 γενέσεις καὶ τὰς οὐσίας οὐθὲν χρήσιμη<sup>4</sup> οὐδ' ἂν  
 εἶεν διὰ γε ταῦτα οὐσίαι καθ' αὐτάς. ἐπὶ μὲν

<sup>1</sup> σύνολος Jaeger: σύνοδος

<sup>2</sup> γεννωμένῳ EJ. γενομένῳ A<sup>b</sup>: γινομένῳ comm

<sup>3</sup> τε EJ Asclepius.

<sup>4</sup> χρήσιμη A<sup>b</sup> χρήσιμα.

<sup>a</sup> If forms are self-subsistent substances, individual substances cannot be generated from them; for the individual contains the form, but one substance cannot contain another actually existing substance (ch. XIII 8) Form, however, is not a substance but a characteristic.

the essence of sphere in general is generated, something must be generated from something; for that which is generated will always have to be divisible, and be partly one thing and partly another; I mean partly matter and partly form. If then a sphere is the figure whose circumference is everywhere equidistant from the centre, part of this will be the medium in which that which we produce will be contained, and part will be in that medium; and the whole will be the thing generated, as in the case of the bronze sphere. It is obvious, then, from what we have said, that the thing in the sense of form or essence is not generated, whereas the concrete whole which is called after it is generated; and that in everything that is generated matter is present, and one part is matter and the other form.

Is there then some sphere besides the particular spheres, or some house besides the bricks? Surely no individual thing would ever have been generated if form had existed thus independently.<sup>a</sup> Form means "of such a kind"; it is not a definite individual, but we produce or generate from the individual something "of such a kind"; and when it is generated it is an individual "of such a kind." The whole individual, Callias or Socrates, corresponds to "this bronze sphere," but "man" and "animal" correspond to bronze sphere in general.

Obviously therefore the cause which consists of the Forms (in the sense in which some speak of them, assuming that there are certain entities besides particulars), in respect at least of generation and destruction, is useless; nor, for this reason at any rate, should they be regarded as self-subsistent substances. Indeed in some cases it is even obvious

133 b

30 δὴ τιῶν καὶ φανερόν ὅτι τὸ γεννῶν τοιοῦτον μὲν οἶον τὸ γεννώμενον, οὐ μέντοι τὸ αὐτό γε, οὐδ' ἐν τῷ ἀριθμῷ ἀλλὰ τῷ εἶδει, οἶον ἐν τοῖς φυσικοῖς (ἄνθρωπος γὰρ ἄνθρωπον γεννᾷ) ἂν μὴ τι παρὰ φύσιν γένηται, οἶον ἵππος ἡμίονον. καὶ ταῦτα δὲ ὁμοίως· ὁ γὰρ ἂν κοινὸν εἶη ἐφ' ἵππου καὶ  
 134 a ὄνου οὐκ ὠνόμασται, τὸ ἐγγυτάτα γένος, εἶη δ' ἂν ἄμφω ἴσως οἶον ἡμίονος. Ὡστε φανερόν ὅτι οὐθέν δεῖ ὡς παράδειγμα εἶδος κατασκευάζειν (μάλιστα γὰρ ἂν ἐν τούτοις ἐπεξητοῦντο· οὐσίαι γὰρ αἱ μάλιστα αὐταί), ἀλλὰ ἱκανὸν τὸ γεννῶν  
 5 ποιῆσαι καὶ τοῦ εἶδους αἴτιον εἶναι ἐν τῇ ὕλῃ. τὸ δ' ἅπαν ἤδη, τὸ τοιόνδε εἶδος ἐν ταῖσδε ταῖς σαρκί καὶ ὀστοῖς, Καλλίας καὶ Σωκράτης· καὶ ἕτερον μὲν διὰ τὴν ὕλην, ἕτερα γάρ· ταῦτό δὲ τῷ εἶδει· ἄτομον γὰρ τὸ εἶδος.

IX. Ἀπορήσειε δ' ἂν τις διὰ τί τὰ μὲν γίγνεται καὶ  
 10 τέχνη καὶ ἀπὸ ταυτομάτου, οἶον ὑγίεια, τὰ δ' οὐ, οἶον οἰκία. αἴτιον δὲ ὅτι τῶν μὲν ἡ ὕλη ἡ ἄρχουσα τῆς γενέσεως ἐν τῷ ποιεῖν καὶ γίγνεσθαι τι τῶν ἀπὸ τέχνης, ἐν ἣ ὑπάρχει τι μέρος τοῦ πράγματος, ἡ μὲν τοιαύτη ἐστὶν οἷα κινεῖσθαι ὑφ' αὐτῆς, ἡ δ' οὐ, καὶ ταύτης ἡ μὲν ὠδί οἷα τε, ἡ δὲ ἀδύνατος·  
 15 πολλὰ γὰρ δύναται μὲν ὑφ' αὐτῶν κινεῖσθαι ἀλλ' οὐχ ὠδί, οἶον ὀρχήσασθαι. ὄσων οὖν τοιαύτη ἡ ὕλη, οἶον οἱ λίθοι, ἀδύνατον ὠδί κινηθῆναι εἰ μὴ

<sup>a</sup> Normally the sire communicates his form to the offspring. In the case of a mule, the material element contributed by the dam, which is an ass, limits the effect of the formal element contributed by the sire, which is a horse, but even so the form of the sire is generically the same as that of the offspring.

that that which generates is of the same kind as that which is generated—not however identical with it, nor numerically one with it, but formally one—*e.g.* in natural productions (for man begets man), unless something happens contrary to nature, as when a horse sires a mule. And even these cases are similar; for that which would be common to both horse and ass, the genus immediately above them, has no name; but it would probably be both, just as the mule is both.<sup>a</sup>

Thus obviously there is no need to set up a form as a pattern (for we should have looked for Forms in these cases especially, since living things are in a special sense substances); the thing which generates is sufficient to produce, and to be the cause of the form in the matter. The completed whole, such-and-such a form induced in this flesh and these bones, is Callias or Socrates. And it is different from that which generated it, because the matter is different; but identical in form, because the form is indivisible.

IX. The question might be raised why some things are generated both artificially and spontaneously—*e.g.* health—and others not; *e.g.* a house. The reason is that in some cases the matter—which is the starting-point of the process in the production and generation of artificial things, and in which some part of the result is already existent—is such that it can initiate its own motion, and in other cases it is not; and of the former kind some can initiate motion in a particular way, and some cannot. For many things can move themselves, but not in a particular way, *e.g.* so as to dance. It is impossible, then, for <sup>2</sup> any things whose matter is of this kind (*e.g.* stones) to be moved in *this* particular way except by some-

1034 a

ὑπ' ἄλλου, ὡδὶ μέντοι ναί· καὶ τὸ πῦρ διὰ τοῦτο  
 τὰ μὲν οὐκ ἔσται ἄνευ τοῦ ἔχοντος τὴν τέχνην,  
 τὰ δὲ ἔσται ὑπὸ γὰρ τούτων κινήθησεται τῶν  
 20 οὐκ ἔχόντων μὲν τὴν τέχνην, κινεῖσθαι δὲ δυνα-  
 μένων αὐτῶν, ἢ ὑπ' ἄλλων οὐκ ἔχόντων τὴν τέχνην,  
 ἢ ἐκ μέρους. Δῆλον δ' ἐκ τῶν εἰρημένων καὶ ὅτι  
 τρόπον τινα πάντα γίνεται ἐξ ὁμωνύμου, ὥσπερ  
 τὰ φύσει, ἢ ἐκ μέρους ὁμωνύμου (οἶον ἢ οἰκία ἐξ  
 οἰκίας, ἢ<sup>1</sup> ὑπὸ νοῦ ἢ γὰρ τέχνη τὸ εἶδος) [ἢ ἐκ  
 25 μέρους]<sup>2</sup> ἢ ἔχοντός τι μέρος, εἰ μὴ κατὰ συμ-  
 βεβηκὸς γίνηται τὸ γὰρ αἴτιον τοῦ ποιεῖν πρῶτον  
 καθ' αὐτὸ μέρος. θερμότης γὰρ ἢ ἐν τῇ κινήσει  
 θερμότητα ἐν τῷ σώματι ἐποίησεν αὕτη δ' ἐστὶν  
 ἢ ὑγεία ἢ μέρος, ἢ ἀκολουθεῖ αὐτῇ μέρος τι τῆς  
 ὑγείας ἢ αὕτη ἢ ὑγεία· διὸ καὶ λέγεται ποιεῖν, ὅτι  
 30 ἐκεῖνο ποιεῖ [τὴν ὑγείαν]<sup>3</sup> ᾧ ἀκολουθεῖ καὶ συμ-  
 βέβηκε [θερμότης].<sup>4</sup> ὥστε ὥσπερ ἐν τοῖς συλ-  
 λογισμοῖς πάντων ἀρχὴ ἢ οὐσία (ἐκ γὰρ τοῦ τί  
 ἐστὶν οἱ συλλογισμοὶ εἰσι), ἐνταῦθα δὲ αἱ γενέσεις.  
 Ὅμοίως δὲ καὶ τὰ φύσει συνιστάμενα τούτοις ἔχει.  
 τὸ μὲν γὰρ σπέρμα ποιεῖ ὥσπερ τὰ ἀπὸ τέχνης ἔχει  
 1034 b γὰρ δυνάμει τὸ εἶδος, καὶ ἀφ' οὗ τὸ σπέρμα ἐστί  
 πως ὁμώνυμον (οὐ γὰρ πάντα οὕτω δεῖ ζητεῖν ὡς

<sup>1</sup> ἢ Robin· ἢ<sup>2</sup> Ross.<sup>3</sup> om. Alexander, secl. Bonitz.<sup>4</sup> Jaeger.

<sup>a</sup> Stones can fall by themselves, but cannot by themselves build a house; fire can rise by itself, but cannot boil a kettle.

<sup>b</sup> e.g., health can be produced as the result of the activity set up by heat in the body.



thing else ; but in *that* particular way it is possible. And it is so with fire <sup>a</sup> For this reason some things cannot exist apart from the possessor of the art, and others can , because the motion can be initiated by those things which do not indeed possess the art, but can themselves be moved either by other things which do not possess the art, or by the motion from the part of the product which pre-exists in them <sup>b</sup>

It is clear also from what we have said that in a <sup>3</sup> sense all artificial things are generated either from something which bears the same name (as is the case with natural objects) or from a part of themselves which bears the same name as themselves (e.g. a house from a house, inasmuch as it is generated by mind ; for the art is the form), or from something which contains some part , that is if the generation is not accidental ; for the direct and independent cause of the production is a part of the product. Heat in the motion produces heat in the body , and <sup>4</sup> either this is health or a part of health, or a part of health or health accompanies it. And this is why heat is said to produce health, because it produces that of which health is a concomitant and consequence. Therefore as essence is the starting-point of everything in syllogisms (because syllogisms start from the "what" of a thing), so too generation proceeds from it

And it is the same with natural formations as it is <sup>5</sup> with the products of art. For the seed produces just as do those things which function by art. It contains the form potentially, and that from which the seed comes has in some sense the same name as the product (for we must not expect that all should have

1034 b

- ἐξ ἀνθρώπου ἄνθρωπος· καὶ γὰρ γυνή ἐξ ἀνδρός)  
 ἐὰν μὴ πῆρωμα ἦ<sup>1</sup>. διὸ ἡμίονος οὐκ ἐξ ἡμίονου.
- 5 Ὅσα δὲ ἀπὸ ταυτομάτου ὥσπερ ἐκεῖ γίνεταί,  
 ὅσων ἢ ὑλὴ δύναται καὶ ὑφ' αὐτῆς κινεῖσθαι ταύτην  
 τὴν κίνησιν ἣν τὸ σπέρμα κινεῖ· ὅσων δὲ μὴ, ταῦτα  
 ἀδύνατα γίνεσθαι ἄλλως πως ἢ ἐξ αὐτῶν. Οὐ  
 μόνον δὲ περὶ τῆς οὐσίας ὁ λόγος δηλοῖ τὸ μὴ  
 γίνεσθαι τὸ εἶδος, ἀλλὰ περὶ πάντων ὁμοίως τῶν
- 10 πρώτων κοινὸς ὁ λόγος, οἷον ποσοῦ ποιοῦ καὶ τῶν  
 ἄλλων κατηγοριῶν. γίνεταί γὰρ ὥσπερ ἢ χαλκῆ  
 σφαῖρα, ἀλλ' οὐ σφαῖρα οὐδὲ χαλκός, καὶ ἐπὶ  
 χαλκοῦ, εἰ γίνεταί (ἀεὶ γὰρ δεῖ προυπάρχειν τὴν  
 ὑλὴν καὶ τὸ εἶδος), οὕτως καὶ ἐπὶ τοῦ τί ἐστὶ καὶ  
 ἐπὶ τοῦ ποιοῦ καὶ ποσοῦ καὶ τῶν ἄλλων ὁμοίως
- 15 κατηγοριῶν· οὐ γὰρ γίνεταί τὸ ποιὸν ἀλλὰ τὸ  
 ποιὸν ξύλον, οὐδὲ τὸ ποσὸν ἀλλὰ τὸ ποσὸν ξύλον  
 ἢ ζῶον. ἀλλ' ἴδιον τῆς οὐσίας ἐκ τούτων λαβεῖν  
 ἐστὶν ὅτι ἀνάγκη προυπάρχειν ἑτέραν οὐσίαν  
 ἐντελεχεία οὖσαν ἢ ποιεῖ, οἷον ζῶον εἰ γίνεταί  
 ζῶον· ποιὸν δὲ ἢ ποσὸν οὐκ ἀνάγκη ἀλλ' ἢ δυνάμει  
 μόνον.
- 20 X. Ἐπεὶ δὲ ὁ<sup>2</sup> ὀρισμὸς λόγος ἐστὶ, πᾶς δὲ λόγος  
 μέρη ἔχει, ὡς δὲ ὁ λόγος πρὸς τὸ πρᾶγμα, καὶ τὸ  
 μέρος τοῦ λόγου πρὸς τὸ μέρος τοῦ πράγματος  
 ὁμοίως ἔχει, ἀπορεῖται ἤδη πότερον δεῖ τὸν τῶν  
 μερῶν λόγον ἐνυπάρχειν ἐν τῷ τοῦ ὅλου λόγῳ ἢ οὐ.

<sup>1</sup> ἐὰν . . . ἢ hic posuit Ross: habent codd. post ἡμίονου.  
 ἐὰν A<sup>b</sup> comm.: ἀλλ' ἐὰν.

<sup>2</sup> ὁ om. EJ

<sup>a</sup> The questions discussed in chs x-xii arise out of the consideration of essence as definition.

the same name in the sense that "man" is produced by "man"—since woman is also produced by man); unless the product is a freak. This is why a mule is not produced by a mule.

Those natural objects which are produced, like 6 artificial objects, spontaneously, are those whose matter can also initiate for itself that motion which the seed initiates. Those whose matter cannot do this cannot be generated otherwise than by their proper parents.

It is not only with reference to substance that our argument shows that the form is not generated; 7 the same argument is common in its application to all the primary divisions, *z. e.* quantity, quality and the other categories. For just as the bronze sphere is generated, but not the sphere nor the bronze; 8 and as in the case of bronze, if it is generated the form and matter are not (because they must always pre-exist), so it is too with the "what" and the quality and quantity and the other categories similarly; for it is not the quality that is generated, but the wood of that quality; nor is it the size, but the wood or animal of that size. But a peculiarity 9 of substance may be gathered from this: that some other substance must pre-exist in actuality which produces it; *e. g.* an animal, if an animal is being generated; but a quality or quantity need not pre-exist otherwise than potentially.

X. Since a definition is a formula, and every formula has parts; and since the formula is related to the thing in the same way as the part of the formula to the part of the thing, the question <sup>a</sup> now arises: Must the formula of the parts be contained in the formula of the whole, or not? It seems clear that

## ARISTOTLE

ἐπ' ἐνίων<sup>1</sup> μὲν γὰρ φαίνονται ἐνόητες,<sup>2</sup> ἐνίων δ' οὐ.  
 τοῦ μὲν γὰρ κύκλου ὁ λόγος οὐκ ἔχει τὸν τῶν τμη-  
 μάτων, ὁ δὲ τῆς συλλαβῆς ἔχει τὸν τῶν στοιχείων  
 καίτοι διαιρεῖται καὶ ὁ κύκλος εἰς τὰ τμήματα ὡς-  
 περ καὶ ἡ συλλαβὴ εἰς τὰ στοιχεῖα. Ἔτι δὲ  
 εἰ πρότερα τὰ μέρη τοῦ ὅλου, τῆς δὲ ὀρθῆς ἢ ὀξεία  
 μέρος καὶ ὁ δάκτυλος τοῦ ζώου, πρότερον ἂν εἴη  
 ἢ ὀξεία τῆς ὀρθῆς καὶ ὁ δάκτυλος τοῦ ἀνθρώπου  
 δοκεῖ δ' ἐκεῖνα εἶναι πρότερα· τῷ λόγῳ γὰρ λέ-  
 γονται ἐξ ἐκείνων, καὶ τῷ εἶναι δὲ ἄνευ ἀλλήλων  
 πρότερα ἢ πολλαχῶς λέγεται τὸ μέρος, ὧν εἰς  
 μὲν τρόπος τὸ μετροῦν κατὰ τὸ ποσόν. ἀλλὰ  
 τοῦτο μὲν ἀφείσθω· ἐξ ὧν δὲ ἡ οὐσία ὡς μερῶν,  
 τοῦτο σκεπτέον. Εἰ οὖν ἐστὶ τὸ μὲν ὕλη τὸ δὲ  
 εἶδος τὸ δ' ἐκ τούτων, καὶ οὐσία ἢ τε ὕλη καὶ τὸ  
 εἶδος καὶ τὸ ἐκ τούτων, ἔστι μὲν ὡς καὶ ἡ ὕλη  
 μέρος τινὸς λέγεται, ἔστι δ' ὡς οὐ, ἀλλ' ἐξ ὧν ὁ  
 τοῦ εἶδους λόγος. οἶον τῆς μὲν κοιλότητος οὐκ  
 ἔστι μέρος ἢ σὰρξ (αὕτη γὰρ ἢ ὕλη ἐφ' ἧς γίνε-  
 ται), τῆς δὲ σιμότητος μέρος· καὶ τοῦ μὲν συνόλου  
 ἀνδριάντος μέρος ὁ χαλκός, τοῦ δ' ὡς εἶδους  
 λεγομένου ἀνδριάντος οὐ. λεκτέον γὰρ τὸ εἶδος  
 καὶ ἡ εἶδος ἔχει ἕκαστον, τὸ δ' ὑλικὸν οὐδέποτε  
 καθ' αὐτὸ λεκτέον. διὸ ὁ μὲν τοῦ κύκλου λόγος  
 οὐκ ἔχει τὸν τῶν τμημάτων, ὁ δὲ τῆς συλλαβῆς

<sup>1</sup> ἐπ' ἐνίων A<sup>b</sup> Asclepius: ἐνίων.

<sup>2</sup> ἐνόητος J· ἐνόητα recc.

it is so in some cases, but not in others. The formula <sup>2</sup> of the circle does not include that of the segments, but the formula of the syllable includes that of the letters. And yet the circle is divisible into its segments in just the same way as the syllable into its letters

Again, if the parts are prior to the whole, and the acute angle is part of the right angle, and the finger part of the animal, the acute angle will be prior to the right angle, and the finger to the man. But it <sup>3</sup> is considered that the latter are prior; for in the formula the parts are explained from them, and the wholes are prior also in virtue of their ability to exist independently. The truth probably is that "part" has several meanings, one of which is "that which measures in respect of quantity." However, let us dismiss this question and consider of what, in the sense of parts, substance consists.

If then matter, form, and the combination of the <sup>4</sup> two are distinct, and if both matter and form and their combination are substance, there is one sense in which even matter may be called "part" of a thing; and another in which it is not, but the only parts are those elements of which the formula of the form consists. *E g.*, flesh is not a part of concavity, because flesh is the matter in which concavity is induced; but it is a part of snubness. And bronze is part of the statue as a concrete whole, but not of the statue in the sense of form. We may speak of <sup>5</sup> the form (or the thing as having a form) as an individual thing, but we may never so speak of that which is material by itself. This is why the formula of the circle does not contain that of the segments, whereas the formula of the syllable does contain

185 a τὸν τῶν στοιχείων· τὰ μὲν γὰρ στοιχεῖα τοῦ λόγου  
 μέρη τοῦ εἴδους καὶ οὐχ ὕλη, τὰ δὲ τμήματα οὕτως  
 μέρη ὡς ὕλη ἐφ' ἧς<sup>1</sup> ἐπιγίγνεται ἐγγυτέρω μέντοι  
 τοῦ εἴδους ἢ ὁ χαλκός, ὅταν ἐν χαλκῷ ἢ στρογ-  
 γυλότης ἐγγένηται ἔστι δ' ὡς οὐδὲ τὰ στοιχεῖα  
 15 πάντα τῆς συλλαβῆς ἐν τῷ λόγῳ ἐνέσται, οἷον ταδὶ  
 τὰ κήρινα ἢ τὰ ἐν τῷ ἀέρι ἤδη γὰρ καὶ ταῦτα  
 μέρος τῆς συλλαβῆς ὡς ὕλη αἰσθητή. καὶ γὰρ ἡ  
 γραμμὴ οὐκ εἰ διαιρουμένη εἰς τὰ ἡμίση φθείρεται,  
 ἢ ὁ ἄνθρωπος εἰς τὰ ὀστά καὶ νεῦρα καὶ σάρκας,  
 20 διὰ τοῦτο καὶ εἰσὶν ἐκ τούτων οὕτως ὡς ὄντων τῆς  
 οὐσίας μερῶν, ἀλλ' ὡς ἐξ ὕλης, καὶ τοῦ μὲν  
 συνόλου μέρη, τοῦ εἴδους δὲ καὶ οὐδ' ὁ λόγος οὐκέτι  
 διόπερ οὐδ' ἐν τοῖς λόγοις. τῶν μὲν οὖν ἐνέσται  
 ὁ τῶν τοιούτων μερῶν λόγος, τῶν δ' οὐ δεῖ ἐνεῖναι,  
 ἂν μὴ ἢ τοῦ συνειλημμένου διὰ γὰρ τοῦτο ἔνια μὲν  
 25 ἐκ τούτων ὡς ἀρχῶν ἔστιν εἰς ἃ φθείρονται, ἔνια  
 δ' οὐκ ἔστιν. ὅσα μὲν οὖν συνειλημμένα τὸ εἶδος  
 καὶ ἡ ὕλη ἐστίν, οἷον τὸ σιμὸν ἢ ὁ χαλκοῦς κύκλος,  
 ταῦτα μὲν φθείρεται εἰς ταῦτα, καὶ μέρος αὐτῶν  
 ἡ ὕλη ὅσα δὲ μὴ συνειληπται τῇ ὕλει ἀλλὰ ἄνευ  
 ὕλης, ὧν οἱ λόγοι τοῦ εἴδους μόνον, ταῦτα δ' οὐ  
 30 φθείρεται, ἢ ὅλως ἢ οὔτοι οὔτω γε. ὥστ' ἐκείνων  
 μὲν ἀρχαὶ καὶ μέρη ταῦτα<sup>2</sup> τοῦ δὲ εἴδους οὔτε  
 μέρη οὔτε ἀρχαί.<sup>3</sup> καὶ διὰ τοῦτο φθείρεται ὁ

<sup>1</sup> ἧς Jaeger: οἷς.

<sup>2</sup> ταῦτα A<sup>b</sup> Alexander (?): τὰ ὑφ' αὐτὰ E J Γ τὰ ὑφ' αὐτῶν  
 Asclepius: τὰ ὑλικὰ Bonitz.

<sup>3</sup> ἀρχαὶ A<sup>b</sup> Alexander ἀρχαὶ ταῦτα E J Γ.

<sup>a</sup> i.e. written on a waxed tablet.

that of the letters ; for the letters are parts of the formula of the form ; they are not matter ; but the segments are parts in the sense of matter in which the form is induced They approximate, however, more closely to the form than does the bronze when roundness is engendered in bronze But there is 6 a sense in which not even all the letters will be contained in the formula of the syllable ; e g. particular letters on wax<sup>a</sup> or sounds in the air ; for these too are part of the syllable in the sense that they are its sensible matter For even if the line is divided and 7 resolved into its halves, or if the man is resolved into bones and muscles and flesh, it does not follow that they are composed of these as parts of their essence, but as their matter ; and these are parts of the concrete whole, but not of the form, or that to which the formula refers. Hence they are not in the formulae. Accordingly in some cases the formula 8 will include the formula of such parts as the above, but in others it need not necessarily contain their formula, unless it is the formula of the concrete object It is for this reason that some things are composed of parts in the sense of principles into which they can be resolved, while others are not All things 9 which are concrete combinations of form and matter (e g “ the snub ” or the bronze circle) can be resolved into form and matter, and the matter is a part of them ; but such as are not concrete combinations with matter, but are without matter—whose formulae refer to the form only—cannot be resolved ; either not at all, or at least not in this way. Thus these 10 material components are principles and parts of the concrete objects, but they are neither parts nor principles of the form. For this reason the clay

- 185 a πῆλινος ἀνδριάς εἰς πηλὸν καὶ ἡ σφαῖρα εἰς χαλκὸν  
καὶ ὁ Καλλίας εἰς σάρκα καὶ ὀστᾶ, ἔτι δὲ ὁ κύκλος  
εἰς τὰ τμήματα· ἔστι γάρ τι ὃ συνείληπται τῇ  
35 b ὕλη ὁμωνύμως γὰρ λέγεται κύκλος ὃ τε ἀπλῶς  
λεγόμενος καὶ ὁ καθ' ἕκαστα, διὰ τὸ μὴ εἶναι ἴδιον  
ὄνομα τοῖς καθ' ἕκαστον. Εἴρηται μὲν οὖν καὶ  
νῦν τὸ ἀληθές, ὅμως δ' ἔτι σαφέστερον εἴπωμεν  
5 ἐπαναλαβόντες ὅσα μὲν γὰρ τοῦ λόγου μέρη καὶ  
εἰς ἃ διαιρεῖται ὁ λόγος, ταῦτα πρότερα, ἢ πάντα ἢ  
ἓνια· ὁ δὲ τῆς ὀρθῆς λόγος οὐ διαιρεῖται εἰς ὀξείας  
λόγον, ἀλλ' <ὁ><sup>1</sup> τῆς ὀξείας εἰς ὀρθὴν χρῆται γὰρ  
ὁ ὀρίζομενος τὴν ὀξείαν τῇ ὀρθῇ· ἐλάττων γὰρ  
ὀρθῆς ἢ ὀξεία. ὁμοίως δὲ καὶ ὁ κύκλος καὶ τὸ  
10 ἡμικύκλιον ἔχουσιν· τὸ γὰρ ἡμικύκλιον τῷ κύκλῳ  
ὀρίζεται, καὶ ὁ δάκτυλος τῷ ὄλῳ· τὸ γὰρ τοιόνδε  
μέρος ἀνθρώπου δάκτυλος ὥσθ' ὅσα μὲν μέρος  
ὡς ὕλη καὶ εἰς ἃ διαιρεῖται ὡς ὕλην, ὕστερα ὅσα  
δὲ ὡς τοῦ λόγου καὶ τῆς οὐσίας τῆς κατὰ τὸν λόγον,  
πρότερα, ἢ πάντα ἢ ἓνια. ἐπεὶ δὲ ἡ τῶν ζώων  
15 ψυχὴ (τοῦτο γὰρ οὐσία τοῦ ἐμψύχου) ἢ κατὰ τὸν  
λόγον οὐσία καὶ τὸ εἶδος καὶ τὸ τί ἦν εἶναι τῷ  
τοιῶδε σώματι (ἕκαστον γοῦν τὸ μέρος εἰς ὀρί-  
ζεται καλῶς, οὐκ ἄνευ τοῦ ἔργου ὀριεῖται, ὃ οὐχ  
ὑπάρξει ἄνευ αἰσθήσεως), ὥστε τὰ ταύτης μέρος  
πρότερα, ἢ πάντα ἢ ἓνια, τοῦ συνόλου ζώου, καὶ  
20 καθ' ἕκαστον δὴ ὁμοίως τὸ δὲ σῶμα καὶ τὰ τού-

<sup>1</sup> ἀλλ' <ὁ> ex Alexandro (?) Ross ἀλλὰ

<sup>a</sup> Which implies soul.



statue can be resolved into clay, and the sphere into bronze, and Callias into flesh and bones, and the circle too into segments, because it is something which is combined with matter. For we use the same name for the absolute circle and for the particular circle, since there is no special name for the particular circles

We have now stated the truth ; nevertheless let 11  
 us recapitulate and state it more clearly All constituents which are parts of the formula, and into which the formula can be divided, are prior to their wholes—either all or some of them But the formula of the right angle is not divisible into the formula of an acute angle, but *vice versa* ; since in defining the acute angle we use the right angle, because “ the acute angle is less than a right angle ” It is the 12  
 same with the circle and the semicircle ; for the semicircle is defined by means of the circle And the finger is defined by means of the whole body ; for a finger is a particular kind of part of a man. Thus such parts as are material, and into which the whole is resolved as into matter, are posterior to the whole ; but such as are parts in the sense of parts of the formula and of the essence as expressed in the formula, are prior ; either all or some of them And 13  
 since the soul of animals (which is the substance of the living creature) is their substance in accordance with the formula, and the form and essence of that particular kind of body (at least each part, if it is to be properly defined, will not be defined apart from its function ; and this will not belong to it apart from perception <sup>a</sup>) ; therefore the parts of the soul are prior, either all or some of them, to the concrete animal ; and similarly in other individual cases. But 14

<sup>1</sup> <sup>b</sup> του μόρια ὕστερα ταύτης τῆς οὐσίας, καὶ διαιρεῖται εἰς ταῦτα ὡς εἰς ὕλην οὐχ ἡ οὐσία ἀλλὰ τὸ σύνολον. τοῦ μὲν οὖν συνόλου πρότερα ταῦτ' ἔστιν ὡς, ἔστι δ' ὡς οὐ οὐδὲ γὰρ εἶναι δύναται χωριζόμενα· οὐδὲ γὰρ ὁ πάντως ἔχων δάκτυλος ζώου, ἀλλ' <sup>25</sup> ὁμώνυμος ὁ τεθνεώς. ἔνια δὲ ἅμα, ὅσα κύρια καὶ ἐν ᾧ πρώτῳ ὁ λόγος καὶ ἡ οὐσία, οἷον εἰ τοῦτο καρδία ἢ ἐγκέφαλος διαφέρει γὰρ οὐθὲν πότερον τοιοῦτον ὁ δ' ἄνθρωπος καὶ ὁ ἵππος καὶ τὰ οὕτως ἐπὶ τῶν καθ' ἕκαστα, καθόλου δέ, οὐκ ἔστιν οὐσία, <sup>30</sup> ἀλλὰ σύνολόν τι ἐκ τουδὶ τοῦ λόγου καὶ τησδὶ τῆς ὕλης ὡς καθόλου· καθ' ἕκαστον δ' ἐκ τῆς ἐσχάτης ὕλης ὁ Σωκράτης ἤδη ἐστίν, καὶ ἐπὶ τῶν ἄλλων ὁμοίως.

Μέρος μὲν οὖν ἐστὶ καὶ τοῦ εἶδους (εἶδος δὲ λέγω τὸ τί ἦν εἶναι) καὶ τοῦ συνόλου τοῦ ἐκ τοῦ εἶδους καὶ τῆς ὕλης <καὶ τῆς ὕλης><sup>1</sup> αὐτῆς. ἀλλὰ τοῦ λόγου μέρη τὰ τοῦ εἶδους μόνον ἐστίν, ὁ δὲ <sup>1</sup> <sup>a</sup> λόγος ἐστὶ τοῦ καθόλου· τὸ γὰρ κύκλω εἶναι καὶ κύκλος καὶ ψυχῇ εἶναι καὶ ψυχῇ ταυτό τοῦ δὲ συνόλου ἤδη, οἷον κύκλου τουδί, τῶν καθ' ἕκαστά τινος ἢ αἰσθητοῦ ἢ νοητοῦ (λέγω δὲ νοητοὺς μὲν οἷον τοὺς μαθηματικούς, αἰσθητοὺς δὲ οἷον τοὺς <sup>5</sup> χαλκοῦς καὶ τοὺς ξυλίνους), τούτων δὲ οὐκ ἔστιν ὀρισμός, ἀλλὰ μετὰ νοήσεως ἢ αἰσθήσεως γνωρίζονται ἀπελθόντες<sup>2</sup> δὲ ἐκ τῆς ἐντελεχείας οὐ δῆλον πότερον<sup>3</sup> εἰσὶν ἢ οὐκ εἰσὶν, ἀλλ' ἀεὶ λέγονται

<sup>1</sup> Bonitz<sup>2</sup> ἀπελθόντας recc<sup>3</sup> πότερόν ποτε EJT<sup>a</sup> Cf. V. 1. 1.<sup>b</sup> i.e., something very similar to the Platonic "intermediates." Cf. *Introd.* pp. xxiii f.

the body and its parts are posterior to this substance, and it is not the substance, but the concrete whole, which is resolved into these parts as into matter. Therefore in one sense these parts are prior to the concrete whole, and in another not; for they cannot exist in separation. A finger cannot in every state be a part of a living animal; for the dead finger has only the name in common with the living one. Some 15 parts are contemporary with the whole: such as are indispensable and in which the formula and the essence are primarily present; *e g.* the heart or perhaps the brain,<sup>a</sup> for it does not matter which of them is of this nature. But "man" and "horse" and terms which are applied in this way to individuals, but universally, are not substance, but a kind of concrete whole composed of *this* particular formula and *this* particular matter regarded as universal. But individually Socrates is already composed of ultimate matter; and similarly in all other cases.

A part, then, may be part of the form (by form I 16 mean essence), or of the concrete whole composed of form and matter, or of the matter itself. But only the parts of the form are parts of the formula, and the formula refers to the universal; for "circle" is the same as "essence of circle," and "soul" the same as "essence of soul." But when we come to the 17 concrete thing, *e g.* *this* circle—which is a particular individual, either sensible or intelligible (by intelligible circles I mean those of mathematics,<sup>b</sup> and by sensible those which are of bronze or wood)—of these individuals there is no definition, we apprehend 18 them by intelligence or perception; and when they have passed from the sphere of actuality it is uncertain whether they exist or not, but they are

<sup>a</sup> καὶ γνωρίζονται τῷ καθόλου λόγῳ· ἢ δ' ὕλη ἄγνωστος καθ' αὐτήν ὕλη δὲ ἢ μὲν αἰσθητὴ ἐστὶν ἢ δὲ νοητὴ, αἰσθητὴ μὲν οἶον χαλκὸς καὶ ξύλον καὶ ὄση κινητὴ ὕλη, νοητὴ δὲ ἢ ἐν τοῖς αἰσθητοῖς ὑπάρχουσα μὴ ἢ αἰσθητά, οἶον τὰ μαθηματικά.

Πῶς μὲν οὖν ἔχει περὶ ὅλου καὶ μέρους, καὶ περὶ τοῦ προτέρου καὶ ὑστέρου, εἴρηται. πρὸς δὲ τὴν ἐρώτησιν ἀνάγκη ἀπαντᾶν, ὅταν τις ἔρηται πότερον ἢ ὀρθὴ καὶ ὁ κύκλος καὶ τὸ ζῶον πρότερον, ἢ εἰς ἅ διαιροῦνται καὶ ἐξ ὧν εἰσὶ, τὰ μέρη, ὅτι οὐχ ἀπλῶς. εἰ μὲν γάρ ἐστι καὶ ἡ ψυχὴ ζῶον ἢ<sup>1</sup> ἔμφυχον, ἢ ἕκαστον ἢ<sup>2</sup> ἐκάστου, καὶ κύκλος τὸ κύκλω εἶναι, καὶ<sup>3</sup> ὀρθὴ τὸ ὀρθῇ εἶναι καὶ ἡ οὐσία ἢ τῆς ὀρθῆς, τί μὲν καὶ τινὸς φατέον ὕστερον, οἶον τῶν ἐν τῷ λόγῳ καὶ τινὸς ὀρθῆς (καὶ γὰρ ἢ μετὰ τῆς ὕλης, ἢ χαλκῇ ὀρθῇ, καὶ ἢ ἐν ταῖς γραμμαῖς ταῖς καθ' ἕκαστα), ἢ δ' ἄνευ ὕλης τῶν μὲν ἐν τῷ λόγῳ ὑστέρα, τῶν δ' ἐν τῷ καθ' ἕκαστα μορίων προτέρα ἀπλῶς δ' οὐ φατέον εἰ δ' ἕτερα καὶ μὴ ἐστὶν ἢ ψυχὴ ζῶον, καὶ οὕτω τὰ μὲν φατέον τὰ δ' οὐ φατέον, ὥσπερ εἴρηται

XI Ἀπορεῖται δὲ εἰκότως καὶ ποῖα τοῦ εἶδους μέρη καὶ ποῖα οὐ, ἀλλὰ τοῦ συνειλημμένου. καίτοι τούτου μὴ δήλου ὄντος οὐκ ἔστιν ὀρίσασθαι ἕκαστον· τοῦ γὰρ καθόλου καὶ τοῦ εἶδους ὁ ὀρισμός·

<sup>1</sup> ἢ codd Alexander om recc ἢ Christ

<sup>2</sup> ἢ J γρ. E

<sup>3</sup> καὶ ἢ EJ.

<sup>a</sup> See XIII II., III.

always spoken of and apprehended by the universal formula. But the matter is in itself unknowable. Some matter is sensible and some intelligible; sensible, such as bronze and wood and all movable matter; intelligible, that which is present in sensible things not *qua* sensible, *e g.* the objects of mathematics.<sup>a</sup>

We have now discussed the case of the whole and 19  
part, and of prior and posterior. But we must In  
answer the question, when we are asked which is ca.  
prior—the right angle and circle and animal, or that wh  
into which they are resolved and of which they are pr  
composed, *i e.* their parts—by saying that neither pa  
is *absolutely* prior. For if the soul also *is* the animal ot  
or living thing, or the soul of the individual *is* the wh  
individual, and “being a circle” *is* the circle, and 20  
“being a right angle” or the essence of the right  
angle *is* the right angle, then we must admit that the  
whole in one sense is posterior to the part in one  
sense *e g.* to the parts in the formula and the parts  
of a particular right angle (since both the material 21  
right angle of bronze and the right angle included  
by individual lines are posterior to their parts), but  
the immaterial angle is posterior to the parts in the  
formula, but prior to the parts in the individual. We  
must not give an unqualified answer. And if the  
soul is not the animal but something else, even so we  
must say that some wholes are prior and some are  
not, as has been stated.

XI. The question naturally presents itself, what Re  
sort of parts belong to the form and what sort belong m.  
not to it but to the concrete object. Yet if this is elc  
not plain it is impossible to define the particular; fo  
because the definition refers to the universal and the co  
ot

<sup>a</sup> ποῖα οὖν ἐστὶ τῶν μερῶν ὡς ὕλη καὶ ποῖα  
<sup>0</sup> οὐ, ἐὰν μὴ ἦ φανερά, οὐδὲ ὁ λόγος ἔσται φανερός  
 ὁ τοῦ πράγματος ὅσα μὲν οὖν φαίνεται ἐπι-  
 γιγνόμενα ἐφ' ἐτέρων τῶ εἶδει, οἷον κύκλος ἐν  
 χαλκῷ καὶ λίθῳ καὶ ξύλῳ, ταῦτα μὲν δῆλα εἶναι  
 δοκεῖ ὅτι οὐδὲν τῆς τοῦ κύκλου οὐσίας ὁ χαλκός  
 οὐδ' ὁ λίθος, διὰ τὸ χωρίζεσθαι αὐτῶν· ὅσα δὲ  
<sup>5</sup> μὴ ὁράται χωριζόμενα, οὐδὲν μὲν κωλύει ὁμοίως  
<sup>b</sup> ἔχειν τούτοις, ὥσπερ κἂν εἰ οἱ κύκλοι πάντες  
 ἐωρῶντο χαλκοῖ οὐδὲν γὰρ ἂν ἦττον ἦν ὁ χαλκός  
 οὐδὲν τοῦ εἶδους, χαλεπὸν δὲ ἀφελεῖν τοῦτον<sup>1</sup> τῆ  
 διανοίᾳ οἷον τὸ τοῦ ἀνθρώπου εἶδος αἰεὶ ἐν  
 σαρξὶ φαίνεται καὶ ὁστοῖς καὶ τοῖς τοιούτοις μέρε-  
<sup>5</sup> σιν· ἄρ' οὖν καὶ ἐστὶ ταῦτα μέρη τοῦ εἶδους καὶ  
 τοῦ λόγου; ἢ οὐ, ἀλλ' ὕλη, ἀλλὰ διὰ τὸ μὴ καὶ  
 ἐπ' ἄλλων ἐπιγίγνεσθαι ἀδυνατοῦμεν χωρίσαι;  
 ἐπεὶ δὲ τοῦτο δοκεῖ μὲν ἐνδέχεσθαι, ἀδηλον δὲ  
 πότε, ἀποροῦσί τινες ἤδη καὶ ἐπὶ τοῦ κύκλου καὶ  
<sup>0</sup> τοῦ τριγώνου, ὡς οὐ προσῆκον γραμμαῖς ὀρίζε-  
<sup>0</sup> σθαι καὶ τῶ συνεχεῖ, ἀλλὰ πάντα καὶ<sup>2</sup> ταῦτα  
 ὁμοίως λέγεσθαι ὡσανεὶ σάρκες καὶ<sup>3</sup> ὁστᾶ τοῦ  
 ἀνθρώπου καὶ χαλκός καὶ λίθος τοῦ ἀνδριάντος·  
 καὶ ἀνάγουσι πάντα εἰς τοὺς ἀριθμούς, καὶ γραμ-  
 μῆς τὸν λόγον τὸν τῶν δύο εἶναι φασί. καὶ τῶν  
 τὰς ιδέας λεγόντων οἱ μὲν αὐτογραμμὴν τὴν  
<sup>5</sup> δυάδα, οἱ δὲ τὸ εἶδος τῆς γραμμῆς· ἓνια μὲν γὰρ  
 εἶναι τὸ αὐτό<sup>4</sup> τὸ εἶδος καὶ οὐ τὸ εἶδος, οἷον  
 δυάδα καὶ τὸ εἶδος δυάδος· ἐπὶ γραμμῆς δὲ οὐκέτι.<sup>5</sup>

<sup>1</sup> τοῦτο E J Γ<sup>2</sup> om. E J Γ.<sup>3</sup> ἢ E J<sup>4</sup> ταῦτα E J.<sup>5</sup> οὐκ ἔστιν E.<sup>a</sup> The Pythagoreans<sup>b</sup> The distinction seems to be that given in VIII. III. 1.

form Therefore if it is not clear what kind of parts are material and what kind are not, the formula of the thing will not be clear either. In the case of 2 things which can be seen to be induced in specifically different materials, as, *e.g.*, a circle is in bronze and stone and wood, it seems clear that these things, the bronze and the stone, are in no sense part of the essential substance of the circle, because it is separable from them. As for things which are not visibly 3 separable, there is no reason why the same should not apply to them, *e.g.*, if all the circles that had ever been seen were bronze; for the bronze would be none the less no part of the form, but it is difficult to separate it in thought. For example, the 4 form of "man" is always manifested in flesh and bones and elements of this kind. then are these actually parts of the form and formula, or are they not so, but matter, though since the form is not induced in other materials, we cannot separate it? Now since this seems to be possible, but it is not clear 5 *when*, some thinkers <sup>a</sup> are doubtful even in the case of the circle and the triangle, considering that it is not proper to define them by lines and continuous space, but that all these are to the circle or triangle as flesh or bone is to man, and bronze or stone to the statue; and they reduce everything to numbers, and say that the formula of "line" is the formula of 2. And of the exponents of the Forms, some make 6 2 the Ideal line, and some the form of the line <sup>b</sup>; for they say that in some cases the form and that of which it is the form, *e.g.* 2 and the form of 2, are the same; but in the case of "line" this is no longer so.

Some held that the line, considered absolutely, is simply "twoness", others that it is "twoness in length."

3 b

συμβαίνει δὴ ἔν τε πολλῶν εἶδος εἶναι, ὧν τὸ  
 εἶδος φαίνεται ἕτερον, ὅπερ καὶ τοῖς Πυθαγο-  
 ρείοις συνέβαινεν· καὶ ἐνδέχεται ἔν πάντων ποιεῖν  
 20 αὐτὸ εἶδος, τὰ δ' ἄλλα μὴ εἶδη καίτοι οὕτως ἔν  
 πάντα ἔσται. Ὅτι μὲν οὖν ἔχει τινὰ ἀπορίαν τὰ  
 περὶ τοὺς ὀρισμούς, καὶ διὰ τίν' αἰτίαν, εἴρηται  
 διὸ καὶ τὸ πάντα ἀνάγειν οὕτω καὶ ἀφαιρεῖν τὴν  
 ὕλην περίεργον· ἕνια γὰρ ἴσως τόδ' ἔν τῷδ' ἐστίν,  
 ἢ ὡδὶ ταδὶ ἔχοντα. καὶ ἢ παραβολὴ ἢ ἐπὶ τοῦ  
 25 ζῶου ἦν εἰώθει λέγειν Σωκράτης ὁ νεώτερος οὐ  
 καλῶς ἔχει ἀπάγει γὰρ ἀπὸ τοῦ ἀληθοῦς, καὶ  
 ποιεῖ ὑπολαμβάνειν ὡς ἐνδεχόμενον εἶναι τὸν  
 ἄνθρωπον ἄνευ τῶν μερῶν, ὥσπερ ἄνευ τοῦ  
 χαλκοῦ τὸν κύκλον τὸ δ' οὐχ ὅμοιον· αἰσθητὸν  
 γάρ τι τὸ ζῶον, καὶ ἄνευ κινήσεως οὐκ ἔστιν  
 30 ὀρίσασθαι, διὸ οὐδ' ἄνευ τῶν μερῶν ἐχόντων πῶς.  
 οὐ γὰρ πάντως τοῦ ἀνθρώπου μέρος ἢ χεῖρ, ἀλλ'  
 ἢ δυναμένη τὸ ἔργον ἀποτελεῖν, ὥστε ἔμφυχος  
 οὔσα μὴ ἔμφυχος δὲ οὐ μέρος. Περὶ δὲ τὰ  
 μαθηματικά, διὰ τί οὐκ εἰσὶ μέρη οἱ λόγοι τῶν  
 λόγων, οἷον τοῦ κύκλου τὰ ἡμικύκλια; οὐ γάρ  
 35 ἐστὶν αἰσθητὰ ταῦτα. ἢ οὐδὲν διαφέρει, ἔσται  
 a γὰρ ὕλη ἐνίων καὶ μὴ αἰσθητῶν· καὶ παντὸς γὰρ  
 ὕλη τίς ἐστὶν ὃ μὴ ἐστὶ τί ἦν εἶναι καὶ εἶδος αὐτὸ  
 καθ' αὐτὸ ἀλλὰ τόδε τι κύκλου μὲν οὖν οὐκ  
 ἔσται τοῦ καθόλου, τῶν δὲ καθ' ἕκαστα ἔσται μέρη

<sup>a</sup> Cf. I. v 17

<sup>b</sup> In ch v

<sup>c</sup> A "disciple" of the great Socrates; one of the speakers in the *Politicus* and referred to in *Theaetetus* 147 c, *Sophist* 218 B.



It follows, then, that there is one form of many things 7  
 whose form is clearly different (a consequence which  
 confronted the Pythagoreans too<sup>a</sup>), and that it is  
 possible to make one supreme Form of everything,  
 and not to regard the rest as forms. In this way,  
 however, all things would be one.

Now we have stated that the question of definitions 8  
 involves some difficulty, and have shown why this is  
 so<sup>b</sup>. Hence to reduce everything in this way and to It is  
take  
to e  
mat  
alto  
 dispose of the matter is going too far; for some  
 things are presumably a particular form in particular  
 matter, or particular things in a particular state  
 And the analogy in the case of the living thing which 9  
 the younger Socrates<sup>c</sup> used to state is not a good from  
esse  
nati  
thin  
 one, for it leads one away from the truth, and makes  
 one suppose that it is possible for a man to exist  
 without his parts, as a circle does without the bronze.  
 But the case is not similar; for the animal is sensible  
 and cannot be defined without motion, and hence  
 not unless its parts are in some definite condition;  
 for it is not the hand in *any* condition that is a part 10  
 of a man, but only when it can perform its function,  
 and so has life in it. Without life in it it is not a part

And with respect to mathematical objects, why  
 are the formulae of the parts not parts of the formulae  
 of the whole; *e g.*, why are the formulae of the  
 semicircles not parts of the formula of the circle?<sup>d</sup>  
 for they are not sensible. Probably this makes no 11  
 difference; because there will be matter even of  
 some things which are not sensible. Indeed there  
 will be matter in some sense in everything which is  
 not essence or form considered independently, but a  
 particular thing. Thus the semicircles will be parts  
 not of the universal circle but of the particular circles,

<sup>1 a</sup> ταῦτα, ὡς περ εἴρηται πρότερον· ἔστι γὰρ ἡ ὕλη  
 5 ἢ μὲν αἰσθητὴ ἢ δὲ νοητὴ δῆλον δὲ καὶ ὅτι ἡ  
 μὲν ψυχὴ οὐσία ἢ πρώτη, τὸ δὲ σῶμα ὕλη, ὃ δ'  
 ἄνθρωπος ἢ τὸ ζῶον τὸ ἐξ ἀμφοῖν ὡς καθόλου·  
 Σωκράτης δὲ καὶ Κορίσκος, εἰ μὲν καὶ ἡ ψυχὴ  
 Σωκράτης,<sup>1</sup> διττόν (οἱ μὲν γὰρ ὡς ψυχὴν, οἱ δ'  
 ὡς τὸ σύνολον), εἰ δ' ἀπλῶς ἡ ψυχὴ ἦδε καὶ <τὸ><sup>2</sup>  
 10 σῶμα τὸδε, ὡς περ τὸ καθόλου <οὕτω><sup>3</sup> καὶ τὸ  
 καθ' ἕκαστον Πότερον δὲ ἔστι παρὰ τὴν ὕλην  
 τῶν τοιούτων οὐσιῶν τις ἄλλη, καὶ δεῖ ζητεῖν  
 οὐσίαν αὐτῶν ἑτέραν τινὰ οἷον ἀριθμούς ἢ τι  
 τοιοῦτον, σκεπτέον ὕστερον. τούτου γὰρ χάριν  
 καὶ περὶ τῶν αἰσθητῶν οὐσιῶν πειρώμεθα δι-  
 15 ορίζειν, ἐπεὶ τρόπον τινὰ τῆς φυσικῆς καὶ δευ-  
 τέρας φιλοσοφίας ἔργον ἢ περὶ τὰς αἰσθητὰς  
 οὐσίας θεωρία οὐ γὰρ μόνον περὶ τῆς ὕλης δεῖ  
 γνωρίζειν τὸν φυσικόν, ἀλλὰ καὶ τῆς κατὰ τὸν  
 λόγον, καὶ μᾶλλον ἐπὶ δὲ τῶν ὀρισμῶν πῶς  
 μέρη τὰ ἐν τῷ λόγῳ, καὶ διὰ τί εἷς λόγος ὁ  
 ὀρισμός (δῆλον γὰρ ὅτι τὸ πρᾶγμα ἓν, τὸ δὲ  
 20 πρᾶγμα τίνι ἓν, μέρη γε ἔχον,) σκεπτέον ὕστερον.  
 Τί μὲν οὖν ἐστὶ τὸ τί ἦν εἶναι καὶ πῶς  
 αὐτὸ καθ' αὐτό, καθόλου περὶ παντὸς εἴρηται,  
 καὶ διὰ τί τῶν μὲν ὁ λόγος ὁ τοῦ τί ἦν εἶναι  
 ἔχει τὰ μόρια τοῦ ὀριζομένου, τῶν δ' οὐ, καὶ  
 ὅτι ἐν μὲν τῷ τῆς οὐσίας λόγῳ τὰ οὕτω μόρια  
 25 ὡς ὕλη οὐκ ἐνέσται—οὐδὲ γὰρ ἔστιν ἐκείνης μόρια

<sup>1</sup> om. EJT Asclepius.<sup>2</sup> Aldine.<sup>3</sup> Apelt: τε codd. Asclepius: om. Alexander Aldine<sup>a</sup> Ch x 17.<sup>b</sup> In Books XIII. and XIV.<sup>c</sup> VIII vi.<sup>d</sup> Ch. iv.

as we said before <sup>a</sup>—for some matter is sensible, and some intelligible. It is clear also that the soul is the primary substance, and the body matter: and “man” or “animal” is the combination of both taken universally. And “Socrates” or “Coriscus” has a double sense, that is if the soul too can be called Socrates (for by Socrates some mean the soul and some the concrete person); but if Socrates means simply *this* soul and *this* body, the individual is composed similarly to the universal.

Whether there is some other material component of these substances besides their matter, and whether we should look for some further substance in them, such as numbers or something of that kind, must be considered later <sup>b</sup>. It is with a view to this that we are trying to determine the nature of sensible substances, since in a sense the study of sensible substances belongs to physics or secondary philosophy; for the physicist must know not only about the matter, but also about the substance according to the formula, this is even more essential. And in the case of definitions, in what sense the elements in the formula are parts of the definition, and why the definition is one formula (for the thing is clearly one, but in virtue of what is it one, seeing that it has parts <sup>?</sup>); this must be considered later <sup>c</sup>.

We have stated, then, in a general account which covers all cases, what essence is, and how it is independent <sup>d</sup>; and why the formula of the essence of some things contains the parts of the thing defined, while that of others does not; and we have shown that the material parts of a thing cannot be present in the formula of the substance (since they are not even parts of the substance in that sense, but of the

<sup>37 a</sup> τῆς οὐσίας ἀλλὰ τῆς συνόλου.<sup>1</sup> ταύτης δέ γ' ἔστι πως λόγος καὶ οὐκ ἔστιν· μετὰ μὲν γὰρ τῆς ὕλης οὐκ ἔστιν (ἀόριστον γάρ), κατὰ τὴν πρώτην δ' οὐσίαν ἔστιν, οἷον ἀνθρώπου ὃ τῆς ψυχῆς λόγος ἢ γὰρ οὐσία<sup>2</sup> ἐστὶ τὸ εἶδος τὸ ἐνόν, <sup>30</sup> ἔξ οὗ καὶ τῆς ὕλης ἢ σύνολος<sup>3</sup> λέγεται οὐσία· οἷον ἢ κοιλότης· ἐκ γὰρ ταύτης καὶ τῆς ῥινὸς σιμῆ ῥίς καὶ ἡ σιμότης ἐστί· δις γὰρ ἐν τούτοις ὑπάρξει ἡ ῥίς<sup>4</sup>—ἐν δὲ τῇ συνόλω οὐσία, οἷον ῥινὶ σιμῇ ἢ Καλλία, ἐνέσται καὶ ἡ ὕλη. καὶ ὅτι τὸ <sup>17 b</sup> τί ἦν εἶναι καὶ<sup>5</sup> ἕκαστον ἐπὶ τινῶν μὲν ταυτό, ὥσπερ ἐπὶ τῶν πρώτων οὐσιῶν· οἷον καμπυλότης καὶ καμπυλότητι εἶναι, εἰ πρώτη ἐστί λέγω δὲ πρώτην ἢ μὴ λέγεται τῷ ἄλλο ἐν ἄλλῳ εἶναι καὶ <sup>5</sup> ὑποκειμένῳ ὡς ὕλη<sup>6</sup>. ὅσα δ' ὡς ὕλη ἢ ὡς συνειλημμένα τῇ ὕλη, οὐ ταυτό, οὐδ' <εἰ><sup>7</sup> κατὰ συμβεβηκὸς ἔν, οἷον ὃ Σωκράτης καὶ τὸ μουσικόν ταῦτα γὰρ ταῦτα κατὰ συμβεβηκὸς.

XII. Νῦν δὲ λέγωμεν πρῶτον ἐφ' ὅσον ἐν τοῖς ἀναλυτικοῖς περὶ ὀρισμοῦ μὴ εἴρηται· ἢ γὰρ ἐν <sup>10</sup> ἐκείνοις ἀπορία λεχθεῖσα πρὸ ἔργου τοῖς περὶ τῆς οὐσίας ἐστὶ λόγοις. λέγω δὲ ταύτην τὴν ἀπορίαν, διὰ τί ποτε ἔν ἐστιν οὗ τὸν λόγον ὀρισμὸν εἶναι φάμεν, οἷον τοῦ ἀνθρώπου τὸ ζῶον δίπουν· ἔστω γὰρ οὗτος αὐτοῦ λόγος. διὰ τί δὴ τοῦτο ἔν ἐστιν ἄλλ' οὐ πολλά, ζῶον καὶ δίπουν; ἐπὶ μὲν γὰρ τοῦ

<sup>1</sup> T Aldine Alexander. συνόλης EA<sup>b</sup>J.

<sup>2</sup> γὰρ οὐσία EJ Asclepius. οὐσία γὰρ A<sup>b</sup> Alexander.

<sup>3</sup> σύνοδος A<sup>b</sup>.

<sup>4</sup> δις . . . ῥίς secl. Ross. <sup>5</sup> καὶ om. recc

<sup>6</sup> ὕλη A<sup>b</sup>

<sup>7</sup> οὐδ' εἰ Ross: οὐδὲ codd.

<sup>a</sup> Chs. x. xi, and cf. ch. v

<sup>b</sup> Ch. vi.

<sup>c</sup> An. Post. 92 a 29.

concrete substance ; and of this in one sense there is a formula, and in another sense there is not There is no formula involving the matter, for this is indeterminate ; but there is a formula in accordance with the primary substance, *e g* , in the case of a man, the formula of the soul ; because the substance is the indwelling form, of which and of the matter the so-called concrete substance is composed *E g* , concavity is such a form, since from this and “ nose ” is derived “ snub nose ” and “ snubness ”—for “ nose ” will be present twice over in these expressions) ; but in the concrete substance. *e g*. snub nose<sup>1</sup> or Callias, matter will be present too<sup>a</sup> We have stated also that the essence and the individual are in some cases the same, as in the case of the primary substances ; *e g*. crookedness and “ essence of crookedness,” if this is primary By primary I mean<sup>1</sup> that which does not imply the presence of something in something else as a material substrate. But such things as are material or are compounded with matter are not the same as their essence ; not even if they are accidentally one, *e g*. Socrates and “ cultured ” ; for these are only accidentally the same.<sup>b</sup>

XII. Now let us first deal with definition, in so far as it has not been dealt with in the *Analytics* ;<sup>t</sup> for the problem stated there<sup>c</sup> has a bearing upon<sup>d</sup> our discussion of substance. The problem I mean is<sup>a</sup> this : what constitutes the unity of the thing of which we say that the formula is a definition ? *E.g.*, in the case of man, “ two-footed animal ” ; for let us take this as the formula of “ man.” Why,<sup>2</sup> then, is this a unity and not a plurality, “ animal ” and “ two-footed ” ? For in the case of “ man ”

<sup>b</sup>  
 15 ἄνθρωπος καὶ λευκὸν πολλὰ μὲν ἔστιν ὅταν μὴ  
 ὑπάρχη θατέρω θάτερον, ἐν δὲ ὅταν ὑπάρχη καὶ  
 πάθῃ τι τὸ ὑποκείμενον ὁ ἄνθρωπος· τότε γὰρ ἐν  
 γίγνεται καὶ ἔστιν ὁ λευκὸς ἄνθρωπος ἐνταῦθα  
 δ' οὐ μετέχει θατέρου θάτερον, τὸ γὰρ γένος οὐ  
 δοκεῖ μετέχειν τῶν διαφορῶν ἅμα γὰρ ἂν τῶν  
 20 ἐναντίων τὸ αὐτὸ μετείχεν, αἱ γὰρ διαφοραὶ  
 ἐναντίαι, αἷς διαφέρει τὸ γένος εἰ δὲ καὶ μετέχει,  
 ὁ αὐτὸς λόγος, εἶπερ εἰσὶν αἱ διαφοραὶ πλείους,  
 οἷον πεζόν, δίπουν, ἄπτερον διὰ τί γὰρ ταῦθ'  
 ἐν ἄλλ' οὐ πολλά, οὐ γὰρ ὅτι ἐνυπάρχει· οὕτω  
 25 μὲν γὰρ ἐξ ἁπάντων ἔσται ἐν. δεῖ δέ γε ἐν εἶναι  
 ὅσα ἐν τῷ ὀρισμῷ· ὁ γὰρ ὀρισμὸς λόγος τίς ἔστιν  
 εἰς καὶ οὐσίας, ὥστε ἐνός τινος δεῖ αὐτὸν εἶναι  
 λόγον καὶ γὰρ ἢ οὐσία ἐν τι καὶ τόδε τι σημαίνει,  
 ὡς φαμέν.

Δεῖ δ' ἐπισκοπεῖν πρῶτον περὶ τῶν κατὰ τὰς  
 διαιρέσεις ὀρισμῶν. οὐδὲν γὰρ ἕτερόν ἐστιν ἐν  
 30 τῷ ὀρισμῷ πλήν τό τε πρῶτον λεγόμενον γένος  
 καὶ αἱ διαφοραί· τὰ δ' ἄλλα γένη ἐστὶ τό  
 τε πρῶτον καὶ μετὰ τούτου αἱ συλλαμβανόμεναι  
 διαφοραί, οἷον τὸ πρῶτον ζῶον, τὸ δὲ ἐχόμενον  
 ζῶον δίπουν, καὶ πάλιν ζῶον δίπουν ἄπτερον·  
 α ὁμοίως δὲ καὶ διὰ πλειόνων λέγεται ὅλως δ'  
 οὐδὲν διαφέρει διὰ πολλῶν ἢ δι' ὀλίγων λέγεσθαι,  
 ὥστ' οὐδὲ δι' ὀλίγων ἢ διὰ δυοῖν· τοῖν δυοῖν δὲ  
 τὸ μὲν διαφορὰ τὸ δὲ γένος, οἷον τοῦ ζῶον δίπουν

<sup>a</sup> The other type of definition, that which states the constituent parts of a thing, is not discussed here.

and "white" we have a plurality when the latter does not refer to the former, but a unity when it does refer to it, and the subject, "man," has an attribute; for then they become a unity and we have "the white man." But in the case before us <sup>3</sup> one term does not partake of the other; the genus is not considered to partake of its differentiae, for then the same thing would be partaking simultaneously of contraries, since the differentiae by which the genus is distinguished are contrary. And even if it does partake of them, the same argument applies, since the differentiae are many, *e.g.* terrestrial, two-footed, wingless. Why is it that these are a <sup>4</sup> unity and not a plurality? Not because they are present in one genus, for in that case all the differentiae of the genus will form a unity. But all the elements in the definition must form a unity, because the definition is a kind of formula which is one and defines substance, so that it must be a formula of one particular thing; because the substance denotes one thing and an individual, as we say.

We must first <sup>a</sup> examine definitions which are <sup>1</sup> reached by the process of division. For there is <sup>5</sup> nothing else in the definition but the primary genus and the differentiae; the other genera consist of the <sup>b</sup> primary genus together with the differentiae which <sup>d</sup> are taken with it. *E.g.*, the primary genus is "animal"; the next below it, "two-footed animal", and again, "two-footed wingless animal"; and similarly also if the expression contains more terms still. In general it does not matter whether it contains <sup>6</sup> many or few terms, nor, therefore, whether it contains few or two. Of the two one is differentia and the other genus; *e.g.*, in "two-footed animal"

<sup>1 a</sup>  
<sup>5</sup> τὸ μὲν ζῶον γένος, διαφορὰ δὲ θάτερον. εἰ οὖν  
 τὸ γένος ἀπλῶς μὴ ἔστι παρὰ τὰ ὡς γένους εἶδη,  
 ἢ εἰ ἔστι μὲν ὡς ὕλη δ' ἔστιν (ἢ μὲν γὰρ φωνὴ  
 γένος καὶ ὕλη, αἱ δὲ διαφοραὶ τὰ εἶδη καὶ τὰ  
 στοιχεῖα ἐκ ταύτης ποιουῦσιν), φανερόν ὅτι ὁ  
 ὀρισμὸς ἔστιν ὁ ἐκ τῶν διαφορῶν λόγος. Ἄλλὰ  
<sup>10</sup> μὴν καὶ δεῖ γε διαιρεῖσθαι τῇ τῆς διαφορᾶς δια-  
 φορᾶ,<sup>1</sup> οἷον ζῴου διαφορὰ τὸ ὑπόπουν· πάλιν τοῦ  
 ζῴου τοῦ ὑπόποδος τὴν διαφορὰν δεῖ εἰδέναι ἢ  
 ὑπόπουν. ὥστε οὐ λεκτέον τοῦ ὑπόποδος τὸ μὲν  
 πτερωτὸν τὸ δὲ ἄπτερον, ἐάνπερ λέγῃ καλῶς,  
 ἀλλὰ διὰ τὸ ἀδυνατεῖν ποιήσῃ τοῦτο· ἀλλ' ἢ τὸ  
<sup>15</sup> μὲν σχιζόπουν τὸ δ' ἄσχιστον· αὐταὶ γὰρ διαφοραὶ  
 ποδός ἢ γὰρ σχιζοποδία ποδότης τις. καὶ οὕτως  
 αἰεὶ βούλεται βαδίζειν ἕως ἂν ἔλθῃ εἰς τὰ ἀδιάφορα.  
 τότε δ' ἔσονται τοσαῦτα εἶδη ποδός ὅσαιπερ αἱ  
 διαφοραί, καὶ τὰ ὑπόποδα ζῶα ἴσα ταῖς διαφοραῖς.  
 εἰ δὴ ταῦτα οὕτως ἔχει, φανερόν ὅτι ἡ τελευταία  
<sup>20</sup> διαφορὰ ἢ οὐσία τοῦ πράγματος ἔσται καὶ ὁ  
 ὀρισμὸς, εἴπερ μὴ δεῖ πολλάκις ταῦτὰ λέγειν ἐν  
 τοῖς ὅροις· περιέργον γάρ. συμβαίνει δέ γε τοῦτο·  
 ὅταν γὰρ εἴπῃ ζῶον ὑπόπουν δίπουν, οὐδὲν ἄλλο  
 εἴρηκεν ἢ ζῶον πόδας ἔχον, δύο πόδας ἔχον· καὶ  
 τοῦτο διαιρῇ τῇ οἰκείᾳ διαιρέσει, πλεονάκις ἐρεῖ  
<sup>25</sup> καὶ ἰσάκις ταῖς διαφοραῖς. ἐὰν μὲν δὴ διαφορᾶς  
 διαφορὰ γίνηται, μία ἔσται ἡ τελευταία τὸ εἶδος

<sup>1</sup> τῇ . . . διαφορᾶ Joachim: τὴν . . . διαφορὰν.



“ animal ” is genus, and the other term differentia. If, then, the genus absolutely does not exist apart 7 from the species which it includes, or if it exists, but only as matter (for speech is genus and matter, and the differentiae make the species, *i e* the letters, out of it), obviously the definition is the formula composed of the differentiae

But further we must also divide by the differentia 8 of the differentia. *E g*, “ having feet ” is a differentia of “ animal ”, then in turn we must discover the differentia of “ animal having feet ” *qua* “ having feet ” Accordingly we should not say that of “ that which has feet ” one kind is winged and another wingless, (that is if we are to speak correctly ; if we say this it will be through incapability), but only that one kind is cloven-footed and another not ; because these are differentiae of “ foot,” since cloven-footedness is a kind of footedness. And thus we 9 tend always to progress until we come to the species which contain no differentiae. At this point there will be just as many species of foot as there are differentiae, and the kinds of animals having feet will be equal in number to the differentiae. Then, if this is so, obviously the ultimate differentia will be the substance and definition of the thing, since we need not state the same things more than once in definitions, because this is superfluous. However, 10 it does happen ; for when we say “ footed two-footed animal ” we have simply said “ animal having feet, having two feet.” And if we divide this by its proper division, we shall be stating the same thing several times, as many times as there are differentiae.

If, then, we keep on taking a differentia of a 1 differentia, one of them, the last, will be the form

8<sup>a</sup> καὶ ἡ οὐσία· ἐὰν δὲ κατὰ συμβεβηκός, οἶον εἰ  
 διαιροῖ τοῦ ὑπόποδος τὸ μὲν λευκὸν τὸ δὲ μέλαν,  
 τοσαῦται ὅσαι ἂν αἱ τομαὶ ὦσιν ὥστε φανερόν  
 ὅτι ὁ ὀρισμὸς λόγος ἐστὶν ὁ ἐκ τῶν διαφορῶν, καὶ  
 30 τούτων τῆς τελευταίας κατὰ γε τὸ ὀρθόν. δῆλον δ'  
 ἂν εἶη, εἴ τις μετατάξειε τοὺς τοιούτους ὀρισμούς,  
 οἶον τὸν τοῦ ἀνθρώπου, λέγων ζῶον δίπουν ὑπόπουν·  
 περιέργον γὰρ τὸ ὑπόπουν εἰρημένου τοῦ δίποδος.  
 τάξις δὲ οὐκ ἔστιν ἐν τῇ οὐσίᾳ πῶς γὰρ δεῖ νοῆσαι  
 τὸ μὲν ὕστερον τὸ δὲ πρότερον; Περὶ μὲν οὖν τῶν  
 35 κατὰ τὰς διαιρέσεις ὀρισμῶν τοσαῦτα εἰρήσθω  
 τῆν πρώτην, ποιοὶ τινές εἰσιν.

<sup>b</sup> XIII Ἐπεὶ δὲ περὶ τῆς οὐσίας ἡ σκέψις ἐστί, πάλιν  
 ἐπανέλθωμεν λέγεται δ' ὥσπερ τὸ ὑποκείμενον  
 οὐσία εἶναι καὶ τὸ τί ἦν εἶναι καὶ τὸ ἐκ τούτων καὶ  
 τὸ καθόλου περὶ μὲν οὖν τοῖν δυοῖν εἴρηται· καὶ  
 5 γὰρ περὶ τοῦ τί ἦν εἶναι καὶ τοῦ ὑποκειμένου, ὅτι  
 διχῶς ὑπόκειται, ἢ τόδε τι ὄν, ὥσπερ τὸ ζῶον τοῖς  
 πάθεσιν, ἢ ὡς ἡ ὕλη τῇ ἐντελεχείᾳ δοκεῖ δὲ καὶ  
 τὸ καθόλου αἰτιόν τισιν εἶναι μάλιστα, καὶ εἶναι  
 ἀρχὴ τὸ καθόλου· διὸ ἐπέλθωμεν καὶ περὶ τούτου.  
 ἔοικε γὰρ ἀδύνατον εἶναι οὐσίαν εἶναι ὅτι οὖν τῶν  
 10 καθόλου λεγομένων Πρῶτον<sup>1</sup> μὲν γὰρ οὐσία  
 ἐκάστου ἢ<sup>2</sup> ἴδιος ἐκάστω, ἢ οὐχ ὑπάρχει ἄλλω, τὸ  
 δὲ καθόλου κοινόν· τοῦτο γὰρ λέγεται καθόλου ὁ  
 πλείοσιν ὑπάρχειν πέφυκεν. τίνος οὖν οὐσία τοῦτ'

<sup>1</sup> πρώτη EJ.

<sup>2</sup> οὐσία ἐκάστου ἢ Ross: οὐσία ἢ ἐκάστου EJT Asclepius:  
 ἡ οὐσία A<sup>b</sup>.

<sup>a</sup> Chs. iv.-vi., x.-xii.

<sup>b</sup> Ch. iii.

<sup>c</sup> The Platonists.

and the substance. But if we proceed with reference to accidental qualities—*e g* if we divide “that which has feet” into white and black—there will be as many differentiae as there are divisions. It is therefore obvious that the definition is the formula derived from the differentiae, and strictly speaking from the last of them. This will be clear if we change the 12 order of such definitions, *e g* that of man, saying “two-footed footed animal”; for “footed” is superfluous when we have already said “two-footed.” But there is no question of order in the substance, for how are we to think of one part as posterior and the other prior?

With regard, then, to definitions by division, let this suffice as a preliminary statement of their nature

XIII Since the subject of our inquiry is sub-<sup>Ar</sup>stance, let us return to it. Just as the substrate and <sup>th</sup>the essence and the combination of these are called <sup>un</sup>substance, so too is the universal. With two of <sup>is 1</sup>these we have already dealt, *z e* with the essence <sup>su</sup><sup>a</sup> and the substrate <sup>b</sup>; of the latter we have said that it underlies in two senses—either being an individual thing (as the animal underlies its attributes), or as matter underlies the actuality. The universal also <sup>2</sup>is thought by some <sup>c</sup> to be in the truest sense a cause and a principle. Let us therefore proceed to discuss this question too; for it seems impossible that any universal term can be substance.

First, the substance of an individual is the substance which is peculiar to it and belongs to nothing else; whereas the universal is common; for by universal we mean that which by nature appertains to several things. Of what particular, then, will 3

3<sup>b</sup> ἔσται; ἢ γὰρ πάντων<sup>1</sup> ἢ οὐδενός πάντων<sup>2</sup> δὲ  
 οὐχ οἶόν τε· ἐνός δ' εἰ ἔσται, καὶ τᾶλλα τοῦτ'  
 15 ἔσται ὧν γὰρ μία ἡ οὐσία, καὶ τὸ τί ἦν εἶναι ἐν  
 καὶ αὐτὰ ἐν. "Ἐτι οὐσία λέγεται τὸ μὴ καθ' ὑπο-  
 κειμένου, τὸ δὲ καθόλου καθ' ὑποκειμένου τινός  
 λέγεται αἰεί. "Ἄλλ' ἄρα οὕτω μὲν οὐκ ἐνδέχεται  
 ὡς τὸ τί ἦν εἶναι, ἐν τούτῳ δὲ ἐνυπάρχειν, οἶον τὸ  
 ζῶον ἐν τῷ ἀνθρώπῳ καὶ ἵππῳ, οὐκοῦν δῆλον  
 ὅτι ἔστι τις αὐτοῦ λόγος. διαφέρει δ' οὐθὲν οὐδ'  
 20 εἰ μὴ πάντων λόγος ἐστὶ τῶν ἐν τῇ οὐσίᾳ· οὐδὲν  
 γὰρ ἦττον οὐσία τοῦτ' ἔσται τινός, ὡς ὁ ἄνθρωπος  
 τοῦ ἀνθρώπου ἐν ᾧ ὑπάρχει ὥστε τὸ αὐτὸ συμ-  
 βῆσεται πάλιν· ἔσται γὰρ<sup>3</sup> ἐκείνου οὐσία, οἶον τὸ  
 ζῶον, ἐν ᾧ ὡς ἴδιον ὑπάρχει. "Ἐτι δὲ καὶ ἀ-  
 δύνατον καὶ ἄτοπον τὸ τόδε καὶ οὐσίαν, εἰ ἔστιν  
 25 ἕκ τινων, μὴ ἐξ οὐσιῶν εἶναι μῆδ' ἐκ τοῦ τόδε τι,  
 ἀλλ' ἐκ ποιου· πρότερον γὰρ ἔσται μὴ οὐσία τε καὶ  
 τὸ ποιὸν οὐσίας τε καὶ τοῦ τόδε. ὅπερ ἀδύνατον  
 οὔτε λόγῳ γὰρ οὔτε χρόνῳ οὔτε γενέσει οἶόν τε  
 τὰ πάθη τῆς οὐσίας εἶναι πρότερα ἔσται γὰρ  
 χωριστά. "Ἐτι τῷ Σωκράτει ἐνυπάρξει οὐσία  
 30 οὐσία,<sup>4</sup> ὥστε δυοῖν ἔσται οὐσία. ὅλως δὲ συμ-  
 βαίνει, εἰ ἔστιν οὐσία ὁ ἄνθρωπος καὶ ὅσα οὕτω  
 λέγεται, μῆθὲν τῶν ἐν τῷ λόγῳ εἶναι μῆδενός

<sup>1</sup> ἀπάντων recc

<sup>2</sup> ἀπάντων A<sup>b</sup> comm.

<sup>3</sup> γὰρ οὐσία EJI.

<sup>4</sup> ἐνυπάρξει οὐσία οὐσία Γ (οὐσία οὐσία γρ. E, οὐσία οὐσία J, οὐσία A<sup>b</sup>). οὐσία ἐνυπάρξει οὐσία recc.

<sup>a</sup> i.e., the argument in § 3 will apply to this case also.

the universal be the substance ? Either of all or of none. But it cannot be the substance of all ; while, if it is to be the substance of one, the rest also will be that one, because things whose substance is one have also one essence and are themselves one.

Again, substance means that which is not predicated of a subject, whereas the universal is always predicated of some subject.

But perhaps although the universal cannot be substance in the sense that essence is, it can be present in the essence, as " animal " can be present in " man " and " horse." Then clearly there is in <sup>4</sup> some sense a formula of the universal. It makes no difference even if there is not a formula of everything that is in the substance ; for the universal will be none the less the substance of something ; *e g.*, " man " will be the substance of the man in whom it is present. Thus the same thing will happen again <sup>a</sup> ; *e g* " animal " will be the substance of that in which it is present as peculiar to it.

Again, it is impossible and absurd that the individual or substance, if it is composed of anything, should be composed not of substances nor of the individual, but of a quality ; for then non-substance or quality will be prior to substance or the individual. Which is impossible ; for neither in formula nor in time nor in generation can the affections of substance be prior to the substance, since then they would be separable.

Again, a substance will be present in " Socrates," <sup>6</sup> who is a substance ; so that it will be the substance of two things. And in general it follows that if " man " and all terms used in this way are substance, none of the elements in the formula is the substance of

- 3 b οὐσίαν, μηδὲ χωρὶς ὑπάρχειν αὐτῶν μηδ' ἐν ἄλλῳ,  
λέγω δ' οἶον οὐκ εἶναι τι ζῶον παρὰ τὰ τινά,  
οὐδ' ἄλλο τῶν ἐν τοῖς λόγοις οὐδέν "Ἐκ τε δὴ  
35 τούτων θεωροῦσι φανερόν ὅτι οὐδέν τῶν καθολοῦ  
1 a ὑπαρχόντων οὐσία ἐστὶ, καὶ ὅτι οὐδέν σημαίνει τῶν  
κοινῇ κατηγορουμένων τόδε τι, ἀλλὰ τοιόνδε εἰ δὲ  
μῆ, ἀλλὰ τε πολλὰ συμβαίνει καὶ ὁ τρίτος ἄνθρωπος  
"Ἐτι δὲ καὶ ᾧδε δῆλον. ἀδύνατον γὰρ οὐσίαν  
ἐξ οὐσιῶν εἶναι ἐνυπαρχουσῶν ὡς ἐντελεχεία. τὰ  
5 γὰρ δύο οὕτως ἐντελεχεία οὐδέποτε ἐν ἐντελεχεία,  
ἀλλ' ἐὰν δυνάμει δύο ᾗ, ἔσται ἓν, οἶον ἢ διπλασία ἐκ  
δύο ἡμίσεων δυνάμει γε· ἢ γὰρ ἐντελέχεια χωρίζει.  
ὥστε εἰ ἢ οὐσία ἓν, οὐκ ἔσται ἐξ οὐσιῶν ἐνυπα-  
ρχουσῶν καὶ κατὰ τοῦτον τὸν τρόπον, ὁ<sup>1</sup> λέγει  
Δημόκριτος ὀρθῶς· ἀδύνατον γὰρ εἶναι φησὶν ἐκ  
10 δύο ἐν ἢ ἐξ ἑνὸς δύο γενέσθαι τὰ γὰρ μεγέθη τὰ  
ἄτομα τὰς οὐσίας ποιεῖ. ὁμοίως τοίνυν δῆλον ὅτι  
καὶ ἐπ' ἀριθμοῦ ἔξει, εἴπερ ἐστὶν ὁ ἀριθμὸς  
σύνθεσις μονάδων, ὥσπερ λέγεται ὑπὸ τινῶν· ἢ  
γὰρ οὐχ ἐν ἢ δυάς, ἢ οὐκ ἔστι μονὰς ἐν αὐτῇ  
ἐντελεχεία  
15 "Ἐχει δὲ τὸ συμβαῖνον ἀπορίαν. εἰ γὰρ μήτε  
ἐκ τῶν καθόλου οἶόν τ' εἶναι μηδεμίαν οὐσίαν  
διὰ τὸ τοιόνδε ἀλλὰ μὴ τόδε τι σημαίνειν, μήτ'  
ἐξ οὐσιῶν ἐνδέχεται ἐντελεχεία εἶναι μηδεμίαν  
οὐσίαν σύνθετον, ἀσύνθετον ἂν εἴη οὐσία πᾶσα,  
ὥστ' οὐδὲ λόγος ἂν εἴη οὐδεμιᾶς οὐσίας. ἀλλὰ  
20 μὴν δοκεῖ γε πᾶσι καὶ ἐλέχθη πάλαι ἢ μόνον εἶναι

<sup>1</sup> δ T, c1 Ross. δν.

<sup>a</sup> See note on I. ix 3

<sup>b</sup> Cf. *De Caelo* 303 a 6, *De Gen. et Corr.* 325 a 35.

anything, nor can it exist apart from the species or in anything else; I mean, *e g*, that neither "animal" nor any other element of the formula can exist apart from the particular species

If we look at the question from this standpoint it is obvious that no universal attribute is substance; and it is also clear from the fact that none of the common predicates means "so-and-so," but "such-and-such" Otherwise amongst many other awkward consequences we have the "third man" <sup>a</sup>

Again, it is clear in this way too Substance cannot consist of substances actually present in it; for that which is actually two can never be actually one, whereas if it is potentially two it can be one *E g*, the double consists of two halves—that is, potentially; for the actualization separates the halves. Thus if substance is one, it cannot consist of substances present in it even in this sense, as Democritus rightly observes, he says that it is impossible for two to come from one, or one from two, because he identifies substance with the atoms <sup>b</sup> Clearly then the same will also hold good in the case of number (assuming that number is a composition of units, as it is said to be by some), because either 2 is not 1, or there is not *actually* a unit in it.

The consequence involves a difficulty; for if no substance can consist of universals, because they mean "of such a kind," and not a particular thing; and if no substance can be actually composed of substances, every substance will be incomposite, and so there will be no formula of any substance. But in point of fact it is universally held, and has been previously stated, <sup>c</sup> that substance is the only

<sup>c</sup> Ch. v. 5-7.

39<sup>a</sup>

οὐσίας ὄρον ἢ μάλιστα· νῦν δ' οὐδὲ ταύτης. οὐδενὸς ἄρ' ἔσται ὄρισμός ἢ τρόπον μὲν τινα ἔσται, τρόπον δέ τινα οὐ. δῆλον δ' ἔσται τὸ λεγόμενον ἐκ τῶν ὕστερον μάλλον.

XIV. Φανερόν δ' ἐξ αὐτῶν τούτων τὸ συμβαῖνον  
 25 καὶ τοῖς τὰς ιδέας λέγουσιν οὐσίας τε καὶ χωριστὰς εἶναι, καὶ ἅμα τὸ εἶδος ἐκ τοῦ γένους ποιούσι καὶ τῶν διαφορῶν. εἰ γὰρ ἔστι τὰ εἶδη, καὶ τὸ ζῶον ἐν τῷ ἀνθρώπῳ καὶ ἵππῳ, ἦτοι ἐν καὶ ταυτόν τῷ ἀριθμῷ ἔστιν ἢ ἕτερον (τῷ μὲν γὰρ λόγῳ δῆλον  
 30 ὅτι ἐν· τὸν γὰρ αὐτὸν διέξεισι λόγον ὁ λέγων ἐν ἑκατέρῳ) εἰ οὖν ἔστι τις ἄνθρωπος αὐτὸς καθ' αὐτὸν τὸδε τι καὶ κεχωρισμένον, ἀνάγκη καὶ ἐξ ὧν, οἷον τὸ ζῶον καὶ τὸ δίπουν, τὸδε τι σημαίνειν καὶ εἶναι χωριστὰ καὶ οὐσίας· ὥστε καὶ τὸ ζῶον.

Εἰ μὲν οὖν τὸ αὐτὸ καὶ ἐν τῷ ἐν τῷ ἵππῳ καὶ τῷ  
 35 ἀνθρώπῳ, ὥσπερ σὺ σαυτῷ, πῶς τὸ ἐν ἐν τοῖς οὐσι χωρὶς ἐν ἔσται, καὶ διὰ τί οὐ καὶ χωρὶς αὐτοῦ ἔσται τὸ ζῶον τοῦτο; ἔπειτα εἰ μὲν μεθέξει τοῦ δίποδος καὶ τοῦ πολύποδος, ἀδύνατόν τι συμβαίνει· τὰναντία γὰρ ἅμα ὑπάρξει αὐτῷ ἐνὶ καὶ τῷδέ τινα ὄντι. εἰ  
 5 δὲ μή, τίς ὁ τρόπος ὅταν εἴπη τις τὸ ζῶον εἶναι δίπουν ἢ πεζόν; ἀλλ' ἴσως σύγκειται καὶ ἄπτεται ἢ μέμικται. ἀλλὰ πάντα ἄτοπα. Ἄλλ' ἕτερον ἐν

<sup>a</sup> Ch. xv., VIII. vi



or chief subject of definition ; but on this showing there is no definition even of substance. Then there can be no definition of anything ; or rather in a sense there can, and in a sense cannot. What this means will be clearer from what follows later <sup>a</sup>

XIV From these same considerations it is clear also what consequence follows for those who maintain that the Forms are substances and separable, and who at the same time make the species consist of the genus and the differentiae. If there are Forms, and if "animal" is present in the man and the horse, it is either numerically one and the same with them, or not. (In formula they are clearly one ; 2 for in each case the speaker will enunciate the same formula.) If, then, there is in some sense an Absolute Man, who is an individual and exists separately, then the constituents, *e g* "animal" and "two-footed," must have an individual meaning and be separable and substances. Hence there must be an Absolute Animal too.

(1) Then if the "animal" which is in the horse and 3 the man is one and the same, as you are one and the same with yourself, how can the one which in things that exist separately be one, and why should not this "animal" also be separated from itself? Again, if it is to partake of "two-footed" and of "many-footed," an impossibility follows; for contrary attributes will belong to it although it is one and individual. But if it does not, in what sense is it 4 that one calls an animal "two-footed" or "terrestrial"? Perhaps the terms are "combined" and "in contact" or "mixed." But all these expressions are absurd.

(11) "But there is a different 'animal' in each

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- ἐκάστω οὐκοῦν ἄπειρα ὡς ἔπος εἰπεῖν ἔσται ὧν  
 ἢ οὐσία ζῶον· οὐ γὰρ κατὰ συμβεβηκὸς ἐκ ζώου ὁ  
 ἄνθρωπος. ἔτι πολλὰ ἔσται αὐτὸ τὸ ζῶον· οὐσία  
 10 τε γὰρ τὸ ἐν ἐκάστω ζῶον· οὐ γὰρ κατ' ἄλλο  
 λέγεται· εἰ δὲ μή, ἐξ ἐκείνου ἔσται ὁ ἄνθρωπος  
 καὶ γένος αὐτοῦ ἐκείνο· καὶ ἔτι ιδέαι ἅπαντα ἐξ  
 ὧν ὁ ἄνθρωπος. οὐκοῦν οὐκ ἄλλου μὲν ιδέα ἔσται  
 ἄλλου δ' οὐσία (ἀδύνατον γάρ)· αὐτὸ ἄρα ζῶον ἐν  
 ἕκαστον ἔσται τῶν ἐν τοῖς ζώοις Ἔτι ἐκ τίνος  
 15 τοῦτο καὶ πῶς ἐξ αὐτοῦ ζώου, ἢ πῶς οἶόν τε  
 εἶναι τὸ ζῶον, ᾧ<sup>1</sup> οὐσία τοῦτο αὐτό, παρ' αὐτὸ τὸ  
 ζῶον, ἔτι δ' ἐπὶ τῶν αἰσθητῶν ταῦτά τε συμ-  
 βαίνει καὶ τούτων ἀτοπώτερα. εἰ δὲ ἀδύνατον  
 οὕτως ἔχειν, δῆλον ὅτι οὐκ ἔστιν εἶδη αὐτῶν οὕτως  
 ὡς τινές φασιν.
- 20 XV Ἐπεὶ δ' ἡ οὐσία ἐτέρα τό τε σύνολον καὶ ὁ  
 λόγος (λέγω δ' ὅτι ἡ μὲν οὕτως ἐστὶν οὐσία σὺν τῇ  
 ὕλῃ συνειλημμένος ὁ λόγος, ἡ δ' ὁ λόγος ὅλως), ὅσαι  
 μὲν οὖν οὕτω λέγονται, τούτων μὲν ἔστι φθορά·  
 καὶ γὰρ γέनेσις· τοῦ δὲ λόγου οὐκ ἔστιν οὕτως  
 25 ὥστε φθειρεσθαι· οὐδὲ γὰρ γέनेσις (οὐ γὰρ γίγνεται  
 τὸ οἰκία εἶναι ἀλλὰ τὸ τῆδε τῇ οἰκία), ἀλλ' ἄνευ  
 γενέσεως καὶ φθορᾶς εἰσὶ καὶ οὐκ εἰσίν· δέδεικται

<sup>1</sup> ᾧ fort. Alexander, ci. Bonitz: ὁ EJ Asclepius om Ab.

<sup>a</sup> Cf. ch. viii. 3.

species." Then there will be practically an infinity of things of which "animal" is the substance, since it is not in an accidental sense that "man" is derived from "animal." Again, the Absolute Animal<sup>5</sup> will be a plurality. For (a) the "animal" in each species will be the substance of that species, since the species is called after it and no other thing. Otherwise "man" would be derived from that other thing, which would be the genus of "man." (b) Further, all the constituents of "man" will be Ideas. Then, since nothing can be the Idea of one thing and the substance of another (for this is impossible), each and every "animal" in the<sup>6</sup> various species will be the Absolute Animal.

Further, from what will these Forms be derived, and how can they be derived from the Absolute Animal? Or how can "the animal," whose very essence is "animal," exist apart from the Absolute Animal? And further, in the case of sensible things both these and still more absurd consequences follow. If, then, these consequences are impossible, clearly there are not Forms of sensible things in the sense in which some hold that there are.

XV. Since substance is of two kinds, the concrete thing and the formula (I mean that one kind of substance is the formula in combination with the matter, and the other is the formula in its full sense), substances in the former sense admit of destruction, for they also admit of generation. But the formula does not admit of destruction<sup>a</sup> in the sense that it is ever *being* destroyed, since neither does it so admit of generation (for "being a house" is not generated, but only "being *this* house"); formulae *are*, and *are not*, independently of generation and destruction;

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γὰρ ὅτι οὐδεὶς ταῦτα γεννᾷ οὐδὲ ποιεῖ. διὰ τοῦτο  
 δὲ καὶ τῶν οὐσιῶν τῶν αἰσθητῶν τῶν καθ' ἕκαστα  
 οὔτε ὀρισμὸς οὔτε ἀπόδειξις ἔστιν, ὅτι ἔχουσι  
 80 ὕλην ἧς ἡ φύσις τοιαύτη ὥστ' ἐνδέχεται καὶ εἶναι  
 καὶ μὴ· διὸ φθαρτὰ πάντα τὰ καθ' ἕκαστα αὐτῶν.  
 εἰ οὖν ἢ τε ἀπόδειξις τῶν ἀναγκαίων καὶ ὁ ὀρισμὸς  
 ἐπιστημονικόν,<sup>1</sup> καὶ οὐκ ἐνδέχεται, ὥσπερ οὐδ'  
 ἐπιστήμην ὅτε μὲν ἐπιστήμην ὅτε δ' ἄγνοιαν εἶναι,  
 ἀλλὰ δόξα τὸ τοιοῦτόν ἐστιν, οὕτως οὐδ' ἀπό-  
 40 a δειξιν οὐδ' ὀρισμόν, ἀλλὰ δόξα ἐστὶ τοῦ ἐνδεχομένου  
 ἄλλως ἔχειν, δῆλον ὅτι οὐκ ἂν εἴη αὐτῶν οὔτε ὀρι-  
 σμὸς οὔτε ἀπόδειξις ἄδηλά τε γὰρ τὰ φθειρόμενα  
 τοῖς ἔχουσι τὴν ἐπιστήμην, ὅταν ἐκ τῆς αἰσθήσεως  
 ἀπέλθῃ· καὶ σωζομένων τῶν λόγων ἐν τῇ ψυχῇ τῶν  
 5 αὐτῶν οὐκ ἔσται οὔτε ὀρισμὸς ἔτι οὔτε ἀπόδειξις  
 διὸ δεῖ τῶν πρὸς ὄρον, ὅταν τις ὀρίζηται τι τῶν  
 καθ' ἕκαστον,<sup>2</sup> μὴ ἀγνοεῖν ὅτι αἰεὶ ἀναιρεῖν ἔστιν·  
 οὐ γὰρ ἐνδέχεται ὀρίσασθαι Οὐδὲ δὴ ιδέαν  
 οὐδεμίαν ἔστιν ὀρίσασθαι· τῶν γὰρ καθ' ἕκαστον ἢ  
 ιδέα, ὡς φασί, καὶ χωριστὴ ἀναγκαῖον δὲ ἐξ  
 10 ὀνομάτων εἶναι τὸν λόγον ὄνομα δ' οὐ ποιήσῃ οὐ  
 ὀριζόμενος ἄγνωστον γὰρ ἔσται τὰ δὲ κείμενα  
 κοινὰ πᾶσιν· ἀνάγκη ἄρα ὑπάρχειν καὶ ἄλλω ταῦτα  
 οἶον εἴ τις σὲ ὀρίσαιτο, ζῶον ἐρεῖ ἰσχνὸν ἢ λευκὸν

<sup>1</sup> ἐπιστημονικός EJ Asclepius.<sup>2</sup> ἕκαστα recce<sup>a</sup> Cf. ch. viii 3

for it has been shown <sup>a</sup> that no one either generates or creates them. For this reason also there is no definition or demonstration of particular sensible substances, because they contain matter whose nature is such that it can both exist and not exist. Hence all the individual instances of them are perishable. If, then, the demonstration and definition of necessary truths requires scientific knowledge, and if, just as knowledge cannot be sometimes knowledge and sometimes ignorance (it is opinion that is of this nature), so too demonstration and definition cannot vary (it is opinion that is concerned with that which can be otherwise than it is)—then clearly there can be neither definition nor demonstration of individual sensible substances. For (a) things which perish are obscure to those who have knowledge of them when they are removed from the sphere of their perception, and (b) even though their formulae are preserved in the soul, there will no longer be either definition or demonstration of them. Therefore in cases relating to definition, when we are trying to define any individual, we must not fail to realize that our definition may always be upset; because it is impossible to define these things.

Nor, indeed, can any Idea be defined; for the Idea is an individual, as they say, and separable; and the formula must consist of words, and the man who is defining must not coin a word, because it would not be comprehensible. But the words which are in use are common to all the things which they denote; and so they must necessarily apply to something else as well. *E.g.*, if a man were to define you, he would say that you are an animal which is lean or white or has some other attribute, which will apply

<sup>0 a</sup> ἢ ἕτερόν τι ὁ καὶ ἄλλω ὑπάρξει. εἰ δέ τις φαίη  
 15 μηδὲν κωλύειν χωρὶς μὲν πάντα πολλοῖς, ἅμα δὲ  
 μόνῳ τούτῳ ὑπάρχειν, λεκτέον πρῶτον μὲν ὅτι καὶ  
 ἀμφοῖν, οἷον τὸ ζῶον δίπουν τῷ ζώῳ καὶ τῷ δίποδι  
 (καὶ τοῦτο ἐπὶ μὲν τῶν αἰδίων καὶ ἀνάγκη εἶναι,  
 πρότερά γ' ὄντα καὶ μέρη τοῦ συνθέτου· ἀλλὰ μὴν  
 καὶ χωριστά, εἶπερ τὸ ἄνθρωπος χωριστόν· ἢ γὰρ  
 20 οὐθὲν ἢ ἄμφω· εἰ μὲν οὖν μηθέν, οὐκ ἔσται τὸ  
 γένος παρὰ τὰ εἶδη εἰ δ' ἔσται, καὶ ἡ διαφορά).  
 εἰθ' ὅτι πρότερα τῷ εἶναι· ταῦτα δὲ οὐκ ἀνταν-  
 αιρεῖται.

Ἐπειτα<sup>1</sup> εἰ ἐξ ἰδεῶν αἱ ἰδέαι (ἀσυνθετώτερα  
 γὰρ τὰ ἐξ ὧν), ἔτι ἐπὶ πολλῶν δεήσει κάκεῖνα  
 κατηγορεῖσθαι ἐξ ὧν ἡ ἰδέα, οἷον τὸ ζῶον καὶ τὸ  
 25 δίπουν εἰ δὲ μή, πῶς γνωρισθήσεται, ἔσται γὰρ  
 ἰδέα τις ἢν ἀδύνατον ἐπὶ πλειόνων κατηγορῆσαι  
 ἢ ἐνός. οὐ δοκεῖ δέ, ἀλλὰ πᾶσα ἰδέα εἶναι μεθ-  
 εκτή.

Ὡσπερ οὖν εἴρηται, λανθάνει ὅτι ἀδύνατον ὀρί-  
 σασθαι ἐν τοῖς αἰδίοις, μάλιστα δὲ ὅσα μοναχά,  
 30 οἷον ἥλιος ἢ σελήνη. οὐ μόνον γὰρ διαμαρτάνουσι  
 τῷ προστιθέναι τοιαῦτα ὧν ἀφαιρουμένων ἔτι ἔσται  
 ἥλιος, ὥσπερ τὸ περὶ γῆν ἰὸν ἢ νυκτικρυφές (ἂν γὰρ

<sup>1</sup> ἔπειτα δὲ E.J ἐτι δ' γρ E· ἐτι (om. εἰ) Alexandei

<sup>a</sup> The statement has only been implied in the preceding arguments.

to something else as well. And if it should be said 6 that there is no reason why all the attributes separately should not belong to several things, and yet in combination belong to this alone, we must reply, (i) that they also belong to both the elements, *e g*, "two-footed animal" belongs both to "animal" and to "two-footed" (and in the case of eternal elements this is even necessarily so; since they are prior to the compound, and parts of it. Indeed they 7 are also separable, if the term "man" is separable—for either neither can be separable, or both are so. If neither, the genus will not exist apart from the species, or if it is so to exist, so will the differentia); (ii) that "animal" and "two-footed" are prior in being to "two-footed animal," and that which is prior to something else is not destroyed together with it.

Again, if the Ideas are composed of Ideas (for 8 constituents are less composite than that which they compose), still the elements of which the Idea is composed (*e g* "animal" and "two-footed") will have to be predicated of many particulars. Otherwise, how can they be known? For there would be an Idea which cannot be predicated of more than one thing. But this is not considered possible; every Idea is thought to admit of participation.

Thus, as we have said,<sup>a</sup> the impossibility of defining 9 individuals is hard to realize when we are dealing with eternal entities, especially in the case of such as are unique, *e g* the sun and moon. For people go wrong not only by including in the definition attributes on whose removal it will still be sun—*e g*, "that which goes round the earth," or "night-hidden" (for they suppose that if it stops or becomes

στῆ ἢ φανῆ, οὐκέτι ἔσται ἥλιος· ἀλλ' ἄτοπον εἰ μὴ· ὁ γὰρ ἥλιος οὐσίαν τινὰ σημαίνει)—ἔτι ὅσα ἐπ' ἄλλου ἐνδέχεται, οἷον ἐὰν ἕτερος γένηται τοιοῦτος, δῆλον ὅτι ἥλιος ἔσται κοινὸς ἄρα ὁ λόγος ἀλλ' ἦν τῶν καθ' ἕκαστα ὁ ἥλιος, ὥσπερ Κλέων ἢ Σωκράτης, ἐπεὶ διὰ τί οὐδεὶς ὄρον ἐκφέρει αὐτῶν ιδέας; γένοιτο γὰρ ἂν δῆλον πειρωμένων ὅτι ἀληθὲς τὸ νῦν εἰρημένον

XVI. Φανερόν δὲ ὅτι καὶ τῶν δοκουσῶν εἶναι οὐσιῶν αἱ πλείους δυνάμεις εἰσὶ, τὰ τε μόρια τῶν ζώων (οὐδὲν γὰρ κεχωρισμένον αὐτῶν ἔστιν ὅταν δὲ χωρισθῆ, καὶ τότε ὄντα ὡς ὕλη πάντα) καὶ γῆ καὶ πῦρ καὶ ἀήρ οὐδὲν γὰρ αὐτῶν ἓν ἔστιν, ἀλλ' οἷον σωρός,<sup>1</sup> πρὶν ἢ πεφθῆ καὶ γένηται τι ἐξ αὐτῶν ἓν. μάλιστα δ' ἂν τις τὰ τῶν ἐμψύχων ὑπολάβοι μόρια καὶ τὰ τῆς ψυχῆς πάρεγγυς ἄμφω γίνεσθαι, ὄντα καὶ ἐντελεχεία καὶ δυνάμει, τῷ ἀρχὰς ἔχειν κινήσεως ἀπὸ τινος ἐν ταῖς καμπαῖς· διὸ ἕνια ζῶα διαιρούμενα ζῆ ἀλλ' ὅμως δυνάμει πάντ' ἔσται, ὅταν ἦ ἓν καὶ συνεχὲς φύσει, ἀλλὰ μὴ βία ἢ<sup>2</sup> συμφύσει· τὸ γὰρ τοιοῦτον πῆρωςις Ἐπεὶ δὲ τὸ ἐν λέγεται ὥσπερ καὶ τὸ ὄν, καὶ ἡ οὐσία ἢ τοῦ ἐνὸς μία καὶ ὦν μία ἀριθμῶ ἐν ἀριθμῶ, φανερόν ὅτι οὔτε τὸ ἐν οὔτε τὸ ὄν ἐνδέχεται οὐσίαν εἶναι

<sup>1</sup> σωρός EJ Asclepius. ὁ σωρός A<sup>b</sup> Alexander: ὁ ὄρρος γρ E γρ. Alexander.

<sup>2</sup> ἢ καὶ A<sup>b</sup>.

<sup>a</sup> sc. in the night.

<sup>b</sup> e g wasps, bees, tortoises (P. Nat 467 a 18, 468 a 25).

<sup>c</sup> i.e., it is only when they do not properly constitute a unity that parts can be said to exist actually.



visible<sup>a</sup> it will no longer be sun ; but it is absurd that this should be so, since “ the sun ” denotes a definite substance)—they also mention attributes which may 10 apply to something else , *e g* , if another thing with those attributes comes into being, clearly it will be a sun. The formula, then, is general , but the sun was supposed to be an individual, like Cleon or Socrates Why does not one of the exponents of the Ideas produce a definition of them<sup>b</sup> If they were to try, it would become obvious that what we have just said is true

XVI It is obvious that even of those things which are thought to be substances the majority are potentialities ; both the parts of living things (for none of them has a separate substantial existence ; and when they are separated, although they still exist, they exist as matter), and earth, fire and air ; for none of these is one *thing*—they are a mere aggregate before they are digested and some one thing is generated from them It might be supposed 2 very reasonably that the parts of living things and the corresponding parts of their vital principle are both, *i e* exist both actually and potentially, because they contain principles of motion derived from something in their joints ; and hence some animals<sup>b</sup> live even when they are divided Nevertheless it is only potentially that all of them will exist when they are one and continuous by nature and not by force or concretion ; for this sort of thing is malformation.<sup>c</sup>

And since “ unity ” has the same variety of senses 3 as “ being,” and the substance of Unity is one, and things whose substance is numerically one are numerically one, evidently neither Unity nor Being can be the substance of things, just as neither

Most so called substances potentialities

Unities are not substances

<sup>0 b</sup> τῶν πραγμάτων, ὡσπερ οὐδὲ τὸ στοιχείω εἶναι ἢ  
<sup>20</sup> ἀρχῇ ἀλλὰ ζητοῦμεν τίς οὖν ἢ ἀρχή, ἵνα εἰς  
 γνωριμώτερον ἀναγάγωμεν μᾶλλον μὲν οὖν τού-  
 των οὐσία τὸ ὄν καὶ ἐν ἢ ἢ τε ἀρχή καὶ τὸ στοιχείον  
 καὶ τὸ αἴτιον, οὐπω δὲ οὐδὲ ταῦτα, εἶπερ μῆδ'  
 ἄλλο κοινὸν μῆδὲν οὐσία οὐδενὶ γὰρ ὑπάρχει ἢ  
 οὐσία ἀλλ' ἢ αὐτῇ τε καὶ τῷ ἔχοντι αὐτήν, οὐ  
<sup>25</sup> ἐστὶν οὐσία. ἐτι τὸ ἐν πολλαχῇ οὐκ ἂν εἶη ἅμα,  
 τὸ δὲ κοινὸν ἅμα πολλαχῇ ὑπάρχει· ὥστε δῆλον  
 ὅτι οὐδὲν τῶν καθόλου ὑπάρχει παρὰ τὰ καθ'  
 ἕκαστα χωρὶς, ἀλλ' οἱ τὰ εἶδη λέγοντες εἶναι<sup>1</sup> τῇ  
 μὲν ὀρθῶς λέγουσι χωρίζοντες αὐτά, εἶπερ οὐσία  
<sup>30</sup> εἰσί, τῇ δ' οὐκ ὀρθῶς, ὅτι τὸ ἐν ἐπὶ πολλῶν εἶδος  
 λέγουσιν. αἴτιον δ' ὅτι οὐκ ἔχουσιν ἀποδοῦναι τίνες  
 αἱ τοιαῦται οὐσῖαι αἱ ἀφθαρτοὶ παρὰ τὰς καθ'  
 ἕκαστα καὶ αἰσθητάς ποιοῦσιν οὖν τὰς αὐτὰς  
 τῷ εἶδει τοῖς φθαρτοῖς (ταύτας γὰρ ἴσμεν), αὐτοάν-  
 θρωπον καὶ αὐτόιππον, προστιθέντες τοῖς αἰσθητοῖς  
<sup>1 a</sup> τὸ ῥῆμα τὸ " αὐτό " καίτοι κἂν εἰ μὴ ἐωράκειμεν  
 τὰ ἄστρα, οὐδὲν ἂν ἦττον, οἶμαι, ἦσαν οὐσῖαι  
 αἰδίοι παρ' ἃς ἡμεῖς ἤδειμεν· ὥστε καὶ νῦν εἰ μὴ  
 ἔχομεν<sup>2</sup> τίνες εἰσὶν, ἀλλ' εἶναι γέ τινας ἴσως  
 ἀναγκαῖον. Ὅτι μὲν οὖν οὔτε τῶν καθόλου  
<sup>5</sup> λεγομένων οὐδὲν οὐσία, οὔτ' ἐστὶν οὐσία οὐδεμία  
 ἐξ οὐσιῶν, δῆλον.

XVII. Τί δὲ χρῆ λέγειν καὶ ὁποῖόν τι τὴν οὐσίαν,

<sup>1</sup> εἶναι A<sup>b</sup> Alexander: om EJ Asclepius.

<sup>2</sup> ἔχομεν recc.

<sup>a</sup> i.e., a thing is a principle in relation to something else which it explains, therefore a principle is less substantial than unity or being, which belong to a thing in itself.

<sup>b</sup> i.e. universal, cf. I. ix. 1.

“being an element” or “principle” can be the substance, but we ask what the principle is so that we may refer to something more intelligible<sup>a</sup> Now<sup>4</sup> of these concepts Being and Unity are more nearly substance than are principle, element and cause; but not even the former are quite substance, since nothing else that is common is substance, for substance belongs to nothing except itself and that which contains it and of which it is the substance. Again, Unity cannot exist in many places at the<sup>5</sup> same time, but that which is common is present in many things at the same time Hence it is clear that no universal exists in separation apart from its particulars The exponents of the Forms are partly right in their account when they make the Forms separate, that is, if the Forms are substances, but they are also partly wrong, since by “Form” they mean the “one-over-many.”<sup>b</sup> The reason for this<sup>6</sup> is that they cannot explain what are the imperishable substances of this kind which exist besides particular sensible substances, so they make them the same in kind as perishable things (for these we know), *i e*, they make “Ideal Man” and “Ideal Horse,” adding the word “Ideal” to the names of sensible things However, I presume that even if we had<sup>7</sup> never seen the stars, none the less there would be eternal substances besides those which we knew; and so in the present case even if we cannot apprehend what they are, still there must be eternal substances of some kind

It is clear, then, both that no universal term is substance and that no substance is composed of substances.

XVII. As for what and what sort of thing we mean

41 a πάλιν ἄλλην οἶον ἀρχὴν ποιησάμενοι λέγωμεν ἴσως  
 γὰρ ἐκ τούτων ἔσται δῆλον καὶ περὶ ἐκείνης τῆς  
 οὐσίας ἣτις ἐστὶ κεχωρισμένη τῶν αἰσθητῶν οὐσιῶν.  
 10 ἐπεὶ οὖν ἡ οὐσία ἀρχὴ καὶ αἰτία τις ἐστίν, ἐντεῦθεν  
 μετιτέον.

Ζητεῖται δὲ τὸ διὰ τί αἰεὶ οὕτως, διὰ τί ἄλλο  
 ἄλλω τινὶ ὑπάρχει τὸ γὰρ ζητεῖν διὰ τί ὁ μου-  
 σικὸς ἄνθρωπος μουσικὸς ἄνθρωπός<sup>1</sup> ἐστίν, ἥτοι ἐστὶ  
 τὸ εἰρημένον ζητεῖν διὰ τί ὁ ἄνθρωπος μουσικὸς  
 ἐστίν, ἢ ἄλλο τὸ μὲν οὖν διὰ τί αὐτό ἐστίν αὐτό,  
 15 οὐδὲν ἐστὶ ζητεῖν· δεῖ γὰρ τὸ ὅτι καὶ τὸ εἶναι  
 ὑπάρχειν δῆλα ὄντα, λέγω δ' οἶον ὅτι ἡ σελήνη  
 ἐκλείπει αὐτὸ δὲ ὅτι αὐτὸ εἰς λόγος καὶ μία αἰτία  
 ἐπὶ πάντων, διὰ τί ὁ ἄνθρωπος ἄνθρωπος ἢ ὁ  
 μουσικὸς μουσικὸς (πλὴν εἴ τις λέγοι ὅτι ἀδιαίρετον  
 πρὸς αὐτὸ ἕκαστον, τοῦτο δ' ἦν τὸ ἐνὶ εἶναι). ἀλλὰ  
 20 τοῦτο κοινόν τε κατὰ πάντων καὶ τὸ σύντομον  
 ζητήσκει δ' ἂν τις διὰ τί ὁ ἄνθρωπος ἐστὶ ζῶον  
 τοιονδί. τοῦτο μὲν τοίνυν δῆλον, ὅτι οὐ ζητεῖ διὰ  
 τί ὅς ἐστιν ἄνθρωπος ἄνθρωπός ἐστιν τι ἄρα κατὰ  
 τινος ζητεῖ διὰ τί ὑπάρχει (ὅτι δ' ὑπάρχει, δεῖ  
 δῆλον εἶναι· εἰ γὰρ μὴ οὕτως, οὐδὲν ζητεῖ) οἶον  
 25 διὰ τί βροντᾶ, διὰ τί<sup>2</sup> ψόφος γίγνεται ἐν τοῖς  
 νέφεσιν; ἄλλο γὰρ οὕτως κατ' ἄλλου ἐστὶ τὸ ζη-  
 τούμενον. καὶ διὰ τί ταδί, οἶον πλίνθοι καὶ λίθοι,

<sup>1</sup> μουσικὸς ἄνθρωπός codd. comm ἄνθρωπος μουσικὸς recs

<sup>2</sup> διὰ τί A Alexander διότι.

<sup>a</sup> The argument is "The question 'Why is the cultured man a cultured man?' if it does not mean 'Why is the man cultured?' can only mean 'Why is a thing itself?'" But when we ask a question the fact must be obvious, and since it is obvious that a thing is itself, "because it is itself" (or "because each thing is indivisible from itself") is the one

by substance, let us explain this by making, as it were, another fresh start. Perhaps in this way we shall also obtain some light upon that kind of substance which exists in separation from sensible substances. Since, then, substance is a kind of principle and cause, we had better pursue our inquiry from this point.

Now when we ask why a thing is, it is always in the sense "why does A belong to B?" To ask why the cultured man is a cultured man is to ask either, as we have said, why the man is cultured, or something else. Now to ask why a thing is itself is no question, because when we ask the reason of a thing the fact must first be evident; e.g., that the moon suffers eclipse, and "because it is itself" is the one explanation and reason which applies to all questions such as "why is man man?" or "why is the cultured person cultured?" (unless one were to say that each thing is indivisible from itself, and that this is what "being one" really means); but this, besides being a general answer, is a summary one.<sup>a</sup> We may, however, ask why a man is an animal of such-and-such a kind. It is clear, then, that we are not asking why he who is a man is a man, therefore we are asking why A, which is predicated of B, belongs to B. (The fact that A does belong to B must be evident, for if this is not so, the question is pointless.) E.g., "Why does it thunder?" means "why is a noise produced in the clouds?" for the true form of the question is one thing predicated in this way of another. Or again, "why are these things, e.g. bricks and stones,

and only complete answer to all questions of this type. Since this answer (in either form) is clearly unsatisfactory, the question which it answers cannot be a proper question

041 a

οἰκία ἐστίν, φανερόν τοίνυν ὅτι ζητεῖ τὸ αἷτιον  
 (τοῦτο δ' ἐστὶ τὸ τί ἦν εἶναι, ὡς εἰπεῖν λογικῶς), ὃ  
 ἐπ' ἐνίων μὲν ἐστὶ τίνος ἕνεκα, οἷον ἴσως ἐπ' οἰκίας ἢ  
 80 κλίνης, ἐπ' ἐνίων δὲ τί ἐκίνησε πρῶτον· αἷτιον γὰρ  
 καὶ τοῦτο ἀλλὰ τὸ μὲν τοιοῦτον αἷτιον ἐπὶ τοῦ  
 γίγνεσθαι ζητεῖται καὶ φθείρεσθαι, θάτερον δὲ καὶ  
 ἐπὶ τοῦ εἶναι Λανθάνει δὲ μάλιστα τὸ ζη-  
 41 b τούμενον ἐν τοῖς μὴ κατ' ἀλλήλων<sup>1</sup> λεγομένοις, οἷον  
 ἄνθρωπος τί ἐστὶ ζητεῖται, διὰ τὸ ἀπλῶς λέγεσθαι  
 ἀλλὰ μὴ διορίζειν ὅτι τάδε<sup>2</sup> τόδε ἀλλὰ δεῖ  
 διαρθρώσαντας ζητεῖν εἰ δὲ μή, κοινὸν τοῦ μηδὲν  
 ζητεῖν καὶ τοῦ ζητεῖν τι γίγνεται. ἐπεὶ δὲ δεῖ ἔχειν  
 5 τε καὶ ὑπάρχειν τὸ εἶναι, δῆλον δὴ ὅτι τὴν ὕλην  
 ζητεῖ διὰ τί <τί><sup>3</sup> ἐστίν· οἷον οἰκία ταδὶ διὰ τί,  
 ὅτι<sup>4</sup> ὑπάρχει ὃ ἦν οἰκία εἶναι. καὶ ἄνθρωπος τοδί,<sup>5</sup>  
 ἢ τὸ σῶμα τοῦτο τοδὶ ἔχον ὥστε τὸ αἷτιον ζητεῖ-  
 ται τῆς ὕλης (τοῦτο δ' ἐστὶ τὸ εἶδος) ᾧ τί ἐστίν·  
 τοῦτο δ' ἢ οὐσία. Φανερόν τοίνυν ὅτι ἐπὶ τῶν  
 10 ἀπλῶν οὐκ ἔστι ζήτησις οὐδὲ δίδαξις, ἀλλ' ἕτερος  
 τρόπος τῆς ζητήσεως τῶν τοιούτων. Ἐπεὶ  
 δὲ τὸ ἐκ τίνος σύνθετον οὕτως ὥστε ἐν εἶναι τὸ  
 πᾶν, ἀλλὰ<sup>6</sup> μὴ ὡς σωρός, ἀλλ' ὡς ἡ συλλαβὴ—ἢ δὲ  
 συλλαβὴ οὐκ ἔστι τὰ στοιχεῖα, οὐδὲ τῶ βα<sup>7</sup> ταῦτο

<sup>1</sup> μὴ κατ' ἀλλήλων γρ E· μὴ καταλλήλως A<sup>b</sup> Alexander:  
 μὴ κατ' ἄλλων μένοις E· μὴ κατ' ἄλλων JΓ.

<sup>2</sup> τάδε ἢ EJ τόδε ἢ Γ.

<sup>3</sup> Christ, fort. Alexander

<sup>4</sup> ὅτι ταδὶ EJ Alexander (ταδὶ post ὑπάρχει recc.)

<sup>5</sup> τοδί A<sup>b</sup> Alexander. ὀδί<sup>6</sup> ἂν A<sup>b</sup>

<sup>7</sup> τῶ βα<sup>7</sup> A<sup>b</sup> Alexander τὸ βα<sup>7</sup> recc : om. EJΓ.

a house ? ” Clearly then we are inquiring for the cause (*i e*, to speak abstractly, the essence); which is in the case of some things, *e g* house or bed, the *end*, and in others the prime mover—for this also is a cause We look for the latter kind of cause in the case of generation and destruction. but for the former also in the case of existence

What we are now looking for is most obscure when one term is not predicated of another, *e.g* when we inquire what man is; because the expression is a simple one not analysed into subject and attributes We must make the question articulate before we ask it; otherwise we get something which shares the nature of a pointless and of a definite question Now since we must know that the fact actually exists, it is surely clear that the question is “ why is the *matter* so-and-so ? ” *e.g* “ why are these materials a house ? ” Because the essence of house is present in them And this matter, or the body containing this particular form, is man Thus what we are seeking is the cause (*i e* the form) in virtue of which the matter is a definite thing. and this is the substance of the thing.

Clearly then in the case of simple entities <sup>a</sup> inquiry and explanation are impossible; in such cases there is a different mode of inquiry.

Now since that which is composed of something in such a way that the whole is a unity; not as an aggregate is a unity, but as a syllable is <sup>b</sup>—the syllable is not the letters, nor is BA the same as B

method just described obviously will not apply. They can only be apprehended intuitively (*cf.* IX. x.).

<sup>b</sup> This sentence is not finished, the parenthesis which follows lasts until the end of the chapter.

We are  
looking  
the e

This is  
obvious  
when  
quest  
of the  
“ Wh  
A ? ”  
is equi  
true

This  
subst  
is torr

It is t  
that d  
mines  
mater

- 41 b τὸ<sup>1</sup> β̄ καὶ ᾱ, οὐδ' ἡ σὰρξ πῦρ καὶ γῆ· διαλυθέντων  
 15 γὰρ τὰ μὲν οὐκέτι ἔστιν, οἷον ἡ σὰρξ καὶ ἡ συλλαβή, τὰ δὲ στοιχεῖα ἔστι, καὶ τὸ πῦρ καὶ ἡ γῆ· ἔστιν ἄρα τι ἡ συλλαβή, οὐ μόνον τὰ στοιχεῖα τὸ φωνῆεν καὶ ἄφωνον, ἀλλὰ καὶ ἕτερόν τι καὶ ἡ σὰρξ οὐ μόνον πῦρ καὶ γῆ ἢ τὸ θερμὸν καὶ ψυχρόν, ἀλλὰ καὶ ἕτερόν τι. εἰ τοίνυν ἀνάγκη κάκεῖνο ἢ  
 20 στοιχεῖον ἢ ἐκ στοιχείων εἶναι, εἰ μὲν στοιχεῖον, πάλιν ὁ αὐτὸς ἔσται λόγος ἐκ τούτου γὰρ καὶ πυρὸς καὶ γῆς ἔσται ἡ σὰρξ καὶ ἔτι ἄλλου, ὥστ' εἰς ἄπειρον βαδιεῖται εἰ δὲ ἐκ στοιχείου, δῆλον ὅτι οὐχ ἑνὸς ἀλλὰ πλειόνων, ἢ ἐκεῖνο αὐτὸ ἔσται, ὥστε πάλιν ἐπὶ τούτου τὸν αὐτὸν ἐροῦμεν λόγον  
 25 καὶ ἐπὶ τῆς σαρκὸς ἢ συλλαβῆς δόξειε δ' ἂν εἶναί τι τοῦτο καὶ οὐ στοιχεῖον, καὶ αἰτιὸν γε τοῦ εἶναι τοδὶ μὲν σάρκα, τοδὶ δὲ συλλαβήν. ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων. οὐσία δὲ ἐκάστου μὲν τοῦτο τοῦτο γὰρ αἰτιον πρῶτον τοῦ εἶναι· ἐπεὶ δ' ἔνια οὐκ οὐσίαι τῶν πραγμάτων, ἀλλ' ὅσαι οὐσίαι κατὰ  
 30 φύσιν καὶ φύσει συνεστήκασιν, φανείη ἂν [καὶ]<sup>2</sup> αὕτη ἢ φύσις οὐσία, ἢ ἔστιν οὐ στοιχεῖον ἀλλ' ἀρχή· στοιχεῖον δ' ἔστιν εἰς ὃ διαιρεῖται ἐνυπάρχον ὡς ὕλην, οἷον τῆς συλλαβῆς τὸ ᾱ καὶ τὸ β̄

<sup>1</sup> ταῦτὸ τὸ EJT Alexander· ταῦτὸ τῶ recc : αὐτὸ τῶ A<sup>b</sup>. ·

<sup>2</sup> Christ.

<sup>a</sup> i.e. the formal cause Cf V. iv. 4-6



and A, nor is flesh fire and earth; because after dissolution the compounds, *e g* flesh or the syllable, no longer exist, but the letters exist, and so do fire and earth. Therefore the syllable is some particular thing, not merely the letters, vowel and consonant, but something else besides. And flesh is not merely fire and earth, or hot and cold, but something else besides. Since then this something else must be either an element or composed of elements, (a) if it is an element, the same argument applies again; for flesh will be composed of *this* and fire and earth, and again of another element, so that there will be an infinite regression. And (b) if it is composed of elements, clearly it is composed not of one (otherwise it will itself be that element) but of several; so that we shall use the same argument in this case as about the flesh or the syllable. It would seem, however, that this "something else" is something that is not an element, but is the cause that *this* matter is flesh and *that* matter a syllable, and similarly in other cases. And this is the substance of each thing, for it is the primary cause of its existence. And since, although some things are not substances, all substances are constituted in accordance with and by nature, substance would seem to be this "nature," which is not an element but a principle <sup>a</sup>. An element is that which is present as matter in a thing, and into which the thing is divided; *e g*, A and B are the elements of the syllable.

## Η

<sup>3</sup> I. Ἐκ δὴ τῶν εἰρημένων συλλογίσασθαι δεῖ, καὶ  
 συναγαγόντας τὸ κεφάλαιον τέλος ἐπιθεῖναι εἴρη-  
<sup>5</sup> ται δὴ ὅτι τῶν οὐσιῶν ζητεῖται τὰ αἷτια καὶ αἱ  
 ἀρχαὶ καὶ τὰ στοιχεῖα οὐσίαι δὲ αἱ μὲν ὁμολογού-  
 μεναί εἰσιν ὑπὸ πάντων, περὶ δὲ ἐνίων ἰδία τινὲς  
 ἀπεφῆναντο ὁμολογούμεναι μὲν αἱ φυσικαί, οἷον  
 πῦρ γῆ ὕδωρ ἀήρ καὶ τᾶλλα τὰ ἀπλᾶ σώματα,  
<sup>0</sup> ἔπειτα τὰ φυτὰ καὶ τὰ μόρια αὐτῶν, καὶ τὰ ζῶα  
 καὶ τὰ μόρια τῶν ζώων, καὶ τέλος ὁ οὐρανὸς καὶ  
 τὰ μόρια τοῦ οὐρανοῦ ἰδία δέ τινες οὐσίας λέγουσιν  
 εἶναι τὰ τ' εἶδη καὶ τὰ μαθηματικά ἄλλας δὲ δὴ  
 συμβαίνει ἐκ τῶν λόγων οὐσίας εἶναι, τὸ τί ἦν  
 εἶναι καὶ τὸ ὑποκείμενον ἔτι ἄλλως τὸ γένος  
<sup>5</sup> μᾶλλον τῶν εἰδῶν καὶ τὸ καθόλου τῶν καθ' ἕκαστα  
 τῶ δὲ καθόλου καὶ τῶ γένει καὶ αἱ ἰδέαι συν-  
 ἄπτουσιν· κατὰ τὸν αὐτὸν γὰρ λόγον οὐσίαι δοκοῦσιν  
 εἶναι. ἐπεὶ δὲ τὸ τί ἦν εἶναι οὐσία, τούτου δὲ  
 λόγος ὁ ὀρισμός, διὰ τοῦτο περὶ ὀρισμοῦ καὶ περὶ  
 τοῦ καθ' αὐτὸ διώρισταί. ἐπεὶ δὲ ὁ ὀρισμὸς λόγος,  
<sup>0</sup> ὁ δὲ λόγος μέρη ἔχει, ἀναγκαῖον καὶ περὶ μέρους

<sup>a</sup> Cf. VII. 1.

<sup>b</sup> Cf. VII. 11

<sup>c</sup> Cf. VII. 11., 14

<sup>d</sup> Cf. VII. 13.

<sup>e</sup> Cf. VII. 14.

<sup>f</sup> Cf. VII. 14.-16., 12., 17.

## BOOK VIII

I. We must now draw our conclusions from what has been said, and after summing up the result, bring our inquiry to a close. We have said<sup>a</sup> that the objects of our inquiry are the causes and principles and elements of substances. Now some substances are agreed upon by all; but about others certain thinkers have stated individual theories. Those about which there is agreement are natural substances · *e g* fire, earth, water, air and all the other simple bodies; next, plants and their parts, and animals and the parts of animals; and finally the sensible universe and its parts; and certain thinkers individually include as substances the Forms and the objects of mathematics.<sup>b</sup> And arguments show<sup>3</sup> that there are yet other substances · the essence and the substrate.<sup>c</sup> Again, from another point of view, the genus is more nearly substance than the species, and the universal than the particulars<sup>d</sup>; and there is a close connexion between the universal and genus and the Ideas for they are thought to be substance on the same grounds · And since the essence<sup>4</sup> is substance, and definition is the formula of the essence, we have therefore systematically examined definition and essential predication<sup>f</sup>. And since the definition is a formula, and the formula has parts, we have been compelled to investigate “parts,”

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<sup>a</sup> ἦν ἰδεῖν, ποῖα τῆς οὐσίας μέρη καὶ ποῖα οὐ, καὶ εἰ ταῦτα καὶ τοῦ ὀρισμοῦ. ἔτι τοίνυν οὔτε τὸ καθόλου οὐσία οὔτε τὸ γένος περὶ δὲ τῶν ἰδεῶν καὶ τῶν μαθηματικῶν ὕστερον σκεπτέον· παρὰ γὰρ τὰς αἰσθητὰς οὐσίας ταύτας λέγουσιν εἶναι. νῦν  
 35 δὲ περὶ τῶν ὁμολογουμένων οὐσιῶν ἐπέλθωμεν.

Αὗται δ' εἰσὶν αἱ αἰσθηταὶ αἱ δ' αἰσθηταὶ οὐσίαι πᾶσαι ὕλην ἔχουσιν. ἔστι δ' οὐσία τὸ ὑποκείμενον, ἄλλως μὲν ἢ ὕλη (ὕλην δὲ λέγω ἢ μὴ τόδε τι οὐσα ἐνεργεῖα δυνάμει ἐστὶ τόδε τι), ἄλλως δ' ὁ λόγος καὶ ἢ μορφή, ὃ τόδε τι ὄν τῷ λόγῳ χωριστόν ἐστιν.  
 30 τρίτον δὲ τὸ ἐκ τούτων, οὗ γένεσις μόνου καὶ φθορά ἐστὶ, καὶ χωριστόν ἀπλῶς· τῶν γὰρ κατὰ τὸν λόγον οὐσιῶν αἱ μὲν αἱ δ' οὐ. "Ὅτι δ' ἐστὶν οὐσία καὶ ἢ ὕλη, δῆλον· ἐν πάσαις γὰρ ταῖς ἀντικειμέναις μεταβολαῖς ἐστὶ τι τὸ ὑποκείμενον ταῖς μεταβολαῖς, οἷον κατὰ τόπον τὸ νῦν μὲν ἐνταῦθα,  
 35 πάλιν δ' ἄλλοθι, καὶ κατ' αὔξησιν ὃ νῦν μὲν τηλικόνδε, πάλιν δ' ἔλαττον ἢ μείζον, καὶ κατ'  
 40 ἀλλοίωσιν ὃ νῦν μὲν ὑγιές, πάλιν δὲ κάμνον. ὁμοίως δὲ καὶ κατ' οὐσίαν ὃ νῦν μὲν ἐν γενέσει, πάλιν δ' ἐν φθορᾷ, καὶ νῦν μὲν ὑποκείμενον ὡς τόδε τι, πάλιν δ' ὑποκείμενον ὡς κατὰ στέρησιν. καὶ ἀκολουθοῦσι δὴ ταύτῃ αἱ ἄλλαι μεταβολαί.

<sup>a</sup> Cf. VII 2, xi.

<sup>b</sup> Cf. VII. xiii., xvi

<sup>c</sup> Books XIII and XIV.

<sup>d</sup> Cf. VII. viii

<sup>e</sup> In point of fact the only form which is absolutely separable is Mind or Reason. Cf. XII vii., ix.

and to discover what things are parts of the substance, and what are not; and whether the parts of the substance are also parts of the definition.<sup>a</sup> Further, then, neither the universal nor the genus is substance<sup>b</sup> As for the Ideas and the objects of 5 mathematics (for some say that these exist apart from sensible substances) we must consider them later<sup>c</sup> But now let us proceed to discuss those substances which are generally accepted as such

Now these are the sensible substances, and all sensible substances contain matter. And the substrate is substance, in one sense matter (by matter 6 I mean that which is not actually, but is potentially, <sup>Subst</sup> <sup>as su</sup> an individual thing); and in another the formula and the specific shape (which is an individual thing and is theoretically separable), and thirdly there is the combination of the two, which alone admits of generation and destruction,<sup>d</sup> and is separable in an unqualified sense—for of substances in the sense of formula some are separable<sup>e</sup> and some are not.

That matter is also substance is evident; for in 7 all opposite processes of change there is something that underlies those processes; *e g*, if the change is of *place*, that which is now in one place and subsequently in another; and if the change is of *magnitude*, that which is now of such-and-such a size, and subsequently smaller or greater; and if the change is of *quality*, that which is now healthy and subsequently diseased Similarly, if the change is 8 in respect of *being*, there is something which is now in course of generation, and subsequently in course of destruction, and which is the underlying substrate, now as *this* individual thing, and subsequently as deprived of its individuality. In this last process

<sup>b</sup>  
 5 τῶν δ' ἄλλων ἢ μιᾶ ἢ δυοῖν αὕτη οὐκ ἀκολουθεῖ·  
 οὐ γὰρ ἀνάγκη, εἴ τι ὕλην ἔχει τοπικὴν, τοῦτο καὶ  
 γεννητὴν καὶ φθαρτὴν ἔχειν τίς μὲν οὖν διαφορὰ  
 τοῦ ἀπλῶς γίνεσθαι καὶ μὴ ἀπλῶς, ἐν τοῖς  
 φυσικοῖς εἴρηται

II. Ἐπεὶ δ' ἡ μὲν ὡς ὑποκειμένη καὶ ὡς ὕλη οὐσία  
 10 ὁμολογεῖται, αὕτη δ' ἐστὶν ἡ δυνάμει, λοιπὸν τὴν  
 ὡς ἐνέργειαν οὐσίαν τῶν αἰσθητῶν εἰπεῖν τίς ἐστίν.  
 Δημόκριτος μὲν οὖν τρεῖς διαφορὰς ἔοικεν οἰομένῳ  
 εἶναι τὸ μὲν γὰρ ὑποκείμενον σῶμα τὴν ὕλην ἐν  
 καὶ ταυτόν, διαφέρειν δὲ ἡ ῥυσμῶ, ὃ ἐστὶ σχῆμα,  
 15 ἡ τροπῆ, ὃ ἐστὶ θέσις, ἡ διαθιγῆ, ὃ ἐστὶ τάξις.  
 φαίνονται δὲ πολλαὶ διαφοραὶ οὐσαι, οἷον τὰ μὲν  
 συνθέσει λέγεται τῆς ὕλης, ὡσπερ ὅσα κράσει  
 καθάπερ μελίκρατον, τὰ δὲ δεσμῶ οἷον φάκελος,  
 τὰ δὲ κόλλῃ οἷον βιβλίον, τὰ δὲ γόμφῳ οἷον  
 κιβώτιον, τὰ δὲ πλείοσι τούτων, τὰ δὲ θέσει οἷον  
 20 οὐδὸς καὶ ὑπέρθυρον (ταῦτα γὰρ τῷ κείσθαι πως  
 διαφέρει), τὰ δὲ χρόνῳ οἷον δεῖπνον καὶ ἄριστον,  
 τὰ δὲ τόπῳ οἷον τὰ πνεύματα, τὰ δὲ τοῖς τῶν  
 αἰσθητῶν πάθεσιν οἷον σκληρότητι καὶ μαλακότητι  
 καὶ πυκνότητι καὶ μανότητι καὶ ξηρότητι καὶ  
 ὑγρότητι· καὶ τὰ μὲν ἐνίοις τούτων τὰ δὲ πᾶσι  
 25 τούτοις, καὶ ὅλως τὰ μὲν ὑπεροχῆ τὰ δὲ ἐλλείψει.  
 Ὡστε δῆλον ὅτι καὶ τὸ ἔστι τοσαυταχῶς λέγεται·  
 οὐδὸς γὰρ ἐστὶν ὅτι οὕτως κείται, καὶ τὸ εἶναι τὸ

<sup>a</sup> *i.e.*, locomotion does not involve substantial change, alteration may or may not involve it (in IX VIII 17 we find that it does not), increase or decrease does involve it

<sup>b</sup> *e.g.*, the heavenly bodies, though imperishable, can move in space (ch IV. 7, XII II. 4).

of change the others are involved, but in either one or two <sup>a</sup> of the others it is not involved, for it does not necessarily follow that if a thing contains matter that admits of change of place, it also contains matter that is generable and destructible <sup>b</sup> The difference between absolute and qualified generation has been explained in the *Physics* <sup>c</sup>

II. Since substance in the sense of substrate or matter is admittedly substance, and this is potential substance, it remains to explain the nature of the actual substance of sensible things. Now Democritus <sup>d</sup> apparently assumes three differences in substance; for he says that the underlying body is one and the same in material, but differs in figure, *i e* shape; or inclination, *i e* position; or inter-contact, *i e* arrangement. But evidently there are <sup>2</sup> many differences; *e g* some things are defined by the way in which their materials are combined, as, for example, things which are unified by mixture, as honey-water; or by ligature, as a faggot, or by glue, as a book; or by clamping, as a chest; or by more than one of these methods. Other things are defined by their position, *e g*. threshold and Intel (for these differ in being situated in a particular way); and others by time, *e g* dinner and breakfast; and others by the attributes peculiar to sensible things, *e g* hardness and softness, density and rarity, dryness and humidity. Some are distinguished by some of these differences, and others by all of them; and in general some by excess and some by defect.

Hence it is clear that "is" has the same number <sup>3</sup> of senses; for a thing "is" a threshold because it is

<sup>c</sup> *Physics* 225 a 12-20, cf. *De Gen et Corr.* 317 a 17-31.

<sup>d</sup> Cf. I. iv. 11.

<sup>b</sup> οὕτως αὐτὸ κείσθαι σημαίνει, καὶ τὸ κρύσταλλον εἶναι τὸ οὕτω πεπυκνωθῆναι. ἐνίων δὲ τὸ εἶναι καὶ πᾶσι τούτοις ὀρισθήσεται, τῷ τὰ μὲν μεμίχθαι, τὰ <sup>0</sup> δὲ κεκραῖσθαι, τὰ δὲ δεδέσθαι, τὰ δὲ πεπυκνωθῆναι, τὰ δὲ ταῖς ἄλλαις διαφοραῖς κεχρηῖσθαι, ὥσπερ χεῖρ<sup>1</sup> ἢ ποῦς. ληπτέα οὖν τὰ γένη τῶν διαφορῶν· αὐταὶ γὰρ ἀρχαὶ ἔσονται τοῦ εἶναι, οἷον τὰ τῷ μάλλον καὶ ἥττον ἢ πυκνωῶ καὶ μανῶ καὶ τοῖς <sup>15</sup> ἄλλοις τοῖς τοιούτοις· πάντα γὰρ ταῦτα ὑπεροχῇ καὶ ἔλλειψίς ἐστιν εἰ δέ τι σχήματι ἢ λειότητι καὶ τραχύτητι, πάντα εὐθεῖ καὶ καμπύλῳ τοῖς δὲ <sup>a</sup> τὸ εἶναι τὸ μεμίχθαι ἔσται, ἀντικειμένως δὲ τὸ μὴ εἶναι

Φανερόν δὴ ἐκ τούτων ὅτι εἶπερ ἢ οὐσία αἰτία τοῦ εἶναι ἕκαστον, ὅτι ἐν τούτοις ζητητέον τί τὸ αἴτιον τοῦ εἶναι τούτων ἕκαστον. οὐσία μὲν <sup>5</sup> οὖν οὐδὲν τούτων οὐδὲ συνδυαζόμενον, ὅμως δὲ τὸ ἀνάλογον ἐν ἐκάστῳ καὶ ὡς ἐν ταῖς οὐσίαις τὸ τῆς ὕλης κατηγορούμενον αὐτῇ ἢ ἐνέργεια, καὶ ἐν τοῖς ἄλλοις ὀρισμοῖς μάλιστα. οἷον εἰ οὐδὸν δέοι ὀρίσασθαι, ξύλον ἢ λίθον ὡδὶ κείμενον ἐροῦμεν, καὶ οἰκίαν πλίνθους καὶ ξύλα ὡδὶ κείμενα· ἢ ἔτι <sup>10</sup> καὶ τὸ οὐ ἔνεκα ἐπ' ἐνίων ἐστίν. εἰ δὲ κρύσταλλον, ὕδωρ πεπηγὸς ἢ πεπυκνωμένον ὡδί. συμφωνία δὲ

<sup>1</sup> χεῖρ] ἢ χεῖρ E: ἢ χεῖρ J.



situated in a particular way, and ‘ to be a threshold ’ means to be situated in this particular way ; and “ to be ice ” means to be condensed in this particular way. Some things have their being defined in all these ways by being partly mixed, partly blended, partly bound, partly condensed, and partly subjected to all the other different processes , as, for example. a hand or a foot We must therefore comprehend the 4 various kinds of differences—for these will be principles of being—*i e* the differences in degree, or in density and rarity, and in other such modifications ; for they are all instances of excess and defect. And 5 if anything differs in shape or in smoothness or roughness, all these are differences in straightness and curvature For some things mixture will constitute being, and the opposite state not-being.

From this it is evident that if substance is the cause of the existence of each thing, we must look among these “ differences ” for the cause of the being of each thing. No one of them, nor the combination of 6 any two of them, is substance, but nevertheless each one of them contains something analogous to substance And just as in the case of substances that which is predicated of the matter is the actuality itself, so in the other kinds of definition it is the nearest approximation to actuality. *E g*, if we have to define a threshold, we shall call it “ a piece of wood or stone placed in such-and-such a way ” ; and we shall define a house as “ bricks and timber arranged in such-and-such a way ” ; or again in 7 some cases there is the final cause as well. And if we are defining ice, we shall describe it as “ water congealed or condensed in such-and-such a way ” ; and a harmony is “ such-and-such a com-

<sup>1</sup> ὀξέος καὶ βαρέος μίξις τοιαδί· τὸν αὐτὸν δὲ τρόπον  
καὶ ἐπὶ τῶν ἄλλων Φανερόν δὴ ἐκ τούτων  
ὅτι ἡ ἐνέργεια ἄλλη ἄλλης ὕλης καὶ ὁ λόγος· τῶν  
μὲν γὰρ ἡ σύνθεσις, τῶν δ' ἡ μίξις, τῶν δ' ἄλλο  
<sup>5</sup> τι τῶν εἰρημένων. διὸ τῶν ὀριζομένων οἱ μὲν λέ-  
γοντες τί ἐστὶν οἰκία, ὅτι λίθοι πλίνθοι ξύλα, τὴν  
δυναμίει οἰκίαν λέγουσιν ὕλη γὰρ ταῦτα οἱ δὲ  
ἀγγεῖον σκεπαστικὸν χρημάτων καὶ σωμάτων,<sup>1</sup> ἢ  
τι<sup>2</sup> ἄλλο τοιοῦτον [προσθέντες],<sup>3</sup> τὴν ἐνέργειαν<sup>4</sup>  
λέγουσιν οἱ δ' ἄμφω ταῦτα συντιθέντες τὴν τρίτην  
καὶ τὴν ἐκ τούτων οὐσίαν ἔοικε γὰρ ὁ μὲν διὰ  
<sup>0</sup> τῶν διαφορῶν λόγος τοῦ εἴδους καὶ τῆς ἐνεργείας  
εἶναι, ὁ δ' ἐκ τῶν ἐνυπαρχόντων τῆς ὕλης μᾶλλον  
ὁμοίως δὲ καὶ οἴους Ἀρχύτας ἀπεδέχετο ὄρους τοῦ  
συνάμφω γὰρ εἰσιν οἷον τί ἐστὶ νηνεμία, ἡρεμία  
ἐν πλήθει ἀέρος· ὕλη μὲν γὰρ ὁ ἀήρ, ἐνέργεια δὲ καὶ  
οὐσία ἢ ἡρεμία τί ἐστὶ γαλήνη, ὁμαλότης θα-  
<sup>15</sup> λάττης· τὸ μὲν ὑποκείμενον ὡς ὕλη ἢ θάλαττα, ἢ  
δὲ ἐνέργεια καὶ ἡ μορφή ἢ ὁμαλότης Φανερόν  
δὴ ἐκ τῶν εἰρημένων τίς ἢ αἰσθητὴ οὐσία ἐστὶ καὶ  
πῶς ἢ μὲν γὰρ ὡς ὕλη, ἢ δ' ὡς μορφή καὶ<sup>5</sup>  
ἐνέργεια ἢ δὲ τρίτη ἢ ἐκ τούτων.

III Δεῖ δὲ μὴ ἀγνοεῖν ὅτι ἐνίοτε λανθάνει πότερον  
<sup>30</sup> σημαίνει τὸ ὄνομα τὴν σύνθετον οὐσίαν ἢ τὴν  
ἐνέργειαν καὶ τὴν μορφήν, οἷον ἢ οἰκία πότερον

<sup>1</sup> σωμάτων καὶ χρημάτων recc.

<sup>2</sup> τι καὶ recc

<sup>3</sup> Christ.

<sup>4</sup> ἐνεργεία Bekker

<sup>5</sup> καὶ Alexander, Bonitz· ὅτι.

<sup>a</sup> A celebrated Pythagorean, contemporary with Plato.

bination of high and low": and similarly in the other cases

From this it is evident that the actuality or formula is different in the case of different matter; for in some cases it is a combination, in others a mixture, and in others some other of the modes which we have described. Hence in defining the nature of a house, 8 those who describe it as stones bricks and wood, describe the potential house, since these things are its matter; those who describe it as "a receptacle for containing goods and bodies," or something else to the same effect, describe its actuality: but those who combine these two definitions describe the third kind of substance, that which is composed of matter and form. For it would seem that the for- 9 mula which involves the differentiae is that of the form and the actuality, while that which involves the constituent parts is rather that of the matter. The same is true of the kind of definitions which Anichytas<sup>a</sup> used to accept; for they are definitions of the combined matter and form. *E g.*, what is "windlessness?" Stillness in a large extent of air, for the air is the matter, and the stillness is the actuality and substance. What is a calm? Levelness of sea 10 The sea is the material substrate, and the levelness is the actuality or form.

From the foregoing account it is clear what sensible substance is, and in what sense it exists; either as matter, or as form and actuality, or thirdly as the combination of the two.

III We must not fail to realize that sometimes it is doubtful whether a name denotes the composite substance or the actuality and the form—*e g.* whether "house" denotes the composite thing, "a covering

Actu  
form  
guish  
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subs

<sup>a</sup> σημεῖον τοῦ κοινοῦ ὅτι σκέπασμα ἐκ πλίνθων καὶ  
λίθων ὡδὶ κειμένων, ἢ τῆς ἐνεργείας καὶ τοῦ εἶδους  
ὅτι σκέπασμα, καὶ γραμμὴ πότερον δυὰς ἐν μήκει  
<sup>35</sup> ἢ [ὅτι]<sup>1</sup> δυὰς, καὶ ζῶον πότερον ψυχὴ ἐν σώματι ἢ  
ψυχὴ αὐτῆ γὰρ οὐσία καὶ ἐνέργεια σώματός τινος.  
εἷη δ' ἂν καὶ ἐπ' ἀμφοτέροις τὸ ζῶον, οὐχ ὡς ἐνὶ  
λόγῳ λεγόμενον ἀλλ' ὡς πρὸς ἓν. ἀλλὰ ταῦτα  
πρὸς μὲν τι ἄλλο διαφέρει, πρὸς δὲ τὴν ζήτησιν τῆς  
<sup>b</sup> οὐσίας τῆς αἰσθητῆς οὐδέν· τὸ γὰρ τί ἦν εἶναι τῷ  
εἶδει καὶ τῇ ἐνεργείᾳ ὑπάρχει ψυχὴ μὲν γὰρ καὶ  
ψυχῇ εἶναι ταυτόν, ἀνθρώπῳ δὲ καὶ ἄνθρωπος οὐ  
ταυτόν, εἰ μὴ καὶ ἡ ψυχὴ ἄνθρωπος λεχθήσεται.  
<sup>5</sup> οὕτω δὲ τινὶ μὲν τινὶ δ' οὐ. Οὐ φαίνεται δὲ ζη-  
τοῦσιν ἢ συλλαβῇ ἐκ τῶν στοιχείων οὔσα καὶ συν-  
θέσεως, οὐδ' ἡ οἰκία πλίνθοι τε καὶ σύνθεσις· καὶ  
τοῦτο ὀρθῶς οὐ γὰρ ἐστὶν ἡ σύνθεσις οὐδ' ἡ μίξις  
ἐκ τούτων ὧν ἐστὶ<sup>2</sup> σύνθεσις ἢ μίξις ὁμοίως δὲ  
οὐδὲ τῶν ἄλλων οὐθέν, οἷον εἰ ὁ οὐδὸς θέσει, οὐκ  
<sup>10</sup> ἐκ τοῦ οὐδοῦ ἢ θέσις, ἀλλὰ μᾶλλον οὗτος ἐξ  
ἐκείνης. οὐδὲ δὴ ὁ ἄνθρωπος ἐστὶ τὸ ζῶον καὶ  
δίπουν, ἀλλὰ τι δεῖ εἶναι ὃ παρὰ ταῦτά ἐστιν, εἰ  
ταῦθ' ὕλη, οὔτε δὲ στοιχείον οὔτ' ἐκ στοιχείου, ἀλλ'  
ἡ οὐσία· ὃ ἐξαιροῦντες τὴν ὕλην λέγουσιν. εἰ  
οὖν τοῦτ' αἴτιον τοῦ εἶναι καὶ οὐσία τοῦτο, αὐτὴν  
ἂν τὴν οὐσίαν οὐ<sup>3</sup> λέγοιεν. Ἐνάγκη δὲ ταύτην

<sup>1</sup> Bywater.<sup>2</sup> ἐστὶν ἢ A<sup>b</sup>.<sup>3</sup> οὐ om. E<sup>2</sup>A<sup>b</sup> Alexander.

made of bricks and stones arranged in such-and-such a way," or the actuality and form, "a covering"; and whether "line" means "duality in length" or "duality" <sup>a</sup>; and whether "animal" means "a soul in a body" or "a soul"; for the soul is the substance and actuality of some body. The term <sup>2</sup> "animal" would be applicable to both cases; not as being defined by one formula, but as relating to one concept. These distinctions are of importance from another point of view, but unimportant for the investigation of sensible substance, because the essence belongs to the form and the actualization. Soul and essence of soul are the same, but man and <sup>3</sup> essence of man are not, unless the soul is also to be called man; and although this is so in one sense, it is not so in another.

It appears, then, when we inquire into the matter, that a syllable is not derived from the phonetic elements *plus* combination, nor is a house bricks *plus* combination. And this is true; for the combination or mixture is not derived from the things of which it is a combination or mixture, nor, similarly, is any <sup>4</sup> other of the "differences" *E g*, if the threshold is defined by its position, the position is not derived from the threshold, but rather *vice versa*. Nor, indeed, is man "animal" *plus* "two-footed"; there must be something which exists besides these, if they are matter; but it is neither an element nor derived from an element, but the substance; and those who offer the definition given above are omitting this and describing the matter. If, then, this something else <sup>5</sup> is the cause of a man's being, and this is his substance, they will not be stating his actual substance

Now the substance must be either eternal or

<sup>b</sup>  
 17 ἢ αἰδιον εἶναι ἢ φθαρτὴν ἄνευ τοῦ φθειρεσθαι καὶ  
 γεγονέναι ἄνευ τοῦ γίνεσθαι. δέδεικται δὲ καὶ  
 δεδήλωται ἐν ἄλλαις ὅτι τὸ εἶδος οὐθεὶς ποιεῖ οὐδὲ  
 γεννᾷ, ἀλλὰ ποιεῖται τόδε, γίννεται δὲ τὸ ἐκ τού-  
 τω· εἰ δ' εἰσὶ τῶν φθαρτῶν αἱ οὐσίαι χωρισταί,  
 οὐδέν πω δῆλον πλὴν ὅτι γ' ἐνίων οὐκ ἐνδέχεται  
 20 δῆλον, ὅσα μὴ οἷόν τε παρὰ τὰ τινὰ εἶναι, οἷον  
 οἰκίαν ἢ σκεῦος. ἴσως μὲν οὖν οὐδ' οὐσίαι εἰσὶν  
 οὔτ' αὐτὰ ταῦτα οὔτε τι τῶν ἄλλων ὅσα μὴ φύσει  
 συνέστηκεν τὴν γὰρ φύσιν μόνην ἂν τις θείη τὴν<sup>1</sup>  
 ἐν τοῖς φθαρτοῖς οὐσίαν ὥστε ἡ ἀπορία ἦν οἱ  
 Ἄντισθένειοι καὶ οἱ οὔτως ἀπαιδευτοὶ ἠπόρουσαν  
 25 ἔχει τινὰ καιρόν, ὅτι οὐκ ἔστι τὸ τί ἔστιν ὀρί-  
 σασθαι (τὸν γὰρ ὄρον εἶναι λόγον μακρόν), ἀλλὰ  
 ποῖον μὲν τί ἔστιν ἐνδέχεται καὶ διδάξαι, ὥσπερ  
 ἄργυρον, τί μὲν ἔστιν οὗ, ὅτι δὲ οἷον καττίτερος.  
 ὥστ' οὐσίας ἔστι μὲν ἧς ἐνδέχεται εἶναι ὄρον καὶ  
 30 λόγον, οἷον τῆς συνθέτου, ἐάν τε αἰσθητῇ ἐάν τε  
 νοητῇ ἢ ἐξ ὧν δ' αὕτη πρώτων, οὐκέτι,<sup>2</sup> εἶπερ  
 τι κατὰ τινος σημαίνει ὁ λόγος ὁ ὀριστικός, καὶ  
 δεῖ τὸ μὲν ὥσπερ ὕλην εἶναι, τὸ δὲ ὡς μορφὴν.

Φανερόν δὲ καὶ διότι, εἶπερ εἰσὶ πῶς ἀριθμοὶ  
 αἱ οὐσίαι, οὔτως εἰσὶ καὶ οὐχ ὡς τινες λέγουσι  
 35 μονάδων· ὅ τε γὰρ ὀρισμὸς ἀριθμὸς τις· διαιρετός

<sup>1</sup> τὴν Bessarion, Aldine, Alexander τῶν.

<sup>2</sup> οὐκ ἔστι EJT Alexander.

<sup>a</sup> Cf. VII viii.

<sup>b</sup> Cf. ch 1 6 n

<sup>c</sup> Cf. VII. viii 6.

<sup>d</sup> Cf. V. xlix. 4.

<sup>e</sup> Aristotle is referring to the Pythagoreans and Platonists, but seems as usual to misrepresent their views. His object in this section is to show that the relation of number

perishable without ever being in process of perishing, and generated without ever being in process of generation. It has been clearly demonstrated elsewhere <sup>a</sup> that no one generates or creates the form; it is the individual thing that is created, and the compound that is generated. But whether the substances of perishable things are separable or not is not yet at all clear <sup>b</sup>; only it is clear that this is impossible in some cases, *i e* in the case of all things which cannot exist apart from the particular instances; *e g* house or implement. <sup>c</sup> Probably, then, neither these things themselves, nor anything else which is not naturally composed, are substances; for their nature is the only substance which one can assume in the case of perishable things. Hence the difficulty which perplexed the followers of Antisthenes <sup>d</sup> and others similarly unlearned has a certain application; I mean the difficulty that it is impossible to define *what* a thing is (for the definition, they say, is a lengthy formula), but it *is* possible actually to teach others what a thing *is like*, *e g*. we cannot say *what* silver is, but we can say that it is like tin. Hence there can be definition and formula of one kind of substance, *i e* the composite, whether it is sensible or intelligible; but not of its primary constituents, since the defining formula denotes something predicated of something, and this must be partly of the nature of matter and partly of the nature of form.

It is also obvious why, if numbers are in any sense substances, they are such in this sense, and not, as some <sup>e</sup> describe them, aggregates of units. For (*a*) the definition is a kind of number, since it is divisible,

Analog  
between  
numbe  
substa  
definit

to substance is only one of analogy. Cf. XIII. vi., vii, and see Introd pp xvii f., xxiii f.

ἰ b τε γάρ, καὶ εἰς ἀδιαίρετα (οὐ γὰρ ἄπειροι οἱ λόγοι),  
 καὶ ὁ ἀριθμὸς δὲ τοιοῦτον<sup>1</sup> καὶ ὡσπερ οὐδ' ἀπ'  
 ἀριθμοῦ ἀφαιρεθέντος τινὸς ἢ προστεθέντος ἐξ ὧν  
 ὁ ἀριθμὸς ἐστίν, οὐκέτι ὁ αὐτὸς ἀριθμὸς ἐστίν  
 ἰ a ἀλλ' ἕτερος, κἂν τοῦλάχιστον ἀφαιρεθῆ ἢ προστεθῆ,  
 οὕτως οὐδὲ ὁ ὀρισμὸς οὐδὲ τὸ τί ἦν εἶναι οὐκέτι  
 ἐστὶ ἀφαιρεθέντος τινὸς ἢ προστεθέντος. καὶ τὸν  
 ἀριθμὸν δεῖ εἶναι τι ᾧ εἰς, ὃ νῦν οὐκ ἔχουσι λέγειν  
 τίνι εἰς, εἴπερ ἐστὶν εἰς ἢ γὰρ οὐκ ἔστιν ἀλλ' οἶον  
 σωρός, ἢ εἴπερ ἐστί, λεκτέον τί τὸ ποιοῦν ἐν ἐκ  
 πολλῶν καὶ ὁ ὀρισμὸς εἰς ἐστίν· ὁμοίως δὲ οὐδὲ  
 τοῦτον ἔχουσι λέγειν. καὶ τοῦτ' εἰκότως συμβαίνει·  
 τοῦ αὐτοῦ γὰρ λόγου, καὶ ἡ οὐσία ἐν οὕτως, ἀλλ'  
 οὐχ ὡς λέγουσιν τινες οἶον μονάς τις οὔσα ἢ στιγμή,  
 ἀλλ' ἐντελέχεια καὶ φύσις τις ἐκάστη καὶ ὡσπερ  
 10 οὐδὲ ὁ ἀριθμὸς ἔχει τὸ μᾶλλον καὶ ἥττον, οὐδ' ἢ  
 κατὰ τὸ εἶδος οὐσία, ἀλλ' εἴπερ, ἢ μετὰ τῆς ὕλης.

Περὶ μὲν οὖν γενέσεως καὶ φθορᾶς τῶν λεγομένων  
 οὐσιῶν, πῶς τ' ἐνδέχεται καὶ πῶς ἀδύνατον, καὶ  
 περὶ τῆς εἰς τὸν ἀριθμὸν ἀναγωγῆς, ἔστω μέχρι  
 τούτων διωρισμένον.

15 IV. Περὶ δὲ τῆς ὑλικῆς οὐσίας δεῖ μὴ λανθάνειν  
 ὅτι εἰ καὶ ἐκ τοῦ αὐτοῦ πάντα πρῶτον ἢ τῶν  
 αὐτῶν ὡς πρῶτων καὶ ἡ αὐτὴ ὕλη ὡς ἀρχὴ τοῖς  
 γιγνομένοις, ὅμως ἔστι τις οἰκεία ἐκάστου, οἶον

<sup>1</sup> τοιοῦτος recc

<sup>a</sup> In *Categories* 3 b 33-4 a 9 Aristotle does not allow this exception

<sup>b</sup> *i.e.* from prime matter or the four elements.



and divisible into indivisible parts (for formulae are not infinite); and number is of this nature. And 10  
 (b) just as when any element which composes the number is subtracted or added, it is no longer the same number but a different one, however small the subtraction or addition is, so neither the definition nor the essence will continue to exist if something is subtracted from or added to it. And (c) a number must be something in virtue of which it is a unity (whereas our opponents cannot say what makes it one); that is, if it is a unity. For either it 11  
 is not a unity but a kind of aggregate, or if it is a unity, we must explain what makes a unity out of a plurality. And the definition is a unity; but similarly they cannot explain the definition either. This is a natural consequence, for the same reason applies to both, and substance is a unity in the way which we have explained, and not as some thinkers say *e.g.* because it is a kind of unit or point, but each substance is a kind of actuality and nature. Also (d) just as a number does not admit of variation 12  
 in degree, so neither does substance in the sense of form, if any substance does admit of this, it is substance in combination with matter <sup>a</sup>

Let this suffice as a detailed account of the generation and destruction of so-called substances, in what sense they are possible and in what sense they are not; and of the reference of things to number.

IV. As regards material substance, we must not fail to realize that even if all things are derived from the same primary cause, or from the same things as primary causes <sup>b</sup>; *i.e.* even if all things that are generated have the same matter for their first principle, nevertheless each thing has some matter

Matter  
 sidered  
 relatio  
 natural  
 substar  
 and eve

<sup>4 a</sup> φλέγματός [ἔστι πρώτη ὕλη]<sup>1</sup> τὰ γλυκέα ἢ λιπαρά,  
<sup>20</sup> χολῆς δὲ τὰ πικρὰ ἢ ἄλλ' ἅττα ἴσως δὲ ταῦτα ἐκ  
 τοῦ αὐτοῦ γίνονται δὲ πλείους ὕλαι τοῦ αὐτοῦ,  
 ὅταν θατέρου ἢ ἑτέρα ἦ, οἷον φλέγμα ἐκ λιπαροῦ  
 καὶ γλυκέος, εἰ τὸ λιπαρὸν ἐκ τοῦ γλυκέος, ἐκ δὲ  
 χολῆς τῷ ἀναλύεσθαι εἰς τὴν πρώτην ὕλην τὴν  
 χολήν διχῶς γὰρ τόδ' ἐκ τοῦδε, ἢ ὅτι πρὸ ὁδοῦ  
<sup>25</sup> ἔσται ἢ ὅτι ἀναλυθέντος εἰς τὴν ἀρχὴν ἐνδέχεται  
 δὲ μιᾶς τῆς ὕλης οὔσης ἕτερα γίνεσθαι διὰ τὴν  
 κινουσαν αἰτίαν, οἷον ἐκ ξύλου καὶ κιβωτὸς καὶ  
 κλίνη ἐνίων δ' ἑτέρα ἢ ὕλη ἐξ ἀνάγκης ἑτέρων ὄν-  
 των, οἷον πρίων οὐκ ἂν γένοιτο ἐκ ξύλου, οὐδ' ἐπὶ  
 τῇ κινούσῃ αἰτίᾳ τοῦτο· οὐ γὰρ ποιήσει πρίονα ἐξ  
<sup>30</sup> ἐρίου ἢ ξύλου. Εἰ δ' ἄρα τὸ αὐτὸ ἐνδέχεται ἐξ  
 ἄλλης ὕλης ποιῆσαι, δῆλον ὅτι ἡ τέχνη καὶ ἡ ἀρχὴ  
 ἢ ὡς κινουσα ἢ αὐτὴ· εἰ γὰρ καὶ ἡ ὕλη ἑτέρα καὶ τὸ  
 κινουῦν, καὶ τὸ γεγονός. Ὅταν δὴ τις ζητῇ τί  
 τὸ αἴτιον, ἐπεὶ πλεοναχῶς τὰ αἴτια λέγεται, πάσας  
 δεῖ λέγειν τὰς ἐνδεχομένας αἰτίας οἷον ἀνθρώπου  
<sup>35</sup> τίς αἰτία ὡς ὕλη; ἄρα τὰ καταμήνια; τί δ' ὡς  
 κινουῦν; ἄρα τὸ σπέρμα, τί δ' ὡς τὸ εἶδος; τὸ  
<sup>4 b</sup> τί ἦν εἶναι· τί δ' ὡς οὐ ἕνεκα; τὸ τέλος. ἴσως δὲ  
 ταῦτα ἄμφω τὸ αὐτό. δεῖ δὲ τὰ ἐγγύτατα αἴτια

<sup>1</sup> om. A<sup>b</sup>.

peculiar to it; *e g*, "the sweet" or "the viscous" is the proximate matter of mucus, and "the bitter" or some such thing is that of bile—although probably mucus and bile are derived from the same ultimate matter. The result is that there is more than one matter of the same thing, when one thing is the matter of the other; *e g*, mucus is derived from "the viscous"; and from "the sweet," if "the viscous" is derived from "the sweet", and from bile, by the analysis of bile into its ultimate matter. For there are two senses in which X comes from Y; either because X will be found further on than Y in the process of development, or because X is produced when Y is analysed into its original constituents. And different things can be generated by the moving cause when the matter is one and the same, *e g*. a chest and a bed from wood. But some different things must necessarily have different matter; *e g*, a saw cannot be generated from wood, nor does this lie in the power of the moving cause, for it cannot make a saw of wool or wood.

If, then, it is possible to make the same thing from different matter, clearly the art, *i e*. the moving principle, is the same; for if both the matter and the mover are different, so too is the product.

So whenever we inquire what the cause is, since there are causes in several senses, we must state all the possible causes. *E g*, what is the material cause of a man? The menses. What is the moving cause? The semen. What is the formal cause? The essence. What is the final cause? The end. (But perhaps both the latter are the same.) We must, however, state the most proximate causes.

<sup>b</sup> λέγειν. τίς ἢ ὕλη; μὴ πῦρ ἢ γῆν, ἀλλὰ τὴν ἴδιον.

Περὶ μὲν οὖν τὰς φυσικὰς οὐσίας καὶ γεννητὰς ἀνάγκη οὕτω μετιέναι, εἴ τις μέτεισιν ὀρθῶς, εἴπερ  
 5 ἄρα αἰτία τε ταῦτα καὶ τοσαῦτα, καὶ δεῖ τὰ αἰτία γνωρίζειν. ἐπὶ δὲ τῶν φυσικῶν μὲν αἰδίων δὲ οὐσιῶν ἄλλος λόγος. ἴσως γὰρ ἔνια οὐκ ἔχει ὕλην, ἢ οὐ τοιαύτην ἀλλὰ μόνον κατὰ τόπον κινήτην. οὐδ' ὅσα δὴ φύσει μὲν, μὴ οὐσίαι<sup>1</sup> δέ, οὐκ ἔστι τούτοις ὕλη, ἀλλὰ τὸ ὑποκείμενον ἢ οὐσία. οἶον  
 10 τί αἴτιον ἐκλείψεως, τίς ὕλη, οὐ γὰρ ἔστιν, ἀλλ' ἢ σελήνη τὸ πάσχον. τί δ' αἴτιον ὡς κινήσαν καὶ φθεῖραν τὸ φῶς, ἢ γῆ τὸ δ' οὐ ἔνεκα ἴσως οὐκ ἔστιν. τὸ δ' ὡς εἶδος ὁ λόγος, ἀλλὰ ἄδηλος ἐὰν μὴ μετὰ τῆς αἰτίας ἢ ὁ λόγος οἶον τί ἐκλειψις; στέρησις φωτός. ἐὰν δὲ προστεθῆ τὸ ὑπὸ γῆς ἐν  
 15 μέσῳ γιγνομένης, ὁ σὺν τῷ αἰτίῳ λόγος οὗτος. ὕπνου δ' ἄδηλον τί τὸ πρῶτον πάσχον. ἀλλ' ὅτι τὸ ζῶον; ναί, ἀλλὰ τοῦτο κατὰ τί, καὶ τί πρῶτον; καρδιά ἢ ἄλλο τι. εἶτα ὑπὸ τίνος; εἶτα τί τὸ πάθος τὸ ἐκείνου καὶ μὴ τοῦ ὄλου; ὅτι ἀκίνησία  
 20 τοιαδί; ναί, ἀλλ' αὕτη τῷ τί πάσχειν τὸ πρῶτον;

V. Ἐπεὶ δ' ἔνια ἄνευ γενέσεως καὶ φθορᾶς ἔστι καὶ οὐκ ἔστιν, οἶον αἰ στιγμαί, εἴπερ εἰσί, καὶ ὅλως τὰ εἶδη καὶ αἰ μορφαί<sup>2</sup> (οὐ γὰρ τὸ λευκὸν

<sup>1</sup> οὐσίαι EA<sup>b</sup>J Alexander· οὐσία 1ecc Γ Simplicius

<sup>2</sup> καὶ αἰ μορφαί om EJ et fort Alexander

<sup>a</sup> Cf. ch. 1 8 n

<sup>b</sup> Cf. VI III 1, VII. VIII 3.

<sup>c</sup> Cf III. v. 8, 9.

What is the matter? Not fire or earth, but the matter proper to man.

Thus as regards generable natural substances we 6 must proceed in this manner, if we are to proceed correctly; that is, if the causes are these and of this number, and it is necessary to know the causes. But in the case of substances which though natural are eternal the principle is different. For presumably some of them have no matter, or no matter of this kind, but only such as is spatially mobile.<sup>a</sup> Moreover, things which exist by nature but are not 7 substances have no matter; their substrate is their substance. *E g.*, what is the cause of an eclipse; what is its matter? It has none; it is the moon which is affected. What is the moving cause which destroys the light? The earth There is probably no final cause. The formal cause is the formula, but this is obscure unless it includes the efficient cause. *E g.*, what is an eclipse? A privation of 8 light; and if we add "caused by the earth's intervention," this is the definition which includes the <efficient> cause In the case of sleep it is not clear what it is that is proximately affected. Is it the animal? Yes; but in respect of what, and of what proximately? The heart, or some other part. Again, by what is it affected? Again, what is the affection which affects that part, and not the whole animal? A particular kind of immobility? Yes; but in virtue of what affection of the proximate subject is it this?

V. Since some things both are and are not, without being hable to generation and destruction <sup>b</sup>—*e.g.* points,<sup>c</sup> if they exist at all; and in general the forms and shapes of things (because white does not come to

The re  
of ma-  
genera-  
and cl

<sup>b</sup> γίγνεται ἀλλὰ τὸ ξύλον λευκόν, εἰ ἕκ τινος καὶ τὶ  
 5 πᾶν τὸ γιγνόμενον γίγνεται), οὐ πάντα ἂν τᾶναντία  
 γίγνοιτο ἐξ ἀλλήλων, ἀλλ' ἐτέρως λευκὸς ἄνθρωπος  
 ἐκ μέλανος ἀνθρώπου καὶ λευκὸν ἐκ μέλανος οὐδὲ  
 παντὸς ὕλη ἔστιν ἀλλ' ὅσων γένεσις ἔστι καὶ μετα-  
 βολὴ εἰς ἀλλήλα· ὅσα δ' ἄνευ τοῦ μεταβάλλειν ἔστιν  
 ἢ μή, οὐκ ἔστι τούτων ὕλη. Ἐχει δ' ἀπορίαν  
 30 πῶς πρὸς τᾶναντία ἢ ὕλη ἢ ἐκάστου ἔχει οἶον εἰ  
 τὸ σῶμα δυνάμει ὑγιεινόν, ἐναντίον δὲ νόσος ὑγεία,  
 ἄρα ἄμφω δυνάμει, καὶ τὸ ὕδωρ δυνάμει οἶνος  
 καὶ ὄξος; ἢ τοῦ μὲν καθ' ἕξιν καὶ κατὰ τὸ εἶδος  
 ὕλη, τοῦ δὲ κατὰ στέρησιν καὶ φθορὰν τὴν παρὰ  
 φύσιν, Ἄπορία δέ τις ἔστι καὶ διὰ τί ὁ οἶνος οὐχ  
 35 ὕλη τοῦ ὄξους οὐδὲ δυνάμει ὄξος (καίτοι γίγνεται  
 ἐξ αὐτοῦ ὄξος) καὶ ὁ ζῶν δυνάμει νεκρός. ἢ οὐ,  
 40 ἀλλὰ κατὰ συμβεβηκὸς αἱ φθοραί, ἢ δὲ τοῦ ζώου  
 ὕλη αὐτὴ κατὰ φθορὰν νεκροῦ δύναμις καὶ ὕλη,  
 καὶ τὸ ὕδωρ ὄξους· γίγνεται γὰρ ἐκ τούτων ὥσπερ  
 ἐξ ἡμέρας νύξ. καὶ ὅσα δὴ οὕτω μεταβάλλει εἰς  
 5 ἀλλήλα, εἰς τὴν ὕλην δεῖ ἐπανελθεῖν, οἶον εἰ ἐκ  
 νεκροῦ ζῶον, εἰς τὴν ὕλην πρῶτον, εἶθ' οὕτω ζῶον·  
 καὶ τὸ ὄξος εἰς ὕδωρ, εἶθ' οὕτως οἶνος.

#### VI Περὶ δὲ τῆς ἀπορίας τῆς εἰρημένης περί τε

<sup>a</sup> i.e., we must distinguish "contraries" in the sense of  
 "contrary qualities" from "contraries" in the sense of  
 "things characterized by contrary qualities."

be, but the wood becomes white, since everything which comes into being comes from something and becomes something)—not all the contraries<sup>a</sup> can be generated from each other. White is not generated from black in the same way as a white man is generated from a black man, nor does everything contain matter, but only such things as admit of generation and transformation into each other. And such<sup>2</sup> things as, without undergoing a process of change, both are and are not, have no matter

There is a difficulty in the question how the matter of the individual is related to the contraries. *E g.*, if the body is potentially healthy, and the contrary of health is disease, is the body potentially both healthy and diseased? And is water potentially wine and vinegar? Probably in the one case it is the matter in respect of the positive state and form, and in the other case in respect of privation and degeneration which is contrary to its proper nature.

There is also a difficulty as to why wine is not the<sup>3</sup> matter of vinegar, nor potentially vinegar (though vinegar comes from it), and why the living man is not potentially dead. In point of fact they are not; their degeneration is accidental, and the actual matter of the living body becomes by degeneration the potentiality and matter of the dead body, and water the matter of vinegar; for the one becomes the other just as day becomes night. All things<sup>4</sup> which change reciprocally in this way must return into the matter; *e.g.*, if a living thing is generated from a dead one, it must first become the matter, and then a living thing; and vinegar must first become water, and then wine.

VI. With regard to the difficulty which we have de-

<sup>1</sup> τοὺς ὀρισμοὺς καὶ περὶ τοὺς ἀριθμοὺς, τί αἴτιον  
 τοῦ ἔν εἶναι; πάντων γὰρ ὅσα πλείω μέρη ἔχει  
 ) καὶ μὴ ἔστιν οἶον σωρὸς τὸ πᾶν ἀλλ' ἔστι τι τὸ  
 ὄλον παρὰ τὰ μόρια, ἔστι τι αἴτιον, ἐπεὶ καὶ ἐν  
 τοῖς σώμασι τοῖς μὲν ἀφή αἰτία τοῦ ἔν εἶναι, τοῖς  
 δὲ γλισχρότης ἢ τι πάθος ἕτερον τοιοῦτον. ὁ δ'  
 ὀρισμὸς λόγος ἐστὶν εἷς οὐ συνδέσμων καθάπερ ἡ  
<sup>5</sup> Ἰλιάς, ἀλλὰ τῷ ἑνὸς εἶναι. Τί οὖν ἔστιν ὁ ποιεῖ  
 ἐν τὸν ἄνθρωπον, καὶ διὰ τί ἔν ἀλλ' οὐ πολλά,  
 οἶον τό τε ζῶον καὶ τὸ δίπουν, ἄλλως τε δὴ καὶ  
 εἰ ἔστιν, ὥσπερ φασὶ τινες, αὐτὸ τι ζῶον καὶ αὐτὸ  
 δίπουν; διὰ τί γὰρ οὐκ ἐκείνα αὐτὰ ὁ ἄνθρωπός  
 ἐστὶ, καὶ ἔσονται κατὰ μέθεξιν οἱ ἄνθρωποι οὐκ  
 ἀνθρώπου οὐδ' ἑνὸς<sup>1</sup> ἀλλὰ δυοῖν, ζῶου καὶ δίποδος;  
<sup>10</sup> καὶ ὅλως δὴ οὐκ ἂν εἶη ὁ ἄνθρωπος ἔν ἀλλὰ πλείω,  
 ζῶον καὶ δίπουν. φανερόν δὴ ὅτι οὕτω μὲν μετ-  
 ιοῦσιν ὡς εἰώθασιν ὀρίζεσθαι καὶ λέγειν, οὐκ ἐν-  
 δέχεται ἀποδοῦναι καὶ λῦσαι τὴν ἀπορίαν· εἰ δ'  
 ἐστίν, ὥσπερ λέγομεν, τὸ μὲν ὕλη τὸ δὲ μορφή,  
 καὶ τὸ μὲν δυνάμει τὸ δὲ ἐνεργεία, οὐκέτι ἀπορία  
<sup>25</sup> δόξειεν ἂν εἶναι τὸ ζητούμενον. ἔστι γὰρ αὕτη ἡ  
 ἀπορία ἢ αὐτὴ καὶ εἰ ὁ<sup>2</sup> ὄρος εἶη ἱματίου στρογγύ-  
 λος<sup>3</sup> χαλκός· εἶη γὰρ ἂν σημείον τοῦνομα τοῦτο  
 τοῦ λόγου, ὥστε τὸ ζητούμενόν ἐστι τί αἴτιον τοῦ  
 ἔν εἶναι τὸ στρογγύλον καὶ τὸν χαλκόν. οὐκέτι δ'  
 ἢ ἀπορία φαίνεται, ὅτι τὸ μὲν ὕλη τὸ δὲ μορφή.  
<sup>30</sup> τί οὖν τούτου αἴτιον, τοῦ τὸ δυνάμει ὄν ἐνεργεία

<sup>1</sup> οὐδενὸς A<sup>b</sup> Alexander.

<sup>2</sup> ὁ om. A<sup>b</sup> Alexander.

<sup>3</sup> στρογγύλος] ὁ στρογγύλος A<sup>b</sup> Alexander.

<sup>a</sup> VII. xii, VIII. iii. 10, 11.

<sup>b</sup> Literally "cloak"; cf. VII. iv. 7 n.



scribed <sup>a</sup> in connexion with definitions and numbers, <sup>The u</sup> what is the cause of the unification? <sup>definit</sup> In all things which have a plurality of parts, and which are not a total aggregate but a whole of some sort distinct from the parts, there is some *cause*; inasmuch as even in bodies sometimes contact is the cause of their unity, and sometimes viscosity or some other such quality. But a definition is *one* account, <sup>2</sup> not by connexion, like the *Iliad*, but because it is a definition of one thing.

What is it, then, that makes "man" one thing, and why does it make him one thing and not many, *e.g.* "animal" and "two-footed," especially if, as some say, there is an Idea of "animal" and an Idea of "two-footed"? Why are not these Ideas <sup>3</sup> "man," and why should not man exist by participation, not in any "man," but in two Ideas, those of "animal" and "two-footed"? And in general "man" will be not one, but two things—"animal" and "two-footed." Evidently if we proceed in this way, as it is usual to define and explain, it will be impossible to answer and solve the difficulty. But <sup>4</sup> if, as we maintain, man is part matter and part form—the matter being potentially, and the form actually man—, the point which we are investigating will no longer seem to be a difficulty. For this difficulty is just the same as we should have if the definition of X <sup>b</sup> were "round bronze"; for this name would give a clue to the formula, so that the question becomes "what is the cause of the unification of 'round' and 'bronze'?" The diffi- <sup>5</sup> culty is no longer apparent, because the one is matter and the other form. What then is it (apart from the active cause) which causes that which exists

εἶναι, παρὰ τὸ ποιῆσαν, ἐν ὅσοις ἔστι γένεσις; οὐθὲν γάρ ἐστιν αἴτιον ἕτερον τοῦ τὴν δυνάμει σφαῖραν ἐνεργείᾳ εἶναι σφαῖραν, ἀλλὰ τοῦτ' ἦν τὸ τί ἦν εἶναι ἑκατέρω. Ἔστι δὲ τῆς ὕλης ἢ μὲν νοητῆ ἢ δ' αἰσθητῆ, καὶ αἰεὶ τοῦ λόγου τὸ μὲν ὕλη τὸ δὲ ἐνεργείᾳ ἐστίν, οἷον ὁ κύκλος σχῆμα ἐπίπεδον. ὅσα δὲ μὴ ἔχει ὕλην μῆτε νοητὴν μῆτε αἰσθητὴν, εὐθύς ὅπερ ἐν τι [εἶναι]<sup>1</sup> ἐστίν ἕκαστον, ὥσπερ καὶ ὅπερ ὄν τι, τὸ τόδε, τὸ ποιόν, τὸ ποσόν. διὸ καὶ οὐκ ἔνεστιν ἐν τοῖς ὀρισμοῖς οὔτε τὸ ὄν οὔτε τὸ ἐν, καὶ τὸ τί ἦν εἶναι εὐθύς ἐν τί ἐστίν ὥσπερ καὶ ὄν τι. διὸ καὶ οὐκ ἔστιν ἕτερόν τι αἴτιον τοῦ ἐν εἶναι οὐθενὶ τούτων, οὐδὲ τοῦ ὄν τι εἶναι· εὐθύς γὰρ ἕκαστόν ἐστιν ὄν τι καὶ ἐν τι, οὐχ ὡς ἐν γένει τῶ ὄντι καὶ τῶ ἐνί, οὐδ' ὡς χωριστῶν ὄντων παρὰ τὰ καθ' ἕκαστα. Διὰ ταύτην δὲ τὴν ἀπορίαν οἱ μὲν μέθεξι λέγουσι, καὶ αἰτιόν τι τῆς μεθέξεως καὶ τί τὸ μετέχειν ἀποροῦσιν· οἱ δὲ συνουσίαν [ψυχῆς],<sup>1</sup> ὥσπερ Λυκόφρων φησὶν εἶναι τὴν ἐπιστήμην τοῦ ἐπίστασθαι καὶ ψυχῆς· οἱ δὲ σύνθεσιν ἢ σύνδεσμον ψυχῆς σώματι τὸ ζῆν. καίτοι ὁ αὐτὸς λόγος ἐπὶ πάντων· καὶ γὰρ τὸ ὑγιαίνειν ἔσται ἢ συνουσία ἢ σύνδεσμος ἢ σύνθεσις ψυχῆς καὶ ὑγείας, καὶ τὸ τὸν χαλκὸν εἶναι τρίγωνον σύνθεσις χαλκοῦ καὶ τριγώνου, καὶ τὸ λευκὸν εἶναι σύνθεσις ἐπιφανείας

<sup>1</sup> Bonitz.

<sup>a</sup> i.e., it was the essence of the potential sphere to become the actual sphere, and of the actual sphere to be generated from the potential sphere

<sup>b</sup> Even formulae contain matter in a sense ("intelligible matter"), i.e. the generic element in the species. "Plane figure" is the generic element of "circle."

<sup>c</sup> The highest genera, or categories.

potentially to exist actually in things which admit of generation <sup>2</sup> There *is* no other cause of the potential sphere's being an actual sphere; this was the essence of each <sup>a</sup>

Some matter is intelligible and some sensible, and 6 part of the formula is always matter and part actuality, *e g*, the circle is a plane figure <sup>b</sup> But such things <sup>c</sup> as have no matter, neither intelligible nor sensible, are *ipso facto* each one of them essentially something one: just as they are essentially something existent: an individual substance, a quality, or a quantity. Hence neither "existent" nor "one" is present in their definitions. And then essence is *ipso facto* something one, just as it is something existent. Hence also there is no other cause of the unity of 7 any of these things, or of their existence; for each one of them is "one" and "existent" not because it is contained in the genus "being" or "unity" nor because these genera exist separately apart from their particulars, but *ipso facto*

It is because of this difficulty that some thinkers <sup>d</sup> 8 speak of "participation," and raise the question of what is the cause of participation, and what participation means; and others speak of "communion"; *e g*, Lycophron <sup>e</sup> says that knowledge is a communion of the soul with "knowing"; and others call life a combination or connexion of soul with body. The 9 same argument, however, applies in every case; for "being healthy" will be the "communion" or "connexion" or "combination" of soul and health; and "being a bronze triangle" a "combination" of bronze and triangle; and "being white" a "com-

<sup>a</sup> The Platonists.

<sup>e</sup> A sophist, disciple of Gorgias.

## ARISTOTLE

<sup>b</sup> καὶ λευκότητος. αἴτιον δ' ὅτι δυνάμεως καὶ ἐν-  
 τελεχείας ζητοῦσι λόγον ἐνοποιὸν καὶ διαφοράν.  
 ἔστι δ', ὡσπερ εἴρηται, ἡ<sup>1</sup> ἐσχάτη ὕλη καὶ ἡ μορ-  
 φὴ ταυτό καὶ ἔν, <τὸ μὲν><sup>2</sup> δυνάμει, τὸ δὲ ἐνεργεί-  
 α. ὥστε ὁμοιον τὸ ζητεῖν τοῦ ἐνὸς τί αἴτιον  
 καὶ τοῦ ἐν εἶναι· ἐν γάρ τι ἕκαστον, καὶ τὸ δυνάμει  
 καὶ τὸ ἐνεργεία ἐν πῶς ἔστιν. ὥστε αἴτιον οὐθὲν  
 ἄλλο πλὴν εἴ τι ὡς κινήσαν ἐκ δυνάμεως εἰς  
 ἐνέργειαν. ὅσα δὲ μὴ ἔχει ὕλην, πάντα ἀπλῶς  
 ὅπερ ἐν<sup>3</sup> τι.

<sup>1</sup> ἡ] καὶ ἡ E.J.F.

<sup>2</sup> ἐν om E.J: ἐν, τὸ μὲν Bonitz · τὸ μὲν (omisso ἐν) Casaubon.

<sup>3</sup> ἐν A<sup>b</sup> Alexander · ὄντα E.J.

bination " of surface and whiteness. The reason for this is that people look for a unifying formula, and a difference, between potentiality and actuality. But, 10 as we have said,<sup>a</sup> the proximate matter and the shape are one and the same; the one existing potentially, and the other actually. Therefore to ask the cause of their unity is like asking the cause of unity in general; for each individual thing is one, and the potential and the actual are in a sense one. Thus there is no cause other than whatever initiates the development from potentiality to actuality. And such things as have no matter are all, without qualification, essential unities

<sup>a</sup> Cf §§ 4, 5.

I. Περὶ μὲν οὖν τοῦ πρώτως ὄντος καὶ πρὸς ὃ  
 πᾶσαι αἱ ἄλλαι κατηγορίαι τοῦ ὄντος ἀναφέρονται  
 εἴρηται, περὶ τῆς οὐσίας. κατὰ γὰρ τὸν τῆς  
 30 οὐσίας λόγον λέγεται τᾶλλα ὄντα, τό τε ποσόν καὶ  
 τὸ ποιὸν καὶ τᾶλλα τὰ οὕτως λεγόμενα πάντα γὰρ  
 ἔξει τὸν τῆς οὐσίας λόγον, ὥσπερ εἶπομεν ἐν τοῖς  
 πρώτοις λόγοις ἐπεὶ δὲ λέγεται τὸ ὄν τὸ μὲν τὸ  
 τί<sup>1</sup> ἢ ποιὸν ἢ ποσόν, τὸ δὲ κατὰ δύναμιν καὶ ἐν-  
 τελέχειαν καὶ κατὰ τὸ ἔργον, διορίσωμεν καὶ περὶ  
 35 δυνάμεως καὶ ἐντελεχείας, καὶ πρῶτον περὶ δυ-  
 νάμεως ἢ λέγεται μὲν μάλιστα κυρίως, οὐ μὴν  
 1046 a χρησιμωτάτη<sup>2</sup> γέ ἐστι πρὸς ὃ βουλόμεθα νῦν ἐπὶ  
 πλέον γὰρ ἐστὶν ἢ δύναμις καὶ ἢ ἐνέργεια τῶν  
 μόνον λεγομένων κατὰ κίνησιν. ἀλλ' εἰπόντες  
 περὶ ταύτης ἐν τοῖς περὶ τῆς ἐνεργείας διορισμοῖς  
 δηλώσομεν καὶ περὶ τῶν ἄλλων. Ὅτι μὲν οὖν  
 5 λέγεται πολλαχῶς<sup>3</sup> ἢ δύναμις καὶ τὸ δύνασθαι,  
 διώριστα ἡμῖν ἐν ἄλλοις τούτων δ' ὅσαι μὲν  
 ὁμωνύμως λέγονται δυνάμεις ἀφείσθωσαν· ἔναι  
 γὰρ ὁμοιότητί τινι λέγονται καθάπερ ἐν γεωμε-  
 τρία, καὶ δυνατὰ καὶ ἀδύνατα λέγομεν τῷ εἶναί πως

<sup>1</sup> τί Ross: τί.<sup>2</sup> χρησίμη EJ.<sup>3</sup> πολλαχῶς λέγεται A<sup>b</sup>.<sup>a</sup> VII. 1.<sup>b</sup> Cf. VI. II. 1.<sup>c</sup> Chs. vi.-x.

## BOOK IX

I We have now dealt with Being in the primary sense, to which all the other categories of being are related; *i. e.* substance. For it is from the concept of substance that all the other modes of being take their meaning; both quantity and quality and all other such terms; for they will all involve the concept of substance, as we stated it in the beginning of our discussion<sup>a</sup>. And since the senses of being are analysable<sup>b</sup> not only into substance or quality or quantity, but also in accordance with potentiality and actuality and function, let us also gain a clear understanding about potentiality and actuality; and first about potentiality in the sense which is most proper to the word, but not most useful for our present purpose—for potentiality and actuality extend beyond the sphere of terms which only refer to motion. When we have discussed this sense of potentiality we will, in the course of our definitions of actuality,<sup>c</sup> explain the others also.

We have made it plain elsewhere<sup>d</sup> that “potentiality” and “can” have several senses. All senses which are merely equivocal may be dismissed; for some are used by analogy, as in geometry,<sup>e</sup> and we call things possible or impossible because they “are” or “are not” in some particular way. But the

<sup>a</sup> V. XII.

<sup>e</sup> Cf. V. XII. 11.

046 a

ἢ μὴ εἶναι· ὅσαι δὲ πρὸς τὸ αὐτὸ εἶδος, πᾶσαι  
 10 ἀρχαί τινές εἰσι, καὶ πρὸς πρώτην μίαν λέγονται,  
 ἢ ἔστιν ἀρχὴ μεταβολῆς ἐν ἄλλῳ ἢ<sup>1</sup> ἢ ἄλλο. Ἡ  
 μὲν γὰρ τοῦ παθεῖν ἔστι δύναμις, ἢ ἐν αὐτῷ τῷ  
 πάσχοντι ἀρχὴ μεταβολῆς παθητικῆς ὑπ' ἄλλου ἢ<sup>1</sup>  
 ἢ ἄλλο· ἢ δ' ἔξισ ἀπαθείας τῆς ἐπὶ τὸ χεῖρον καὶ  
 15 φθορᾶς τῆς ὑπ' ἄλλου ἢ<sup>1</sup> ἢ ἄλλο ὑπ' ἀρχῆς μετα-  
 βλητικῆς. ἐν γὰρ τούτοις ἔνεστι πᾶσι τοῖς ὅροις ὁ  
 τῆς πρώτης δυνάμεως λόγος. πάλιν δ' αὐταὶ αἱ  
 δυνάμεις λέγονται ἢ τοῦ μόνον ποιῆσαι ἢ [τοῦ]<sup>2</sup>  
 παθεῖν ἢ τοῦ καλῶς, ὥστε καὶ ἐν τοῖς τούτων  
 λόγοις ἐνυπάρχουσί πως οἱ τῶν προτέρων δυνά-  
 μεων λόγοι. Φανερόν οὖν ὅτι ἔστι μὲν ὡς μία  
 20 δύναμις τοῦ ποιεῖν καὶ πάσχειν (δυνατὸν γὰρ ἔστι  
 καὶ τῷ ἔχειν αὐτὸ δύναμιν τοῦ παθεῖν καὶ τῷ ἄλλο  
 ὑπ' αὐτοῦ), ἔστι δὲ ὡς ἄλλη. ἢ μὲν γὰρ ἐν τῷ  
 πάσχοντι (διὰ γὰρ τὸ ἔχειν τινὰ ἀρχήν, καὶ  
 εἶναι καὶ τὴν ὕλην ἀρχήν τινα, πάσχει τὸ πάσχον,  
 25 καὶ ἄλλο ὑπ' ἄλλου· τὸ λιπαρὸν μὲν γὰρ καυστόν,  
 τὸ δ' ὑπεῖκον ὠδὶ θλαστόν· ὁμοίως δὲ καὶ ἐπὶ τῶν  
 ἄλλων), ἢ δ' ἐν τῷ ποιοῦντι, οἷον τὸ θερμὸν καὶ ἢ  
 οἰκοδομική, ἢ μὲν ἐν τῷ θερμαντικῷ ἢ δ' ἐν τῷ  
 οἰκοδομικῷ· διὸ ἢ συμπέφυκεν, οὐθὲν πάσχει αὐτὸ  
 ὑφ' ἑαυτοῦ· ἐν γὰρ καὶ οὐκ ἄλλο. καὶ ἢ ἀδυναμία

<sup>1</sup> om. A<sup>b</sup>Γ.<sup>2</sup> Bonitz



potentialities which conform to the same type are all principles, and derive their meaning from one primary sense of potency, which is the source of change in some other thing, or in the same thing *qua* other.

One kind of potentiality is the power of being 5 affected; the principle in the patient itself which initiates a passive change in it by the action of some other thing, or of itself *qua* other. Another is a positive state of impassivity in respect of deterioration or destruction by something else or by itself *qua* something else, *i.e.* by a transformatory principle—for all these definitions contain the formula of the primary sense of potentiality. Again, all these 6 potentialities are so called either because they merely act or are acted upon in a particular way, or because they do so *well*. Hence in their formulae also the formulae of potentiality in the senses previously described are present in some degree.

Clearly, then, in one sense the potentiality for acting and being acted upon is one (for a thing is "capable" both because it itself possesses the power of being acted upon, and also because something else has the power of being acted upon by it); and in another 7 sense it is not: for it is partly in the patient (for it is because it contains a certain principle, and because even the matter is a kind of principle, that the patient is acted upon; *i.e.*, one thing is acted upon by another: oily stuff is inflammable, and stuff which yields in a certain way is breakable, and similarly in other cases)—and partly in the agent; *e.g.* heat and the art of 8 building. the former in that which produces heat, and the latter in that which builds. Hence in so far as it is a natural unity, nothing is acted upon by itself; because it is one, and not a separate thing.

1046 a

30 καὶ τὸ ἀδύνατον ἢ τῇ τοιαύτῃ δυνάμει ἐναντία  
 στέρησις ἐστίν, ὥστε τοῦ αὐτοῦ καὶ κατὰ τὸ αὐτὸ  
 πᾶσα δύναμις ἀδυναμία. Ἡ δὲ στέρησις λέγεται  
 πολλαχῶς· καὶ γὰρ τὸ μὴ ἔχον καὶ τὸ πεφυκὸς  
 ἂν μὴ ἔχῃ, ἢ ὅλως ἢ ὅτε πέφυκεν, καὶ ἢ<sup>1</sup> ὠδί, οἷον  
 παντελῶς, ἢ κἂν ὀπωσοῦν. ἐπ' ἐνίων δέ, ἂν  
 35 πεφυκότα ἔχειν μὴ ἔχῃ βία, ἐστερηῆσθαι ταῦτα  
 λέγομεν.

II. Ἐπεὶ δ' αἱ μὲν ἐν τοῖς ἀψύχοις ἐνυπάρχουσιν  
 ἀρχαὶ τοιαῦται, αἱ δ' ἐν τοῖς ἐμφύχοις καὶ ἐν ψυχῇ  
 1046 b καὶ τῆς ψυχῆς ἐν τῷ λόγον ἔχοντι, δῆλον ὅτι καὶ  
 τῶν δυνάμεων αἱ μὲν ἔσονται ἄλογοι αἱ δὲ μετὰ  
 λόγου. διὸ πᾶσαι αἱ τέχναι καὶ αἱ ποιητικαὶ<sup>2</sup>  
 ἐπιστῆμαι δυνάμεις εἰσὶν ἀρχαὶ γὰρ μεταβλητικαὶ<sup>3</sup>  
 5 εἰσὶν ἐν ἄλλῳ ἢ<sup>3</sup> ἢ ἄλλο. Καὶ αἱ μὲν μετὰ λόγου  
 πᾶσαι τῶν ἐναντίων αἱ αὐταί, αἱ δ' ἄλογοι μία  
 ἐνός, οἷον τὸ θερμὸν τοῦ θερμαίνειν μόνον, ἢ δὲ  
 ἰατρικὴ νόσου καὶ ὑγείας. αἷτιον δὲ ὅτι λόγος  
 ἐστὶν ἢ ἐπιστήμη, ὃ δὲ λόγος ὁ αὐτὸς δηλοῖ τὸ  
 πρᾶγμα καὶ τὴν στέρησιν, πλὴν οὐχ ὡσαύτως, καὶ  
 10 ἔστιν ὡς ἀμφοῖν, ἔστι δ' ὡς τοῦ ὑπάρχοντος μᾶλλον.  
 ὥστ' ἀνάγκη καὶ τὰς τοιαύτας ἐπιστήμας εἶναι μὲν  
 τῶν ἐναντίων, εἶναι δὲ τοῦ μὲν καθ' αὐτὰς τοῦ δὲ  
 μὴ καθ' αὐτάς· καὶ γὰρ ὁ λόγος τοῦ μὲν καθ' αὐτό,  
 τοῦ δὲ τρόπον τινὰ κατὰ συμβεβηκός· ἀποφάσει

<sup>1</sup> ἢ A<sup>b</sup>: ἢ E<sup>2</sup> ποιητικαὶ καὶ recc. . ποιητικαὶ καὶ αἱ Alexander.<sup>3</sup> om EA<sup>b</sup>.<sup>a</sup> Cf V. xxii.

“Incapacity” and “the incapable” is the privation contrary to “capacity” in this sense; so that every “capacity” has a contrary incapacity for producing the same result in respect of the same subject

Privation has several senses <sup>a</sup>—it is applied (1) to 9 anything which does not possess a certain attribute; (11) to that which would naturally possess it, but does not; either (a) in general, or (b) when it would naturally possess it; and either (1) in a particular way, *e.g.* entirely, or (2) in any way at all. And in some cases if things which would naturally possess some attribute lack it as the result of constraint, we say that they are “deprived”

II Since some of these principles are inherent in <sup>Ra</sup> inanimate things, and others in animate things and <sup>irr</sup> in the soul and in the rational part of the soul, it is <sup>pot</sup> clear that some of the potencies also will be irrational and some rational. Hence all arts, *i.e.* the productive sciences, are potencies, because they are principles of change in another thing, or in the artist himself *qua* other.

Every rational potency admits equally of contrary 2 results, but irrational potencies admit of one result only. *E.g.*, heat can only produce heat, but medical science can produce disease and health. The reason of this is that science is a rational account, and the same account explains both the thing and its privation, though not in the same way; and in one sense it applies to both, and in another sense rather to the actual fact. Therefore such sciences must treat of 3 contraries—essentially of the one, and non-essentially of the other; for the rational account also applies essentially to the one, but to the other in a kind of accidental way, since it is by negation and

<sup>i b</sup> γὰρ καὶ ἀποφορᾶ δηλοῖ τὸ ἐναντίον. ἡ γὰρ στέ-  
 15 ρησις ἢ πρώτη τὸ ἐναντίον, αὕτη δὲ ἀποφορὰ  
 θατέρου ἐπεὶ δὲ τὰ ἐναντία οὐκ ἐγγίγνεται ἐν τῷ  
 αὐτῷ, ἢ δ' ἐπιστήμη δύναμις τῷ λόγον ἔχειν, καὶ  
 ἢ ψυχῇ κινήσεως ἔχει ἀρχήν, τὸ μὲν ὑγιεινὸν  
 ὑγίειαν μόνον ποιεῖ καὶ τὸ θερμαντικὸν θερμότητα  
 20 καὶ τὸ ψυκτικὸν ψυχρότητα, ὁ δ' ἐπιστήμων ἄμφω  
 λόγος γάρ ἐστιν ἄμφοῖν μὲν, οὐχ ὁμοίως δέ, καὶ ἐν  
 ψυχῇ ἢ ἔχει κινήσεως ἀρχήν ὥστε ἄμφω ἀπὸ τῆς  
 αὐτῆς ἀρχῆς κινήσει πρὸς τὸ αὐτὸ συνάψασα· διὸ  
 τὰ κατὰ λόγον δυνατὰ τοῖς ἄνευ λόγου δυνατοῖς  
 ποιεῖ τὰναντία· μιᾷ γὰρ ἀρχῇ<sup>1</sup> περιέχεται, τῷ λόγῳ.  
 25 φανερόν δὲ καὶ ὅτι τῇ μὲν τοῦ εὖ δυνάμει ἀκολου-  
 θεῖ ἢ τοῦ μόνον ποιῆσαι ἢ παθεῖν δύναμις, ταύτη  
 δ' ἐκείνη οὐκ αἰεὶ ἀνάγκη γὰρ τὸν εὖ ποιοῦντα καὶ  
 ποιεῖν, τὸν δὲ μόνον ποιοῦντα οὐκ ἀνάγκη καὶ εὖ  
 ποιεῖν.

III. Εἰσὶ δὲ τινες οἱ φασιν, οἷον οἱ Μεγαρικοί,  
 30 ὅταν ἐνεργῇ μόνον δύνασθαι, ὅταν δὲ μὴ ἐνεργῇ οὐ  
 δύνασθαι, οἷον τὸν μὴ οἰκοδομοῦντα οὐ δύνασθαι  
 οἰκοδομεῖν, ἀλλὰ τὸν οἰκοδομοῦντα ὅταν οἰκοδομῇ·  
 ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων. οἷς τὰ συμβαί-  
 νοντα ἄτοπα οὐ χαλεπὸν ἰδεῖν. δηλον γὰρ ὅτι οὕτ'

<sup>1</sup> μιᾷ γὰρ ἀρχῇ A<sup>b</sup>J

<sup>a</sup> Cf X. iv. 7

<sup>b</sup> Literally "of the other," i.e. the positive term

<sup>c</sup> The meaning of this awkward sentence is clearly shown in the latter part of § 4.

<sup>d</sup> Founded by Euclides of Megara, an enthusiastic admirer of Socrates. The Megarics adopted the Eleatic system and developed it along dialectical lines

removal that it throws light on the contrary. For the contrary is the primary privation,<sup>a</sup> and this is the removal of that to which it is contrary.<sup>b</sup> And <sup>4</sup> since contrary attributes cannot be induced in the same subject, and science is a potency which depends upon the possession of a rational formula, and the soul contains a principle of motion, it follows that whereas "the salutary" can only produce health, and "the calefactory" only heat, and "the frigorific" only cold, the scientific man can produce both contrary results. For the rational account <sup>5</sup> includes both, though not in the same way; and it is in the soul, which contains a principle of motion, and will therefore, by means of the same principle, set both processes in motion, by linking them with the same rational account. Hence things which have a rational potency produce results contrary to those of things whose potency is irrational<sup>c</sup>; for the results of the former are included under one principle, the rational account. It is evident also <sup>6</sup> that whereas the power of merely producing (or suffering) a given effect is implied in the power of producing that effect *well*, the contrary is not always true; for that which produces an effect well must also produce it, but that which merely produces a given effect does not necessarily produce it well.

III. There are some, *e g* the Megaric school,<sup>d</sup> <sup>Re</sup> who say that a thing only has potency when it <sup>of</sup> functions, and that when it is not functioning it has <sup>Me</sup> no potency. *E g*, they say that a man who is not <sup>vit</sup> building cannot build, but only the man who is build- <sup>po</sup> ing, and at the moment when he is building; and similarly in the other cases. It is not difficult to see <sup>2</sup> the absurd consequences of this theory. Obviously

- <sup>b</sup> οἰκοδόμος ἔσται ἐὰν μὴ οἰκοδομῇ (τὸ γὰρ οἰκοδόμῳ  
 5 εἶναι τὸ δυνατῶ εἶναί ἐστιν οἰκοδομεῖν), ὁμοίως δὲ  
 καὶ ἐπὶ τῶν ἄλλων τεχνῶν. εἰ οὖν ἀδύνατον τὰς  
 τοιαύτας ἔχειν τέχνας μὴ μαθάνοντά<sup>1</sup> ποτε καὶ  
 α λαβόντα, καὶ μὴ ἔχειν μὴ ἀποβαλόντα ποτέ (ἢ γὰρ  
 λήθη ἢ πάθει τινὶ ἢ χρόνῳ· οὐ γὰρ δὴ τοῦ γε  
 πράγματος φθαρέντος, ἀεὶ γὰρ ἔστιν), ὅταν παύση-  
 10 ται, οὐχ ἔξει τὴν τέχνην· πάλιν δ' εὐθύς οἰκοδομή-  
 σει πῶς λαβών; Καὶ τὰ ἄψυχα δὴ ὁμοίως· οὔτε  
 5 γὰρ ψυχρὸν οὔτε θερμὸν οὔτε γλυκὺ οὔτε ὄλως  
 αἰσθητὸν οὐθέν ἐσται μὴ αἰσθανομένων<sup>2</sup>. ὥστε τὸν  
 Πρωταγόρου λόγον συμβήσεται λέγειν αὐτοῖς ἀλλὰ  
 μὴν οὐδ' αἰσθησιν ἔξει οὐδὲν ἂν μὴ αἰσθάνηται  
 μηδ' ἐνεργῆ. εἰ οὖν τυφλὸν τὸ μὴ ἔχον ὄψιν,  
 πεφυκὸς δὲ καὶ ὅτε πέφυκε καὶ ἔτι ὄν, οἱ αὐτοὶ  
 10 τυφλοὶ ἔσονται πολλάκις τῆς ἡμέρας, καὶ κωφοί.  
 Ἔτι εἰ ἀδύνατον τὸ ἐστερημένον δυνάμεως, τὸ μὴ  
 γιγνόμενον<sup>3</sup> ἀδύνατον ἔσται γενέσθαι· τὸ δ' ἀδύ-  
 νατον γενέσθαι ὁ λέγων ἢ εἶναι ἢ ἔσεσθαι ψεύσεται·  
 τὸ γὰρ ἀδύνατον τοῦτο ἐσήμαιεν ὥστε οὗτοι οἱ  
 15 λόγοι ἐξαιροῦσι καὶ κίνησιν καὶ γένεσιν ἀεὶ γὰρ  
 τό τε ἐστηκὸς ἐστήξεται καὶ τὸ καθήμενον καθ-  
 εδεῖται· οὐ γὰρ ἀναστήσεται ἂν καθέζηται ἀδύνατον  
 γὰρ ἔσται ἀναστήναι ὃ γε μὴ δύναται ἀναστήναι.

<sup>1</sup> μαθόντα Alexander, Bonitz.

<sup>2</sup> αἰσθανόμενον recc

<sup>3</sup> γενόμενον E.J.

<sup>a</sup> i e the form of "house"

<sup>b</sup> Cf. IV v, vi

<sup>c</sup> i e, we have just said that that which is incapable is deprived of its potency—in this case, of its potency for happening

a man will not be a builder unless he is building, because "to be a builder" is "to be capable of building"; and the same will be true of the other arts. If, therefore, it is impossible to possess these 3 arts without learning them at some time and having grasped them, and impossible not to possess them without having lost them at some time (through forgetfulness or some affection or the lapse of time, not, of course, through the destruction of the object of the art,<sup>a</sup> because it exists always), when the artist ceases to practise his art, he will not possess it; and if he immediately starts building again, how 4 will he have re-acquired the art?

The same is true of inanimate things. Neither the cold nor the hot nor the sweet nor in general any sensible thing will exist unless we are perceiving it (and so the result will be that they are affirming Protagoras' theory<sup>b</sup>). Indeed, nothing will have the faculty of sensation unless it is perceiving, *i.e.* actually employing the faculty. If, then, that is 5 blind which has not sight, though it would naturally have it, and when it would naturally have it, and while it still exists, the same people will be blind many times a day; and deaf too.

Further, if that which is deprived of its potency is incapable, that which is not happening will be incapable of happening. and he who says that that which is incapable of happening *is* or *will be*, will be in error, for this is what "incapable" meant<sup>c</sup>. Thus 6 these theories do away with both motion and generation; for that which is standing will always stand, and that which is sitting will always sit; because if it is sitting it will not get up, since it is impossible that anything which is incapable of getting up

- <sup>a</sup> εἰ οὖν μὴ ἐνδέχεται ταῦτα λέγειν, φανερόν ὅτι δύναμις καὶ ἐνέργεια ἕτερόν ἐστιν ἐκεῖνοι δ' οἱ <sup>10</sup> λόγοι δύναμιν καὶ ἐνέργειαν ταῦτὸ ποιοῦσιν, διὸ καὶ οὐ μικρόν τι ζητοῦσιν ἀναιρεῖν Ὡστε ἐνδέχεται δυνατόν μὲν τι εἶναι μὴ εἶναι δέ, καὶ δυνατόν μὴ εἶναι εἶναι δέ, ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων κατηγοριῶν δυνατόν βαδίζειν ὃν μὴ βαδίζειν, καὶ μὴ βαδίζειν<sup>1</sup> δυνατόν ὃν<sup>2</sup> βαδίζειν. ἔστι δὲ δυνατόν <sup>25</sup> τοῦτο ᾧ ἂν ὑπάρξῃ ἢ ἐνέργεια οὐ λέγεται ἔχειν τὴν δύναμιν, οὐθὲν ἔσται ἀδύνατον. λέγω δὲ οἶον, εἰ δυνατόν καθῆσθαι καὶ ἐνδέχεται καθῆσθαι τούτῳ, ἂν ὑπάρξῃ τὸ καθῆσθαι, οὐδὲν ἔσται ἀδύνατον· καὶ εἰ κινηθῆναί τι ἢ κινήσῃ ἢ στήναι ἢ στήσῃ ἢ εἶναι ἢ γίγνεσθαι ἢ μὴ εἶναι ἢ μὴ γίγνεσθαι, ὁμοίως.
- <sup>30</sup> Ἐλήλυθε δ' ἢ ἐνέργεια τοῦνομα, ἢ πρὸς τὴν ἐντελέχειαν συντιθεμένη, καὶ ἐπὶ τὰ ἄλλα ἐκ τῶν κινήσεων μάλιστα· δοκεῖ γὰρ ἢ ἐνέργεια μάλιστα ἢ κίνησις εἶναι. διὸ καὶ τοῖς μὴ οὖσιν οὐκ ἀποδιδόασιν τὸ κινεῖσθαι, ἄλλας δὲ τινὰς κατηγορίας, οἶον <sup>35</sup> διανοητὰ καὶ ἐπιθυμητὰ εἶναι τὰ μὴ ὄντα, κινούμενα δὲ οὐ τοῦτο δὲ ὅτι οὐκ ὄντα ἐνεργείᾳ ἔσονται <sup>47</sup> ἐνεργείᾳ τῶν γὰρ μὴ ὄντων ἕνια δυνάμει ἐστίν· οὐκ ἔστι δέ, ὅτι οὐκ ἐντελεχείᾳ ἐστίν.

IV Εἰ δ' ἐστὶ, τὸ εἰρημένον, δυνατόν <ᾧ ἀδύνατον μὴ><sup>3</sup> ἀκολουθεῖ, φανερόν ὅτι οὐκ ἐνδέχεται ἀληθὲς

<sup>1</sup> βαδίζειν Joachim : βαδίζον

<sup>2</sup> ὃν Joachim εἶναι

<sup>3</sup> ᾧ ἀδύνατον μὴ Zeller : ἢ JT. ἢ EA<sup>b</sup> Alexander.



should get up Since, then, we cannot maintain 7  
 this, obviously potentiality and actuality are different.  
 But these theories make potentiality and actuality  
 identical; hence it is no small thing that they are  
 trying to abolish

Thus it is possible that a thing may be capable  
 of being and yet not be, and capable of not being and  
 yet be; and similarly in the other categories that  
 which is capable of walking may not walk, and that  
 which is capable of not walking may walk A thing 8  
 is capable of doing something if there is nothing  
 impossible in its having the actuality of that of which  
 it is said to have the potentiality. I mean, *e g*, that  
 if a thing is capable of sitting and is not prevented  
 from sitting, there is nothing impossible in its actually  
 sitting, and similarly if it is capable of being moved  
 or moving or standing or making to stand or being  
 or becoming or not being or not becoming

The term "actuality," with its implication of 9  
 "complete reality," has been extended from motions,  
 to which it properly belongs, to other things; for  
 it is agreed that actuality is properly motion Hence 10  
 people do not invest non-existent things with motion,  
 although they do invest them with certain other  
 predicates *E g*, they say that non-existent things  
 are conceivable and desirable, but not that they are  
 in motion This is because, although these things  
 do not exist actually, they will exist actually; for  
 some non-existent things exist potentially; yet  
 they do not exist, because they do not exist in  
 complete reality

IV. Now if, as we have said, that is possible which <sup>Thir</sup>  
 does not involve an impossibility, obviously it cannot <sup>is I</sup>  
 be true to say that so-and-so is possible, but will not <sup>ma;</sup>  
 to 1

<sup>b</sup>  
 5 εἶναι τὸ εἰπεῖν ὅτι δυνατόν μὲν τοδί, οὐκ ἔσται δέ-  
 ὥστε τὰ ἀδύνατα εἶναι ταύτη διαφεύγειν. λέγω  
 δὲ οἷον εἴ τις φαίη δυνατόν τὴν διάμετρον μετρη-  
 θῆναι οὐ μέντοι μετρηθήσεσθαι—ὃ μὴ λογιζόμενος  
 τὸ ἀδύνατον εἶναι—ὅτι οὐθὲν κωλύει δυνατόν τι  
 ὄν εἶναι ἢ γενέσθαι μὴ εἶναι<sup>1</sup> μηδ' ἔσεσθαι ἀλλ'  
 10 ἐκεῖνο ἀνάγκη ἐκ τῶν κειμένων, εἰ καὶ ὑποθοίμεθα  
 εἶναι ἢ γεγονέναι ὃ οὐκ ἔστι μὲν δυνατόν δέ, ὅτι  
 οὐθὲν ἔσται ἀδύνατον· συμβήσεται δέ γε, τὸ γὰρ  
 μετρεῖσθαι ἀδύνατον. Οὐ γὰρ δὴ ἔστι ταυτό-  
 τὸ<sup>2</sup> ψεῦδος καὶ τὸ ἀδύνατον· τὸ γὰρ σε ἐστάναι νῦν  
 ψεῦδος μὲν, οὐκ ἀδύνατον δέ. ἅμα δὲ δῆλον καὶ  
 15 ὅτι, εἰ τοῦ Α ὄντος ἀνάγκη τὸ Β εἶναι, καὶ δυνατοῦ  
 ὄντος εἶναι τοῦ Α<sup>3</sup> καὶ τὸ Β ἀνάγκη εἶναι δυνατόν·  
 εἰ γὰρ μὴ ἀνάγκη δυνατόν εἶναι, οὐθὲν κωλύει  
 μὴ εἶναι δυνατόν εἶναι. ἔστω δὴ τὸ Α δυνατόν.  
 οὐκοῦν ὅτε τὸ Α δυνατόν εἴη εἶναι, εἰ τεθείη τὸ  
 Α,<sup>4</sup> οὐδὲν ἀδύνατον εἶναι συνέβαιεν τὸ δέ γε Β  
 20 ἀνάγκη εἶναι. ἀλλ' ἦν ἀδύνατον ἔστω δὴ ἀδύ-  
 νατον. εἰ δὴ ἀδύνατον [ἀνάγκη]<sup>5</sup> εἶναι τὸ Β,<sup>6</sup> ἀνάγκη  
 καὶ τὸ Α<sup>7</sup> εἶναι. ἀλλ' ἦν ἄρα τὸ Α δυνατόν· καὶ  
 τὸ Β ἄρα. Ἄν ἄρα ἦ τὸ Α δυνατόν, καὶ τὸ Β  
 ἔσται δυνατόν, εἴπερ οὕτως εἶχον ὥστε τοῦ Α ὄντος  
 25 ἀνάγκη εἶναι τὸ Β. ἐὰν δὴ οὕτως ἐχόντων τῶν<sup>8</sup>  
 Α Β μὴ ἦ δυνατόν τὸ Β οὕτως, οὐδὲ τὰ<sup>9</sup> Α Β ἔξει  
 ὡς ἐτέθη· καὶ εἰ τοῦ Α δυνατοῦ ὄντος ἀνάγκη τὸ  
 Β δυνατόν εἶναι, εἰ ἔστι τὸ Α, ἀνάγκη εἶναι καὶ τὸ

<sup>1</sup> εἶναι δὲ ΕJ.<sup>2</sup> τὸ τε Α<sup>b</sup>Γ.<sup>3</sup> εἶναι τοῦ Α τοῦ εἶναι Α Brandis.<sup>4</sup> Α ΑΒ ΕJ.<sup>5</sup> Bonitz.<sup>6</sup> Β Γ Bonitz: Α.<sup>7</sup> Α Γ Bonitz: Β<sup>8</sup> τῶν Ross· τοῦ.<sup>9</sup> τὸ recc.

<sup>a</sup> If it is true to say that a thing which is possible will not be, anything may be possible, and nothing impossible.

be ; on this view things which are incapable of being would be beyond our comprehension <sup>a</sup> I mean, suppose that someone—*i e* the sort of man who does not take the impossible into account—were to say that it is possible to measure the diagonal of a square, but that it will not be measured, because there is nothing to prevent a thing which is capable of being or coming to be from neither being nor being likely ever to be. But from our premisses this <sup>2</sup> necessarily follows. that if we are to assume that which is not, but is possible, to be or to have come to be, nothing impossible must be involved. But in this case something impossible will take place ; for the measuring of the diagonal is impossible

The false is of course not the same as the impossible ; for although it is false that you are now standing, it is not impossible. At the same time <sup>3</sup> it is also clear that if B must be real if A is, then if it is possible for A to be real, it must also be possible for B to be real ; for even if B is not necessarily possible, there is nothing to prevent its being possible. Let A, then, be possible. Then when A was possible, if A was assumed to be real, nothing impossible was involved ; but B was necessarily real too. But *ex hypothesi* B was impossible. Let B be impossible. Then if B is impossible, A must also be impossible <sup>4</sup> But A was by definition possible. Therefore so is B.

If, therefore, A is possible, B will also be possible ; that is if their relation was such that if A is real, B must be real. Then if, A and B being thus related, <sup>5</sup> B is not possible on this condition, A and B will not be related as we assumed ; and if when A is possible B is necessarily possible, then if A is real B must

<sup>7 b</sup> B. τὸ γὰρ δυνατόν εἶναι ἐξ ἀνάγκης τὸ B εἶναι, εἰ τὸ A δυνατόν, τοῦτο σημαίνει, ἐὰν ἦ τὸ A καὶ  
 30 ὅτε καὶ ὡς ἦν δυνατόν εἶναι, κακείνο τότε καὶ οὕτως εἶναι ἀναγκαῖον.

V. Ἀπασῶν δὲ τῶν δυνάμεων οὐσῶν τῶν μὲν συγγενῶν οἷον τῶν αἰσθήσεων, τῶν δὲ ἔθει οἷον τῆς τοῦ αὐλεῖν, τῶν δὲ μαθήσει οἷον τῆς τῶν τεχνῶν, τὰς μὲν ἀνάγκη προενεργήσαντας ἔχειν ὅσαι  
 35 ἔθει καὶ λόγῳ, τὰς δὲ μὴ τοιαύτας καὶ τὰς ἐπὶ  
 8 a τοῦ πάσχειν οὐκ ἀνάγκη. Ἐπεὶ δὲ τὸ δυνατόν τι δυνατόν καὶ ποτὲ καὶ πῶς καὶ ὅσα ἄλλα ἀνάγκη προσεῖναι ἐν τῷ διορισμῷ, καὶ τὰ μὲν κατὰ λόγον δύναται κινεῖν καὶ αἱ δυνάμεις αὐτῶν μετὰ λόγου, τὰ δὲ ἄλογα καὶ αἱ δυνάμεις ἄλογοι, κακείνας μὲν  
 5 ἀνάγκη ἐν ἐμφύχῳ εἶναι ταύτας δὲ ἐν ἀμφοῖν, τὰς μὲν τοιαύτας δυνάμεις ἀνάγκη, ὅταν ὡς δύνανται τὸ ποιητικὸν καὶ τὸ παθητικὸν πλησιάζωσι, τὸ μὲν ποιεῖν τὸ δὲ πάσχειν, ἐκείνας δ' οὐκ ἀνάγκη αὐται μὲν γὰρ πᾶσαι μία ἐνὸς ποιητική, ἐκείναι δὲ τῶν ἐναντίων, ὥστε ἅμα ποιήσει τὰναντία·  
 10 τοῦτο δὲ ἀδύνατον. ἀνάγκη ἄρα ἕτερόν τι εἶναι τὸ κύριον· λέγω δὲ τοῦτο ὄρεξιν ἢ προαίρεσιν. ὁποτέρου γὰρ ἂν ὀρέγηται κυρίως, τοῦτο ποιήσει, ὅταν ὡς δύναται ὑπάρχη καὶ πλησιάζῃ τῷ παθη-

<sup>a</sup> Cf. ch. viii. 6, 7.

<sup>b</sup> Cf. ch. ii 4, 5.

<sup>c</sup> *sc.*, if every potency must act automatically whenever agent and patient meet

be real too. For to say that B must be possible if A is possible means that if A is real at the time when and in the way in which it was assumed that it was possible for it to be real, then B must be real at that time and in that way.

V Since all potencies are either innate, like the senses, or acquired by practice, like flute-playing, or by study, as in the arts, some—such as are acquired by practice or a rational formula—we can only possess when we have first exercised them <sup>a</sup>; in the case of others which are not of this kind and which imply passivity, this is not necessary.

Since anything which is possible is something possible at some time and in some way, and with any other qualifications which are necessarily included in the definition, and since some things can set up processes rationally and have rational potencies, while others are irrational and have irrational potencies; and since the former class can only belong to a living thing, whereas the latter can belong both to living and to inanimate things: it follows that as for potencies of the latter kind, when the agent and the patient meet in accordance with the potency in question, the one must act and the other be acted upon; but in the former kind of potency this is not necessary, for whereas each single potency of the latter kind is productive of a single effect, those of the former kind are productive of contrary effects,<sup>b</sup> so that one potency will produce at the same time contrary effects<sup>c</sup>. But this is impossible. Therefore<sup>3</sup> there must be some other deciding factor, by which I mean *desire* or *conscious choice*. For whichever of two things an animal desires decisively it will do, when it is in circumstances appropriate to the

<sup>a</sup> τικῶ. ὥστε τὸ δυνατόν κατὰ λόγον ἅπαν ἀνάγκη, ὅταν ὀρέγηται, οὐ τε ἔχει τὴν δύναμιν καὶ ὡς ἔχει, 15 τοῦτο ποιεῖν ἔχει δὲ παρόντος τοῦ παθητικοῦ καὶ ὡδὶ ἔχοντος [ποιεῖν]<sup>1</sup>. εἰ δὲ μή, ποιεῖν οὐ δυνήσεται (τὸ γὰρ μηθενὸς τῶν ἔξω κωλύοντος προσδιορίζεσθαι οὐθὲν ἔτι δεῖ· τὴν γὰρ δύναμιν ἔχει ὡς ἔστι δύναμις<sup>2</sup> τοῦ ποιεῖν, ἔστι δ' οὐ πάντως ἀλλ' ἐχόντων 20 πῶς, ἐν οἷς ἀφορισθήσεται καὶ τὰ ἔξω κωλύοντα· ἀφαιρεῖται γὰρ ταῦτα τῶν ἐν τῷ διορισμῶ προσόντων ἔνια). διὸ οὐδ' ἂν ἅμα βούληται ἢ ἐπιθυμῆ ποιεῖν δύο ἢ τὰ ἐναντία, οὐ ποιήσει οὐ γὰρ οὕτως ἔχει αὐτῶν τὴν δύναμιν οὐδ' ἔστι τοῦ ἅμα ποιεῖν ἢ δύναμις, ἐπεὶ ὧν ἔστιν οὕτως ποιήσει.

25 VI. Ἐπεὶ δὲ περὶ τῆς κατὰ κίνησιν λεγομένης δυνάμεως εἴρηται, περὶ ἐνεργείας διορίσωμεν τί τέ ἐστιν ἢ ἐνέργεια καὶ ποιῶν τι. καὶ γὰρ τὸ δυνατόν ἅμα δῆλον ἔσται διαιροῦσιν, ὅτι οὐ μόνον τοῦτο λέγομεν δυνατόν ὃ πέφυκε κινεῖν ἄλλο ἢ κινεῖσθαι ὑπ' ἄλλου, ἢ ἀπλῶς ἢ τρόπον τινά, 30 ἀλλὰ καὶ ἑτέρως διὸ ζητοῦντες καὶ περὶ τούτων διήλθομεν.

Ἔστι δ' ἢ ἐνέργεια τὸ ὑπάρχειν τὸ πρᾶγμα μὴ οὕτως ὥσπερ λέγομεν δυνάμει· λέγομεν δὲ δυνάμει οἷον ἐν τῷ ξύλῳ Ἑρμῆν καὶ ἐν τῇ ὄλῃ τὴν

<sup>1</sup> Christ.<sup>2</sup> δυνάμει A<sup>b</sup>

potency and meets with that which admits of being acted upon. Therefore everything which is rationally capable, when it desires something of which it has the capability, and in the circumstances in which it has the capability, must do that thing. Now it has 4 the capability when that which admits of being acted upon is present and is in a certain state; otherwise it will not be able to act. (To add the qualification "if nothing external prevents it" is no longer necessary; because the agent has the capability in so far as it is a capability of acting; and this is not in all, but in certain circumstances, in which external hindrances will be excluded; for they are precluded by some of the positive qualifications in the definition) Hence even if it wishes 5 or desires to do two things or contrary things simultaneously, it will not do them, for it has not the capability to do them under these conditions, nor has it the capability of doing things simultaneously, since it will only do the things to which the capability applies and under the appropriate conditions.

VI Since we have now dealt with the kind of <sup>The 1</sup>potency which is related to motion, let us now discuss <sup>of act</sup>actuality; what it is, and what its qualities are. For as we continue our analysis it will also become clear with regard to the potential that we apply the name not only to that whose nature it is to move or be moved by something else, either without qualification or in some definite way, but also in other senses; and it is on this account that in the course of our inquiry we have discussed these as well.

"Actuality" means the presence of the thing, 2 not in the sense which we mean by "potentially." <sup>Actu</sup>We say that a thing is present potentially as Hermes <sup>distin</sup>guish <sup>guish</sup>

- 8<sup>a</sup> ἡμίσειαν, ὅτι ἀφαιρεθείη ἄν, καὶ ἐπιστήμονα καὶ  
 35 τὸν μὴ θεωροῦντα, ἂν δυνατὸς ἦ θεωρῆσαι· τὸ  
 δὲ ἐνεργεῖα δῆλον δ' ἐπὶ τῶν καθ' ἕκαστα τῆ  
 ἐπαγωγῆ ὃ βουλόμεθα λέγειν, καὶ οὐ δεῖ παντὸς  
 ὄρον ζητεῖν ἀλλὰ καὶ τὸ ἀνάλογον συνορᾶν, ὅτι  
 8<sup>b</sup> ὡς τὸ οἰκοδομοῦν πρὸς τὸ οἰκοδομικόν, καὶ τὸ  
 ἐγρηγορὸς πρὸς τὸ καθεῦδον, καὶ τὸ ὄρων πρὸς  
 τὸ μῦον μὲν ὄψιν δὲ ἔχον, καὶ τὸ ἀποκεκριμένον  
 ἐκ τῆς ὕλης πρὸς τὴν ὕλην, καὶ τὸ ἀπειργασμένον  
 5 πρὸς τὸ ἀνέργαστον. ταύτης δὲ τῆς διαφορᾶς  
 θατέρω μορίω<sup>1</sup> ἔστω ἡ ἐνέργεια ἀφωρισμένη, θα-  
 τέρω δὲ τὸ δυνατόν. Λέγεται δὲ ἐνεργεῖα οὐ  
 πάντα ὁμοίως, ἀλλ' ἢ τῶ<sup>2</sup> ἀνάλογον, ὡς τοῦτο ἐν  
 τούτῳ ἢ πρὸς τοῦτο, τόδ'<sup>3</sup> ἐν τῷδε ἢ πρὸς τόδε·  
 τὰ μὲν γὰρ ὡς κινήσεις πρὸς δύναμιν, τὰ δ' ὡς οὐσία  
 πρὸς τινα ὕλην.
- 10 Ἄλλως δὲ καὶ τὸ ἄπειρον καὶ τὸ κενὸν καὶ ὅσα  
 τοιαῦτα λέγεται δυνάμει καὶ ἐνεργεῖα πολλοῖς<sup>4</sup>  
 τῶν ὄντων, οἷον τῷ ὄρωντι καὶ βαδίζοντι καὶ  
 ὀρωμένῳ. ταῦτα μὲν γὰρ ἐνδέχεται καὶ ἀπλῶς  
 ἀληθεύεσθαι ποτε· τὸ μὲν γὰρ ὀρώμενον ὅτι ὀρᾶται,  
 τὸ δ' ὅτι ὀρᾶσθαι δυνατόν τὸ δ' ἄπειρον οὐχ οὕτω  
 15 δυνάμει ἐστὶν ὡς ἐνεργεῖα ἐσόμενον χωριστόν, ἀλλὰ  
 γνώσει. τὸ<sup>5</sup> γὰρ μὴ ὑπολείπειν τὴν διαίρεσιν ἀπο-  
 δίδωσι τὸ εἶναι δυνάμει ταύτην τὴν ἐνέργειαν, τὸ<sup>6</sup>  
 δὲ χωρίζεσθαι οὐ. Ἐπεὶ δὲ τῶν πράξεων ὦν

<sup>1</sup> θάτερον μόριον A<sup>b</sup> Alexander.

<sup>2</sup> τὸ J, fecit E

<sup>3</sup> τὸ δ' J

<sup>4</sup> ἢ πολλοῖς Ross.

<sup>5</sup> τὸ A<sup>b</sup> Alexander τῷ EJ.

<sup>6</sup> τὸ Alexander, Christ τῷ

<sup>a</sup> For Aristotle's views about infinity and void see *Physics* III iv-viii. and IV. vi-ix. respectively.



is present in the wood, or the half-line in the whole, <sup>front</sup> because it can be separated from it ; and as we call <sup>tent</sup> even a man who is not studying " a scholar " if he is capable of studying. That which is present in the opposite sense to this is present actually. What we **3** mean can be plainly seen in the particular cases by induction ; we need not seek a definition for every term, but must comprehend the analogy. that as that which is actually building is to that which is capable of building, so is that which is awake to that which is asleep ; and that which is seeing to that which has the eyes shut, but has the power of sight ; and that which is differentiated out of matter to the matter ; and the finished article to the raw material. Let actuality be defined by one member of this **4** antithesis, and the potential by the other.

But things are not all said to exist actually in the same sense, but only by analogy—as A is in B or to B, so is C in or to D ; for the relation is either that of motion to potentiality, or that of substance to some particular matter.

Infinity and void and other concepts of this kind **5** are said to " be " potentially or actually in a different <sup>Infin</sup> sense from the majority of existing things. *e g* that <sup>void,</sup> which sees, or walks, or is seen. For in these latter **6** cases the predication may sometimes be truly made <sup>have</sup> without qualification, since " that which is seen " <sup>actu.</sup> is so called sometimes because it is seen and sometimes because it is capable of being seen : but the Infinite does not exist potentially in the sense that it will ever exist separately in actuality. It is separable only in knowledge. For the fact that the process of division never ceases makes this actuality exist potentially, but not separately.<sup>a</sup>

8 b ἔστι πέρας οὐδεμία τέλος ἀλλὰ τῶν περὶ τὸ τέλος,  
 20 οἷον τὸ ἰσχυαίνειν [ἢ ἰσχυασία αὐτό],<sup>1</sup> αὐτὰ δὲ ὅταν  
 ἰσχυαίνῃ οὕτως ἐστὶν ἐν κινήσει, μὴ ὑπάρχοντα ὦν  
 ἔνεκα ἢ κίνησις, οὐκ ἔστι ταῦτα πράξις, ἢ οὐ  
 τελεία γε· οὐ γὰρ τέλος· ἀλλ' ἐκείνη <ἦ><sup>2</sup> ἐνυπάρχει  
 τὸ τέλος καὶ [ἦ]<sup>3</sup> πράξις. οἷον ὄρᾳ ἅμα <καὶ  
 ἐώρακε,><sup>4</sup> καὶ φρονεῖ <καὶ πεφρόνηκε,><sup>5</sup> καὶ νοεῖ  
 καὶ νενόηκεν· ἀλλ' οὐ μανθάνει καὶ μεμάθηκεν,  
 25 οὐδ' ὑγιάζεται καὶ ὑγίασται. εὖ ζῆ καὶ εὖ ἔζηκεν  
 ἅμα,<sup>5</sup> καὶ εὐδαιμονεῖ καὶ εὐδαιμόνηκεν· εἰ δὲ μή,  
 ἔδει ἄν ποτε παύεσθαι, ὥσπερ ὅταν ἰσχυαίνῃ νῦν  
 δ' οὐ, ἀλλὰ ζῆ καὶ ἔζηκεν. Τούτων δὴ <δεῖ><sup>6</sup>  
 τὰς μὲν κινήσεις λέγειν, τὰς δ' ἐνεργείας. πᾶσα  
 γὰρ κίνησις ἀτελής, ἰσχυασία μάθησις βάδισις  
 30 οἰκοδόμησις· αὐταὶ δὴ<sup>6</sup> κινήσεις, καὶ ἀτελεῖς γε.  
 οὐ γὰρ ἅμα βαδίζει καὶ βεβάδικεν, οὐδ' οἰκοδομεῖ  
 καὶ ὠκοδόμηκεν, οὐδὲ γίγνεται καὶ γέγονεν, ἢ  
 κινεῖται καὶ κεκίνηται<sup>7</sup>· ἀλλ' ἕτερον καὶ κινεῖ καὶ  
 κεκίνηκεν<sup>8</sup>· ἐώρακε δὲ καὶ ὄρᾳ ἅμα τὸ αὐτό, καὶ  
 νοεῖ καὶ νενόηκεν. τὴν μὲν οὖν τοιαύτην ἐνεργεῖαν  
 35 λέγω, ἐκείνην δὲ κίνησιν. Τὸ μὲν οὖν ἐνεργεῖα

<sup>1</sup> ἢ ἰσχυασία αὐτό seclusi: αὐτὸ secl Christ τὸ ἰσχυαίνειν ἢ ἰσχυασία Bywater: τοῦ . . ἢ codd.

<sup>2</sup> ἐλείνη ἢ Bonitz· ἐκείνη.

<sup>3</sup> Bonitz

<sup>4</sup> ἀμὰ καὶ ἐώρακε Bonitz: ἀλλὰ codd.

<sup>5</sup> Bonitz ἀλλά.

<sup>6</sup> δὴ Bonitz δέ.

<sup>7</sup> κελίνηκεν recc

<sup>8</sup> κινεῖται recc.

Since no action which has a limit is an end, but 7  
 only a means to the end, as, *e g*, the process of thinning; and since the parts of the body themselves, Act  
dist  
gu  
from  
mot  
 when one is thinning them, are in motion in the  
 sense that they are not already that which it is the  
 object of the motion to make them, this process is  
 not an action, or at least not a complete one, since  
 it is not an end; it is the process which includes the  
 end that is an action. *E g*, at the same time we see 8  
 and have seen, understand and have understood,  
 think and have thought; but we cannot at the same  
 time learn and have learnt, or become healthy and be  
 healthy. We are living well and have lived well,  
 we are happy and have been happy, at the same  
 time; otherwise the process would have had to  
 cease at some time, like the thinning-process; but  
 it has not ceased at the present moment. we both  
 are living and have lived.

Now of these processes we should call the one  
 type motions, and the other actualizations. Every 9  
 motion is incomplete—the processes of thinning,  
 learning, walking, building—these are motions, and  
 incomplete at that. For it is not the same thing  
 which at the same time is walking and has walked,  
 or is building and has built, or is becoming and has  
 become, or is being moved and has been moved,  
 but two different things; and that which is causing  
 motion is different from that which has caused  
 motion. But the same thing at the same time is 10  
 seeing and has seen, is thinking and has thought.  
 The latter kind of process, then, is what I mean  
 by actualization, and the former what I mean by  
 motion.

What the actual is, then, and what it is like, may

<sup>b</sup> τί τέ ἐστι καὶ ποῖον, ἐκ τούτων καὶ τῶν τοιούτων  
δηλον ἡμῖν ἔστω.

VII Πότε δὲ δυνάμει ἔστιν ἕκαστον καὶ πότε  
<sup>a</sup> οὐ, διοριστέον· οὐ γὰρ ὅποτεοῦν. οἶον ἢ γῆ ἄρ'  
 ἐστὶ δυνάμει ἄνθρωπος<sup>1</sup>; ἢ οὐ, ἀλλὰ μᾶλλον ὅταν  
 ἤδη γένηται σπέρμα, καὶ οὐδὲ τότε ἴσως. ὥσπερ  
 οὖν οὐδὲ ὑπὸ ἰατρικῆς ἅπαν ἂν ὑγιασθεῖη οὐδ'  
 ἀπὸ τύχης, ἀλλ' ἔστι τι ὃ δυνατὸν ἐστι, καὶ τοῦτ'  
<sup>5</sup> ἐστὶν ὑγιαῖνον δυνάμει. Ὅρος δὲ τοῦ μὲν ἀπὸ  
 διανοίας ἐντελεχεία γιγνομένου ἐκ τοῦ δυνάμει  
 ὄντος, ὅταν βουληθέντος γίγνηται μηθενὸς κωλύον-  
 τος τῶν ἐκτός, ἐκεῖ δ' ἐν τῷ ὑγιαζομένῳ, ὅταν μηθὲν  
 κωλύῃ τῶν ἐν αὐτῷ. ὁμοίως δὲ δυνάμει καὶ οἰκία,  
<sup>10</sup> εἰ μηθὲν κωλύει τῶν ἐν τούτῳ καὶ τῇ ὕλῃ τοῦ  
 γίγνεσθαι οἰκίαν, οὐδ' ἔστιν ὃ δεῖ προσγενέσθαι ἢ  
 ἀπογενέσθαι ἢ μεταβαλεῖν, τοῦτο δυνάμει οἰκία.  
 καὶ ἐπὶ τῶν ἄλλων ὡσαύτως, ὅσων ἔξωθεν ἢ ἀρχὴ  
 τῆς γενέσεως, καὶ ὅσων δὴ ἐν αὐτῷ τῷ ἔχοντι,  
 ὅσα μηθενὸς τῶν ἔξωθεν ἐμποδίζοντος ἔσται δι'  
<sup>15</sup> αὐτοῦ. οἶον τὸ σπέρμα οὐπω· δεῖ γὰρ ἐν ἄλλῳ  
 καὶ<sup>2</sup> μεταβάλλειν· ὅταν δ' ἤδη διὰ τῆς αὐτοῦ  
 ἀρχῆς ἢ τοιοῦτον, ἤδη τοῦτο δυνάμει· ἐκεῖνο δὲ  
 ἐτέρας ἀρχῆς δεῖται, ὥσπερ ἢ γῆ οὐπω ἀνδριάς

<sup>1</sup> δυνάμει ἄνθρωπος EJ Alexanderi ἄνθρωπος δυνάμει A<sup>b</sup>.

<sup>2</sup> πεσεῖν καὶ Ross: εἶναι καὶ Bullinger

<sup>a</sup> This is inconsistent with Aristotle's doctrine that the semen is the formal element in reproduction. Cf. VIII. iv. 5, VI ix 5.

be regarded as demonstrated from these and similar considerations

VII We must, however, distinguish when a particular thing exists potentially, and when it does not; for it does not so exist at any and every time *Eg*, is earth potentially a man? No, but rather when it has already become semen,<sup>a</sup> and perhaps not even then; just as not *everything* can be healed by medicine, or even by chance, but there is some definite kind of thing which is capable of it, and this is that which is potentially healthy

The definition of that which as a result of thought comes, from existing potentially, to exist actually, is that, when it has been willed, if no external influence hinders it, it comes to pass, and the condition in the case of the patient, *ie* in the person who is being healed, is that nothing in him should hinder the process. Similarly a house exists potentially if there is nothing in X, the matter, to prevent it from becoming a house, *ie.*, if there is nothing which must be added or removed or changed; then X is potentially a house; and similarly in all other cases where the generative principle is external. And in all cases where the generative principle is contained in the thing itself, one thing is potentially another when, if nothing external hinders, it will of itself become the other. *Eg.*, the semen is not yet potentially a man; for it must further undergo a change in some other medium.<sup>a</sup> But when, by its own generative principle, it has already come to have the necessary attributes, in this state it is now potentially a man, whereas in the former state it has need of another principle; just as earth is not yet potentially a statue, 4

## ARISTOTLE

δυνάμει· μεταβαλοῦσα<sup>1</sup> γὰρ ἔσται χαλκός. Ἔοικε δὲ ὁ λέγομεν εἶναι οὐ τόδε ἀλλ' ἐκείνινον, οἷον τὸ  
 0 κιβώτιον οὐ ξύλον ἀλλὰ ξύλινον, οὐδὲ τὸ ξύλον γῆ  
 ἀλλὰ γήινον· πάλιν ἢ γῆ εἰ οὕτως μὴ ἄλλο ἀλλὰ  
 ἐκείνινον,—ἀεὶ ἐκείνο δυνάμει ἀπλῶς τὸ ὕστερόν  
 ἔστιν. οἷον τὸ κιβώτιον οὐ γήινον οὐδὲ γῆ, ἀλλὰ  
 ξύλινον· τοῦτο γὰρ δυνάμει κιβώτιον, καὶ ὕλη κιβω-  
 5 τίου αὐτῆ, ἀπλῶς μὲν τοῦ ἀπλῶς, τουδὶ δὲ τοδὶ  
 τὸ ξύλον. Εἰ δὲ τί ἐστι πρῶτον ὁ μηκέτι κατ'  
 ἄλλο<sup>2</sup> λέγεται ἐκείνινον, τοῦτο πρώτη ὕλη οἷον εἰ ἢ  
 γῆ ἀερίνη, ὁ δ' ἀήρ μὴ πῦρ ἀλλὰ πύρινος, τὸ πῦρ  
 ὕλη πρώτη οὐ<sup>3</sup> τόδε τι οὔσα.<sup>4</sup> τούτῳ γὰρ διαφέρει  
 τὸ καθ' οὐ<sup>5</sup> καὶ τὸ ὑποκείμενον, τῷ εἶναι τόδε τι  
 ἢ μὴ εἶναι. οἷον τοῖς πάθεσι τὸ ὑποκείμενον ἄν-  
 30 θρωπος καὶ σῶμα καὶ ψυχὴ, πάθος δὲ τὸ μουσικόν  
 καὶ λευκόν. λέγεται δὲ τῆς μουσικῆς ἐγγενομένης  
 ἐκείνο οὐ μουσικὴ ἀλλὰ μουσικόν, καὶ οὐ λευκότης  
 ὁ ἄνθρωπος ἀλλὰ λευκόν, οὐδὲ βάδισις ἢ κίνησις  
 ἀλλὰ βαδίζον ἢ κινούμενον, ὡς τὸ ἐκείνινον ὅσα  
 35 μὲν οὖν οὕτω, τὸ ἔσχατον οὐσία· ὅσα δὲ μὴ οὕτως  
 ἀλλ' εἰδός τι καὶ τόδε τι τὸ κατηγορούμενον, τὸ  
 ἔσχατον ὕλη καὶ οὐσία ὑλική. καὶ ὀρθῶς δὴ συμ-

<sup>1</sup> μεταβάλλουσα E<sup>2</sup>A<sup>b</sup>J.

<sup>2</sup> ἄλλο A<sup>b</sup> γρ. E Alexander· ἄλλου EJ.

<sup>3</sup> οὐ om. Γ Alexander εἰ δὲ A<sup>b</sup> ὡς E<sup>2</sup>

<sup>4</sup> οὐσία A<sup>b</sup>. καὶ οὐσία recc.

<sup>5</sup> καθ' οὐ Apelt· καθόλου.

<sup>a</sup> Cf. VII vii. 10-12.

because it must undergo a change before it becomes bronze

It seems that what we are describing is not a particular thing, but a definite material; *e g*, a box is not wood, but wooden material,<sup>a</sup> and wood is not earth, but earthen material; and earth also is an illustration of our point if it is similarly not some other thing, but a definite material—it is always the latter term in this series which is, in the fullest sense, potentially something else. *E g*, a box is not<sup>5</sup> earth, nor earthen, but wooden; for it is this that is potentially a box, and this is the matter of the box—that is, wooden material in general is the matter of “box” in general, whereas the matter of a particular box is a particular piece of wood.

If there is some primary stuff, which is not further called the material of some other thing, this is primary matter. *E g*, if earth is “made of air,” and air is not fire, but “made of fire,” then fire is primary matter, not being an individual thing. For the subject or substrate is distinguishable into<sup>6</sup> two kinds by either being or not being an individual thing. Take for example as the subject of the attributes “man,” or “body” or “soul,” and as an attribute “cultured” or “white.” Now the subject, when culture is induced in it, is called not “culture” but “cultured,” and the man is called not whiteness but white; nor is he called “ambulation” or “motion,” but “walking” or “moving”; just as we said that things are of a definite material. Thus where “subject” has this sense, the ultimate<sup>7</sup> substrate is substance; but where it has not this sense, and the predicate is a form or individuality, the ultimate substrate is matter or material sub-

ββαίνει τὸ ἐκείνῳ λέγεσθαι κατὰ τὴν ὕλην καὶ τὰ  
 πάθη· ἄμφω γὰρ ἀόριστα Πότε μὲν οὖν  
 λεκτέον δυνάμει καὶ πότε οὐ, εἴρηται.

VIII. Ἐπεὶ δὲ τὸ πρότερον διώριστα ποσαχῶς  
 λέγεται, φανερόν ὅτι πρότερον ἐνέργεια δυνάμει  
 ἐστίν. λέγω δὲ δυνάμει οὐ μόνον τῆς ὠρισμένης  
 ἢ λέγεται ἀρχὴ μεταβλητικὴ ἐν ἄλλῳ ἢ ἢ ἄλλο,  
 ἀλλ' ὅλως πάσης ἀρχῆς κινήτικῆς ἢ στατικῆς.  
 καὶ γὰρ ἡ φύσις ἐν ταύτῳ [γίγνεται· ἐν ταύτῳ γὰρ]<sup>2</sup>  
 γένηται τῇ δυνάμει· ἀρχὴ γὰρ κινήτικῆ, ἀλλ' οὐκ ἐν  
 ἄλλῳ ἀλλ' ἐν αὐτῷ ἢ αὐτό. πάσης δὲ τῆς τοιαύτης  
 προτέρα ἐστὶν ἡ ἐνέργεια καὶ λόγῳ καὶ τῇ οὐσίᾳ·  
 χρόνῳ δ' ἔστι μὲν ὡς, ἔστι δ' ὡς οὐ. Τῷ λόγῳ  
 μὲν οὖν ὅτι προτέρα, δῆλον· τῷ γὰρ ἐνδέχεσθαι ἐν-  
 εργῆσαι δυνατόν ἐστὶ τὸ πρῶτως δυνατόν, οἷον λέγω  
 οἰκοδομικὸν τὸ δυνάμενον οἰκοδομεῖν, καὶ ὄρατικὸν  
 τὸ ὄραν, καὶ ὄρατὸν τὸ δυνατόν ὄρασθαι· ὁ δ'  
 αὐτὸς λόγος καὶ ἐπὶ τῶν ἄλλων, ὥστ' ἀνάγκη τὸν  
 λόγον προεπάρχειν καὶ τὴν γνώσιν τῆς γνώσεως.

Τῷ δὲ χρόνῳ πρότερον ὦδε,<sup>3</sup> τὸ τῷ εἶδει τὸ  
 αὐτὸ ἐνεργεῖν πρότερον, ἀριθμῷ δ' οὐ. λέγω  
 δὲ τοῦτο ὅτι τοῦδε μὲν τοῦ ἀνθρώπου τοῦ ἤδη  
 ὄντος κατ' ἐνέργειαν καὶ τοῦ σίτου καὶ τοῦ ὄρων-  
 τος πρότερον τῷ χρόνῳ ἢ ὕλη καὶ τὸ σπέρμα

<sup>1</sup> ἢ om. E<sup>1</sup>A<sup>b</sup>J.

<sup>2</sup> γίγνεται . . . γὰρ om. A<sup>b</sup> Alexander: γίγνεται δυνάμει  
 ἐν ταυτῷ γὰρ E.

<sup>3</sup> ὦδε om. E<sup>1</sup>J.

<sup>a</sup> V. xi.

<sup>b</sup> Cf. V. iv. 1.



stance. It is quite proper that both matter and attributes should be described by a derivative predicate, since they are both indefinite

Thus it has now been stated when a thing should be said to exist potentially, and when it should not.

VIII Now since we have distinguished<sup>a</sup> the several senses of priority, it is obvious that actuality is prior to potentiality. By potentiality I mean not that which we have defined as "a principle of change which is in something other than the thing changed, or in that same thing *qua* other," but in general any principle of motion or of rest, for nature also is in the same genus as potentiality, because it is a principle of motion, although not in some other thing, but in the thing itself *qua* itself.<sup>b</sup> To every<sup>2</sup> potentiality of this kind actuality is prior, both in formula and in substance; in time it is sometimes prior and sometimes not.

That actuality is prior in formula is evident; for<sup>(1)</sup> it is because it can be actualized that the potential, in the primary sense, is potential, I mean, *e g*, that the potentially constructive is that which can construct, the potentially seeing that which can see, and the potentially visible that which can be seen. The same principle holds in all other cases too, so<sup>3</sup> that the formula and knowledge of the actual must precede the knowledge of the potential.

In time it is prior in this sense: the actual is<sup>(2)</sup> prior to the potential with which it is formally identical, but not to that with which it is identical numerically. What I mean is this that the matter<sup>4</sup> and the seed and the thing which is capable of seeing, which are potentially a man and corn and seeing, but are not yet so actually, are prior in time to the

<sup>1</sup> καὶ τὸ ὀρατικόν, ἃ δυνάμει μὲν ἔστιν ἄνθρωπος καὶ σῖτος καὶ ὀρών, ἐνεργεία δ' οὐπω. ἀλλὰ τούτων πρότερα τῷ χρόνῳ ἕτερα ὄντα ἐνεργεία, ἐξ ὧν ταῦτα ἐγένετο· αἰεὶ γὰρ ἐκ τοῦ δυνάμει ὄντος γίνεταί τὸ ἐνεργεία ὃν ὑπὸ ἐνεργεία ὄντος, οἷον ἄνθρωπος ἐξ ἀνθρώπου, μουσικὸς ὑπὸ μουσικοῦ, αἰεὶ κινουῦντός τινος πρώτου· τὸ δὲ κινουῦν ἐνεργεία ἤδη ἔστιν.

Εἴρηται δὲ ἐν τοῖς περὶ τῆς οὐσίας λόγοις ὅτι ἅπαν τὸ γιγνόμενον γίνεταί ἐκ τινός τι καὶ ὑπὸ τινος, καὶ τοῦτο τῷ εἶδει τὸ αὐτό. διὸ καὶ δοκεῖ ἀδύνατον εἶναι οἰκοδόμον εἶναι μὴ οἰκοδομήσαντα μηδὲν, ἢ κιθαριστὴν μηθὲν κιθαρίσαντα· ὁ γὰρ μανθάνων κιθαρίζειν κιθαρίζων μανθάνει κιθαρίζειν, ὁμοίως δὲ καὶ οἱ ἄλλοι. ὅθεν ὁ σοφιστικὸς ἔλεγχος ἐγένετο ὅτι οὐκ ἔχων τις τὴν ἐπιστήμην ποιήσει οὐ ἢ ἐπιστήμη· ὁ γὰρ μανθάνων οὐκ ἔχει, ἀλλὰ διὰ τὸ τοῦ γιγνομένου γεγενῆσθαι τι καὶ τοῦ ὅλως κινουμένου κεκινήσθαι τι (δηλὸν δ' ἐν τοῖς περὶ κινήσεως τοῦτο) καὶ τὸν μανθάνοντα ἀνάγκη ἔχειν τι τῆς ἐπιστήμης ἴσως. ἀλλ' οὖν καὶ ταύτῃ γε δηλὸν ὅτι ἢ ἐνέργεια καὶ οὕτω προτέρα τῆς δυνάμεως κατὰ γένεσιν καὶ χρόνον. Ἄλλὰ μὴν καὶ οὐσία γε, πρῶτον μὲν ὅτι τὰ τῇ γενέσει ὕστερα τῷ εἶδει καὶ τῇ οὐσία πρότερα, οἷον ἀνὴρ παιδὸς καὶ ἄνθρωπος σπέρματος· τὸ μὲν γὰρ ἤδη ἔχει τὸ εἶδος, τὸ δ' οὐ καὶ ὅτι ἅπαν ἐπ' ἀρχὴν

<sup>a</sup> VII. vii, viii.

<sup>b</sup> *Physics*, VI. vi.

individual man and coin and seeing subject which already exist in actuality. But prior in time to 5 these potential entities are other actual entities from which the former are generated, for the actually existent is always generated from the potentially existent *by* something which is actually existent—*e g.*, man by man, cultured by cultured—there is always some prime mover, and that which initiates motion exists already in actuality.

We have said <sup>a</sup> in our discussion of substance that everything which is generated is generated from something and by something; and by something formally identical with itself. Hence it seems im- 6 possible that a man can be a builder if he has never built, or a harpist if he has never played a harp, because he who learns to play the harp learns by playing it, and similarly in all other cases. This was 7 the origin of the sophists' quibble that a man who does not know a given science will be doing that which is the object of that science, because the learner does not know the science. But since something of that which is being generated is already generated, and something of that which is being moved as a whole is already moved (this is demonstrated in our discussion on Motion <sup>b</sup>), presumably the learner too must possess something of the science. At any rate 8 from this argument it is clear that actuality is prior to potentiality in this sense too, *i e.* in respect of generation and time.

But it is also prior in substantiality; (*a*) because <sup>(3)</sup> things which are posterior in generation are prior <sup>sta1</sup> in form and substantiality; *e g.*, adult is prior to child, and man to semen, because the one already possesses the form, but the other does not; and (*b*) 9

<sup>a</sup> βαδίζει τὸ γιγνόμενον καὶ τέλος ἀρχὴ γὰρ τὸ οὐ  
 ἔνεκα, τοῦ τέλους δὲ ἔνεκα ἢ γένεσις. τέλος δ' ἢ  
 10 ἐνέργεια, καὶ τούτου χάριν ἢ δύναμις λαμβάνεται·  
 οὐ γὰρ ἵνα ὄψιν ἔχουσιν ὀρώσι τὰ ζῶα, ἀλλ' ὅπως  
 ὀρώσιν ὄψιν ἔχουσιν. ὁμοίως δὲ καὶ οἰκοδομικὴν  
 ἵνα οἰκοδομῶσι, καὶ τὴν θεωρητικὴν ἵνα θεωρῶσιν·  
 ἀλλ' οὐ θεωροῦσιν ἵνα θεωρητικὴν ἔχουσιν, εἰ μὴ  
 οἱ μελετῶντες· οὗτοι δ' οὐχὶ θεωροῦσιν, ἀλλ' ἢ ὡδὶ  
 15 ἢ ὅ τι<sup>1</sup> οὐδὲν δέονται θεωρεῖν. Ἐπι ἢ ὕλη ἔστι  
 δυνάμει, ὅτι ἔλθοι ἂν εἰς τὸ εἶδος ὅταν δέ γε  
 ἐνεργείᾳ ἦ, τότε ἐν τῷ εἶδει ἐστίν. ὁμοίως δὲ καὶ  
 ἐπὶ τῶν ἄλλων καὶ ὧν κίνησις τὸ τέλος. διὸ  
 ὡσπερ οἱ διδάσκοντες ἐνεργοῦντα ἐπιδείξαντες οἴον-  
 ται τὸ τέλος ἀποδεδωκέναι, καὶ ἡ φύσις ὁμοίως. εἰ  
 20 γὰρ μὴ οὕτω γίγνεται, ὁ Παύσωνος ἔσται Ἑρμῆς·  
 ἄδηλος γὰρ καὶ ἡ ἐπιστήμη εἰ ἔσω ἢ ἔξω, ὡσπερ  
 κάκεινος τὸ γὰρ ἔργον τέλος, ἢ δὲ ἐνέργεια τὸ  
 ἔργον. διὸ καὶ τοῦνομα ἐνέργεια λέγεται κατὰ τὸ  
 ἔργον, καὶ συντείνει πρὸς τὴν ἐντελέχειαν Ἐπεὶ  
 δ' ἐστὶ τῶν μὲν ἔσχατον ἢ χρήσις, οἶον ὄψεως ἢ  
 25 ὄρασις, καὶ οὐθὲν γίγνεται παρὰ ταύτην ἕτερον ἀπὸ  
 τῆς ὄψεως [ἔργον],<sup>2</sup> ἀπ' ἐνίων δὲ γίγνεται τι, οἶον

<sup>1</sup> ὅ τι Bullinger: ὅτι.

<sup>2</sup> om A<sup>b</sup> Alexander

<sup>a</sup> Probably a "trick" picture of some kind. So Pausanias is said to have painted a picture of a horse galloping which when inverted showed the horse rolling on its back. Cf. Aelian, *Var. Hist.* xiv. 15, Lucian, *Demosth. Enc.* 24; Plutarch, *Moralia*, 396 E; Pfuhl, *Malerei und Zeichnung der Griechen*, § 763.

because everything which is generated moves towards a principle, *i e.* its *end*. For the object of a thing is its principle; and generation has as its object the *end*. And the actuality is the end, and it is for the sake of this that the potentiality is acquired; for animals do not see in order that they may have sight, but have sight in order that they may see. Similarly men possess the art of building 10 in order that they may build, and the power of speculation that they may speculate; they do not speculate in order that they may have the power of speculation—except those who are learning by practice; and they do not really speculate, but only in a limited sense, or about a subject about which they have no desire to speculate.

Further, matter exists potentially, because it may attain to the form; but when it exists actually, it is then *in* the form. The same applies in all other cases, including those where the end is motion. Hence, just as teachers think that they have achieved 11 their end when they have exhibited their pupil performing, so it is with nature. For if this is not so, it will be another case of "Pauson's Hermes" <sup>a</sup>; it will be impossible to say whether the knowledge is *in* the pupil or outside him, as in the case of the Hermes. For the activity is the end, and the actuality is the activity; hence the term "actuality" is derived from "activity," and tends to have the meaning of "complete reality."

Now whereas in some cases the ultimate thing is 12 the use of the faculty, as, *e.g.*, in the case of sight seeing is the ultimate thing, and sight produces nothing else besides this; but in other cases something is produced, *e.g.* the art of building produces

<sup>a</sup> ἀπὸ τῆς οἰκοδομικῆς οἰκία παρὰ τὴν οἰκοδόμησιν, ὁμῶς οὐθὲν ἦττον ἔνθα μὲν τέλος ἔνθα δὲ μᾶλλον τέλος τῆς δυνάμεώς ἐστιν. ἡ γὰρ οἰκοδόμησις ἐν τῷ οἰκοδομουμένῳ, καὶ ἅμα γίγνεται καὶ ἔστι τῆ οἰκία.

<sup>30</sup> Ὅσων μὲν οὖν ἕτερόν τί ἐστι παρὰ τὴν χρῆσιν τὸ γιγνόμενον, τούτων μὲν ἡ ἐνέργεια ἐν τῷ ποιουμένῳ ἐστίν, οἷον ἡ τε οἰκοδόμησις ἐν τῷ οἰκοδομουμένῳ καὶ ἡ ὑφανσις ἐν τῷ ὑφαινομένῳ, ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων, καὶ ὅλως ἡ κίνησις ἐν τῷ κινουμένῳ· ὅσων δὲ μὴ ἐστιν ἄλλο τι ἔργον <sup>35</sup> παρὰ τὴν ἐνέργειαν, ἐν αὐτοῖς ὑπάρχει ἡ ἐνέργεια, οἷον ἡ ὄρασις ἐν τῷ ὁρῶντι καὶ ἡ θεωρία ἐν τῷ <sup>1b</sup> θεωροῦντι καὶ ἡ ζωὴ ἐν τῇ ψυχῇ (διὸ καὶ ἡ εὐδαιμονία· ζωὴ γὰρ ποιά τις ἐστίν· ὥστε φανερόν ὅτι ἡ οὐσία καὶ τὸ εἶδος ἐνέργειά ἐστιν). κατὰ τε δὴ τοῦτον τὸν λόγον φανερόν ὅτι πρότερον τῇ οὐσίᾳ ἐνέργεια δυνάμεως, καὶ ὥσπερ εἶπομεν, τοῦ χρόνου <sup>5</sup> αἰεὶ προλαμβάνει ἐνέργεια ἑτέρα πρὸ ἑτέρας ἕως τῆς τοῦ αἰεὶ κινουῦντος πρώτως Ἄλλὰ μὴν καὶ κυριωτέρως· τὰ μὲν γὰρ αἰδία πρότερα τῇ οὐσίᾳ τῶν φθαρτῶν, ἔστι δ' οὐθὲν δυνάμει αἰδίων. λόγος δὲ ὅδε· πᾶσα δύναμις ἅμα τῆς ἀντιφάσεώς ἐστιν· τὸ <sup>10</sup> μὲν γὰρ μὴ δυνατόν ὑπάρχειν οὐκ ἂν ὑπάρξειεν οὐθενί· τὸ δυνατόν δὲ πᾶν ἐνδέχεται μὴ ἐνεργεῖν. τὸ ἄρα δυνατόν εἶναι ἐνδέχεται καὶ εἶναι καὶ μὴ εἶναι· τὸ αὐτὸ ἄρα δυνατόν καὶ εἶναι καὶ μὴ εἶναι. τὸ δὲ δυνατόν μὴ εἶναι ἐνδέχεται μὴ εἶναι τὸ δὲ ἐνδεχόμενον μὴ εἶναι φθαρτόν, ἢ ἀπλῶς, ἢ τοῦτο

<sup>a</sup> Cf. § 19.

not only the act of building but a house ; nevertheless in the one case the use of the faculty is the end, and in the other it is more truly the end than is the potentiality. For the act of building resides in the thing built ; *i.e.*, it comes to be and exists simultaneously with the house.

Thus in all cases where the result is something 13 other than the exercise of the faculty, the actuality resides in the thing produced , *e.g.* the act of building in the thing built, the act of weaving in the thing woven, and so on ; and in general the motion resides in the thing moved . But where there is no other result besides the actualization, the actualization resides in the subject ; *e.g.* seeing in the seer, and speculation in the speculator, and life in the soul (and hence also happiness, since happiness is a 14 particular kind of life) . Evidently, therefore, substance or form is actuality. Thus it is obvious by this argument that actuality is prior in substantiality to potentiality ; and that in point of time, as we have said, one actuality presupposes another right back to that of the prime mover in each case

It is also prior in a deeper sense ; because that 15 which is eternal is prior in substantiality to that which is perishable, and nothing eternal is potential. The argument is as follows. Every potentiality is at the same time a potentiality for the opposite.<sup>a</sup> For whereas that which is incapable of happening cannot happen to anything everything which is capable may fail to be actualized: Therefore that which is capable 16 of being may both be and not be . Therefore the same thing is capable both of being and of not being . But that which is capable of not being may possibly not be ; and that which may possibly not be is perish-

## ARISTOTLE

<sup>b</sup>  
 5 αὐτὸ δὲ λέγεται ἐνδέχασθαι μὴ εἶναι, ἢ κατὰ τόπον  
 ἢ κατὰ τὸ<sup>1</sup> ποσὸν ἢ ποιόν· ἀπλῶς δὲ τὸ κατ' οὐσίαν.  
 οὐθὲν ἄρα τῶν ἀφθάρτων ἀπλῶς δυνάμει ἔστιν<sup>2</sup>  
 ἀπλῶς κατὰ τι δὲ οὐδὲν κωλύει, οἷον ποιόν, ἢ πού·  
 ἐνεργεία ἄρα πάντα. οὐδὲ τῶν ἐξ ἀνάγκης ὄντων,  
 καίτοι ταῦτα πρῶτα· εἰ γὰρ ταῦτα μὴ ἦν, οὐθὲν ἂν  
 20 ἦν. οὐδὲ δὴ κίνησις, εἴ τίς ἐστιν αἰδίου· οὐδ' εἴ τι  
 κινούμενον αἰδίον, οὐκ ἔστι κατὰ δύναμιν κινού-  
 μενον ἀλλ' ἢ πόθεν ποί· τούτου δ' ὕλην οὐδὲν  
 κωλύει ὑπάρχειν διὸ αἰεὶ ἐνεργεῖ ἥλιος καὶ ἄστρα  
 καὶ ὄλος ὁ οὐρανός, καὶ οὐ φοβερὸν μὴ ποτε στῆ, ὃ  
 φοβούνται οἱ περὶ φύσεως. οὐδὲ κάμνει τοῦτο  
 25 δρῶντα· οὐ γὰρ περὶ τὴν δύναμιν τῆς ἀντιφάσεως  
 αὐτοῖς, οἷον τοῖς φθαρτοῖς, ἢ κίνησις, ὥστε ἐπί-  
 πονον εἶναι τὴν συνέχειαν τῆς κινήσεως· ἢ γὰρ  
 οὐσία ὕλη καὶ δύναμις οὐσα, οὐκ ἐνεργεία, αἰτία  
 τούτου

Μιμεῖται δὲ τὰ ἀφθάρτα καὶ τὰ ἐν μεταβολῇ  
 ὄντα, οἷον γῆ καὶ πῦρ. καὶ γὰρ ταῦτα αἰεὶ ἐνεργεῖ  
 30 καθ' αὐτὰ γὰρ καὶ ἐν αὐτοῖς ἔχει τὴν κίνησιν.  
 αἱ δ' ἄλλαι δυνάμεις, ἐξ ὧν διώρισται, πάσαι τῆς  
 ἀντιφάσεώς εἰσιν· τὸ γὰρ δυνάμενον ὡδὶ κινεῖν  
 δύναται καὶ μὴ ὡδί, ὅσα γε κατὰ λόγον. αἱ δὲ

<sup>1</sup> τὸ om EJ<sup>2</sup> ἐστιν ὄν EJ.<sup>a</sup> e.g. Empedocles; cf. V. xiiii. 3 n<sup>b</sup> Cf. *De Gen. et Corr.* 337 a 1-7.<sup>c</sup> Ch. v. 2.



able ; either absolutely, or in the particular sense in which it is said that it may possibly not be ; that is, in respect either of place or of quantity or of quality. " Absolutely " means in respect of substance. Hence 17 nothing which is absolutely imperishable is absolutely potential (although there is no reason why it should not be potential in some particular respect ; *e g* of quality or place) ; therefore all imperishable things are actual. Nor can anything which is of necessity be potential ; and yet these things are primary, for if they did not exist, nothing would exist. Nor can motion be potential, if there is any eternal motion. Nor, if there is anything eternally in motion, is it potentially in motion (except in respect of some starting-point or destination), and there is no reason why the matter of such a thing should not exist. Hence the sun and stars and the whole 18 visible heaven are always active, and there is no fear that they will ever stop—a fear which the writers <sup>a</sup> on physics entertain. Nor do the heavenly bodies tire in their activity ; for motion does not imply for them, as it does for perishable things, the potentiality for the opposite, which makes the continuity of the motion distressing ; this results when the substance is matter and potentiality, not actuality.

Imperishable things are resembled in this respect 19 by things which are always undergoing transformation, such as earth and fire ; for the latter too are always active, since they have their motion independently and in themselves.<sup>b</sup> Other potentialities, according to the distinctions already made,<sup>c</sup> all admit of the opposite result ; for that which is capable of causing motion in a certain way can also cause it not in that way ; that is if it acts rationally. The same 20

1 b ἄλογοι τῷ παρεῖναι καὶ μὴ τῆς ἀντιφάσεως ἔσονται  
 35 αἱ αὐταί. Εἰ ἄρα τινὲς εἰσὶ φύσεις τοιαῦται ἢ  
 οὐσίαι οἷας λέγουσιν οἱ ἐν τοῖς λόγοις τὰς ἰδέας,  
 πολὺ μᾶλλον ἐπιστήμον ἂν τι εἴη ἢ αὐτὸ ἐπιστήμη  
 1 a καὶ κινούμενον ἢ κίνησις· ταῦτα γὰρ ἐνέργεια  
 μᾶλλον, ἐκεῖναι δὲ δυνάμεις τούτων ὅτι μὲν οὖν  
 πρότερον ἢ ἐνέργεια καὶ δυνάμεως καὶ πάσης  
 ἀρχῆς μεταβλητικῆς, φανερόν.

IX. Ὅτι δὲ καὶ βελτίων καὶ τιμιωτέρα τῆς  
 5 σπουδαίας δυνάμεως ἢ ἐνέργεια, ἐκ τῶνδε δῆλον.  
 ὅσα γὰρ κατὰ τὸ δύνασθαι λέγεται, ταῦτόν ἐστι  
 δυνατὸν τὰναντία, οἷον τὸ δύνασθαι λεγόμενον  
 ὑγιαίνειν ταῦτόν ἐστι καὶ τὸ νοσεῖν,<sup>1</sup> καὶ ἅμα· ἢ  
 αὐτὴ γὰρ δύναμις τοῦ ὑγιαίνειν καὶ κάμνειν, καὶ  
 ἡρεμεῖν καὶ κινεῖσθαι, καὶ οἰκοδομεῖν καὶ κατα-  
 10 βάλλειν, καὶ οἰκοδομεῖσθαι καὶ καταπίπτειν τὸ  
 μὲν οὖν δύνασθαι τὰναντία ἅμα ὑπάρχει, τὰ δ'  
 ἐναντία ἅμα ἀδύνατον καὶ τὰς ἐνεργείας δὲ ἅμα  
 ἀδύνατον ὑπάρχειν, οἷον ὑγιαίνειν καὶ κάμνειν  
 ὡστ' ἀνάγκη τούτων θάτερον εἶναι τὰγαθόν. τὸ  
 15 δὲ δύνασθαι ὁμοίως ἀμφότερον ἢ οὐδέτερον· ἢ ἄρα  
 ἐνέργεια βελτίων. Ἀνάγκη δὲ καὶ ἐπὶ τῶν  
 κακῶν τὸ τέλος καὶ τὴν ἐνέργειαν εἶναι χεῖρον  
 τῆς δυνάμεως· τὸ γὰρ δυνάμενον ταῦτὸ ἅμφω  
 τὰναντία.

Δῆλον ἄρα ὅτι οὐκ ἔστι τὸ κακὸν παρὰ τὰ πράγ-

<sup>1</sup> νοσεῖν Alexander (?), Bonitz (omisso τὸ). νοσοῦν codd.

<sup>a</sup> For this description of the Platonists cf I vi. 7.

<sup>b</sup> This is a passing thrust at the Ideal theory. "Absolute

irrational potentialities can only produce opposite results by their presence or absence.

Thus if there are any entities or substances such as the dialecticians <sup>a</sup> describe the Ideas to be, there must be something which has much more knowledge than absolute knowledge, and much more mobility than motion: for they will be in a truer sense actualities, whereas knowledge and motion will be their potentialities <sup>b</sup>. Thus it is obvious that actuality is prior both to potentiality and to every principle of change.

IX. That a good actuality is both better and more estimable than a good potentiality will be obvious from the following arguments. Everything of which we speak as capable is alike capable of contrary results; *e.g.*, that which we call capable of being well is alike capable of being ill, and has both potentialities at once; for the same potentiality admits of health and disease, or of rest and motion, or of building and of pulling down, or of being built and of falling down. Thus the capacity for two contraries <sup>2</sup> can belong to a thing at the same time, but the contraries cannot belong at the same time; *i.e.*, the actualities, *e.g.* health and disease, cannot belong to a thing at the same time. Therefore one of them must be the good; but the potentiality may equally well be both or neither. Therefore the actuality is better.

Also in the case of evils the end or actuality must <sup>3</sup> be worse than the potentiality; for that which is capable is capable alike of both contraries.

Clearly, then, evil does not exist apart from *things*;

knowledge" (the faculty of knowledge) will be a mere potentiality, and therefore substantially posterior to its actualization in particular instances.

1 a  
 ματα· ὕστερον γὰρ τῇ φύσει τὸ κακὸν τῆς δυνάμεως.  
 20 οὐκ ἄρα οὐδ' ἐν τοῖς ἐξ ἀρχῆς καὶ τοῖς αἰδίοις οὐθὲν  
 ἔστιν οὔτε κακὸν οὔτε ἀμάρτημα οὔτε διεφθαρμέ-  
 νον· καὶ γὰρ ἡ διαφθορὰ τῶν κακῶν ἐστίν.

Εὐρίσκεται δὲ καὶ τὰ διαγράμματα ἐνεργεία,  
 διαιροῦντες γὰρ εὐρίσκουσιν· εἰ δ' ἦν διηρημένα,  
 φανερὰ ἂν ἦν νῦν δ' ἐνυπάρχει δυνάμει. διὰ τί  
 25 δύο ὀρθαὶ τὸ τρίγωνον; ὅτι αἱ περὶ μίαν στιγ-  
 μὴν γωνίαι ἴσαι δύο ὀρθαῖς. εἰ οὖν ἀνήκτο ἢ παρὰ  
 τὴν πλευράν, ἰδόντι ἂν ἦν εὐθύς δῆλον διὰ τί.<sup>1</sup>  
 ἐν ἡμικυκλίῳ ὀρθὴ καθόλου διὰ τί<sup>2</sup>; ἐὰν ἴσαι  
 τρεῖς, ἢ τε βάσις δύο καὶ ἢ ἐκ μέσου ἐπισταθείσα

<sup>1</sup> post τί interpunctit Cannan: post δῆλον cet.

<sup>2</sup> διότι rec. Γ.

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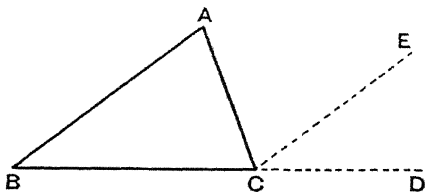
<sup>a</sup> The argument is presumably as follows (the tallacy, as pointed out by Bonitz, is indicated in parenthesis). That which has a separate substantial existence is actuality. Actuality is prior (substantially) to potentiality. Potentiality is prior to evil (in the moral scale. But since by evil Aristotle means the actualization of a potentiality for evil, potentiality is substantially posterior to evil). Therefore that which has a separate substantial existence is prior to evil; i.e., evil does not exist apart from particular instances of evil. The argument is directed against the Platonic Idea of evil (Plato, *Republic*, 476 A); and the corollary which follows against the identification of Evil with one of the principles of the universe

for evil is by nature posterior to potentiality.<sup>a</sup> Nor is there in things which are original and eternal any evil or error, or anything which has been destroyed—for destruction is an evil.

Geometrical constructions, too, are discovered by 4 an actualization, because it is by dividing that we discover them. If the division were already done, they would be obvious; but as it is the division is only there potentially. Why is the sum of the interior angles of a triangle equal to two right angles? Because the angles about one point (in a straight line) are equal to two right angles. If the line parallel to the side had been already drawn, the answer would have been obvious at sight.<sup>b</sup> Why is 5 the angle in a semicircle always a right angle? If three lines are equal, the two forming the base, and the one set upright from the middle of the base, the answer is obvious to one who knows the former

(I vi. 10, XII. x. 6, XIV. iv. 10, 11: cf. Plato, *Laws*, 896 E, 898 c).

<sup>b</sup> The figure, construction and proof are as follows.



Produce the base of the  $\triangle ABC$  to D (Aristotle omits this, but in Euclid 1 32, of which this proposition is the second part, it is already done); from C draw CE parallel to and in the same sense as BA. Then  $\angle BCA + \angle ACE + \angle ECD = 2 \text{ rt. } \angle s$ . But since CE is  $\parallel$  to BA,  $\angle ACE = \angle BAC$ , and  $\angle ECD = \angle ABC$ .  
 $\therefore \angle BCA + \angle BAC + \angle ABC = 2 \text{ rt. } \angle s$ .

<sup>a</sup> ὀρθή, ἰδόντι δῆλον τῷ ἐκείνο εἰδότε. ὥστε φανερόν  
<sup>0</sup> ὅτι τὰ δυνάμει ὄντα εἰς ἐνέργειαν ἀγόμενα<sup>1</sup> εὐ-  
 ρίσκεται. αἴτιον δὲ ὅτι νόησις ἢ ἐνέργεια ὥστ'  
 ἐξ ἐνεργείας ἢ δυνάμεις· καὶ διὰ τοῦτο ποιοῦντες  
 γινώσκουσιν ὕστερον γὰρ γενέσει ἢ ἐνέργεια ἢ  
 κατ' ἀριθμόν.

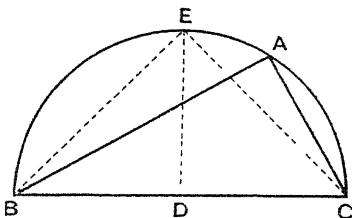
X Ἐπεὶ δὲ τὸ ὄν λέγεται καὶ τὸ μὴ ὄν τὸ μὲν  
<sup>5</sup> κατὰ τὰ σχήματα τῶν κατηγοριῶν, τὸ δὲ κατὰ  
<sup>b</sup> δυνάμιν ἢ ἐνέργειαν τούτων ἢ τὰναντία, τὸ δὲ  
 [κυριώτατα ὄν]<sup>2</sup> ἀληθὲς ἢ ψεῦδος, τοῦτο δ' ἐπὶ  
 τῶν πραγμάτων ἐστὶ τῷ συγκείσθαι ἢ διηρηθῆσθαι,  
 ὥστε ἀληθεύει μὲν ὁ τὸ διηρημένον οἰόμενος  
 διηρηθῆσθαι<sup>3</sup> καὶ τὸ συγκείμενον συγκείσθαι, ἔψευσται  
<sup>5</sup> δὲ ὁ ἐναντίως ἔχων ἢ τὰ πράγματα, πότ' ἐστὶν ἢ  
 οὐκ ἐστὶ τὸ ἀληθὲς λεγόμενον ἢ ψεῦδος; τοῦτο  
 γὰρ σκεπτέον τί λέγομεν. Οὐ γὰρ διὰ τὸ ἡμᾶς

<sup>1</sup> ἀγόμενα EJ Alexander (?) ἀναγόμενα A<sup>b</sup>Γ.

<sup>2</sup> Ross.

<sup>3</sup> διαιρεῖσθαι A<sup>b</sup>Γ

<sup>a</sup> Aristotle implies a proof something after this fashion :



BAC is an angle in a semicircle. From D, the mid-point of the diameter BC, draw a perpendicular DE to meet the circumference at E. Join EB, EC.

proposition.<sup>a</sup> Thus it is evident that the potential constructions are discovered by being actualized. The reason for this is that the actualization is an act of thinking. Thus potentiality comes from actuality (and therefore it is by constructive action that we acquire knowledge). <But this is true only in the abstract>, for the individual actuality is posterior in generation to its potentiality.<sup>b</sup>

X The terms "being" and "not-being" are used<sup>c</sup> not only with reference to the types of predication, and to the potentiality or actuality, or non-potentiality and non-actuality, of these types, but also (in the strictest sense<sup>c</sup>) to denote truth and falsity. This depends, in the case of the objects, upon their being united or divided; so that he who thinks that what is divided is divided, or that what is united is united, is right; while he whose thought is contrary to the real condition of the objects is in error. Then *when* do what we call truth and falsity exist or not exist? We must consider what we mean by these terms.

It is not because we are right in thinking that you 2

Since the radii DB, DF are equal,  $\angle DBE = \angle DEB$

But  $\angle DBE + \angle DEB = \text{rt. } \angle$ .  $\angle BDE = 2 \text{ rt. } \angle$ s.  $\therefore \angle DBE + \angle DEB = \text{a rt. } \angle$ , and  $\angle DEB = \frac{1}{2} \text{ rt. } \angle$ .

Similarly  $\angle DEC = \frac{1}{2} \text{ rt. } \angle$ .  $\therefore \angle BEC = \angle DEB + \angle DEC = \text{a rt. } \angle$

But  $\angle BAC = \angle BEC$  (Eucl. III. 21).

$\therefore \angle BAC$  is a rt.  $\angle$ .

The method is clumsier than Euclid's (III. 31); but "the answer is obvious" from the construction, and the proof involves "the former proposition."

<sup>b</sup> This whole passage (§§ 4, 5) should be compared with VIII. 3-7, where it logically belongs.

<sup>c</sup> This appears to contradict VI. IV. 3. But it is just possible to interpret *κρυώτατα* (with Jaeger) as "in the commonest sense."

<sup>b</sup> οἶσθαι ἀληθῶς σε λευκὸν εἶναι εἰ σὺ λευκός, ἀλλὰ  
 διὰ τὸ σὲ λευκὸν εἶναι ἡμεῖς οἱ φάντες τοῦτο  
 ἀληθεύομεν εἰ δὴ τὰ μὲν αἰεὶ σύγκειται καὶ  
 10 ἀδύνατα διαιρεθῆναι, τὰ δ' αἰεὶ διήρηται καὶ ἀδύ-  
 νατα συντεθῆναι, τὰ δ' ἐνδέχεται πάναντία, τὸ μὲν  
 εἶναί ἐστι τὸ συγκείσθαι καὶ ἐν εἶναι, τὸ δὲ μὴ  
 εἶναι τὸ μὴ συγκείσθαι ἀλλὰ πλειῶν εἶναι. περὶ  
 μὲν οὖν τὰ ἐνδεχόμενα ἢ αὐτὴ γίγνεται ψευδῆς καὶ  
 ἀληθῆς δόξα καὶ ὁ λόγος ὁ αὐτός, καὶ ἐνδέχεται  
 15 ὅτε μὲν ἀληθεύειν ὅτε δὲ ψεύδεσθαι περὶ δὲ τὰ  
 ἀδύνατα ἄλλως ἔχειν οὐ γίγνεται ὅτε μὲν ἀληθές  
 ὅτε δὲ ψεῦδος, ἀλλ' αἰεὶ ταυτὰ<sup>1</sup> ἀληθῆ καὶ ψευδῆ

Περὶ δὲ δὴ τὰ ἀσύνθετα τί τὸ εἶναι ἢ μὴ εἶναι καὶ  
 τὸ ἀληθές καὶ τὸ ψεῦδος; οὐ γάρ ἐστι σύνθετον,  
 20 ὥστε εἶναι μὲν ὅταν συγκέηται, μὴ εἶναι δὲ ἐὰν  
 διηρημένον ἦ, ὥσπερ τὸ λευκὸν <τὸ><sup>2</sup> ξύλον ἢ τὸ  
 ἀσύμμετρον τὴν διάμετρον οὐδὲ τὸ ἀληθές καὶ τὸ<sup>3</sup>  
 ψεῦδος ὁμοίως ἔτι ὑπάρξει καὶ ἐπ' ἐκείνων. ἢ  
 ὥσπερ οὐδὲ τὸ ἀληθές ἐπὶ τούτων τὸ αὐτό, οὕτως  
 οὐδὲ τὸ εἶναι, ἀλλ' ἔστι τὸ μὲν ἀληθές τὸ δὲ<sup>4</sup>  
 ψεῦδος, τὸ μὲν θίγειν καὶ φάναι ἀληθές (οὐ γὰρ  
 2) ταυτὸ κατάφασις καὶ φάσις), τὸ δ' ἀγνωεῖν μὴ  
 θιγγάνειν· ἀπατηθῆναι γὰρ περὶ τὸ τί ἐστίν οὐκ  
 ἔστιν ἀλλ' ἢ κατὰ συμβεβηκός. ὁμοίως δὲ καὶ περὶ  
 τὰς μὴ συνθετὰς οὐσίας· οὐ γὰρ ἔστιν ἀπατηθῆναι.  
 καὶ πᾶσαι εἰσιν ἐνεργεῖα, οὐ δυνάμει· ἐγίγνοντο  
 γὰρ ἂν καὶ ἐφθείροντο· νῦν δὲ τὸ ὄν αὐτὸ οὐ

<sup>1</sup> ταυτὰ Casaubon· ταῦτα.

<sup>2</sup> Bywater

<sup>3</sup> τὸ om. A<sup>b</sup>.

<sup>4</sup> τὸ δὲ 1ecc. Alexander ἢ codd.

<sup>a</sup> i e direct and accurate apprehension

<sup>b</sup> i e, we cannot be mistaken with regard to a simple term  
 X. We either apprehend it or not. Mistake arises when we



are white that you are white ; it is because you are white that we are right in saying so. Now if whereas some things are always united and cannot be divided, and others are always divided and cannot be united, others again admit of both contrary states, then " to be " is to be united, *i e* a unity ; and " not to be " is to be not united, but a plurality. Therefore as 3 regards the class of things which admit of both contrary states, the same opinion or the same statement comes to be false and true, and it is possible at one time to be right and at another wrong ; but as regards things which cannot be otherwise the same opinion is not sometimes true and sometimes false, but the same opinions are always true or always false.

But with regard to incomposite things, what is 4 being or not-being, and truth or falsity ? Such a thing is not composite, so as to be when it is united and not to be when it is divided, like the proposition that " the wood is white," or " the diagonal is incommensurable " ; nor will truth and falsity apply in the same way to these cases as to the previous ones. In point of fact, just as truth is not the same 5 in these cases, so neither is being. Truth and falsity are as follows : contact <sup>a</sup> and assertion are truth (for assertion is not the same as affirmation), and ignorance is non-contact. I say ignorance, because it is impossible to be deceived with respect to what a thing is, except accidentally <sup>b</sup> ; and the same applies to 6 incomposite substances, for it is impossible to be deceived about them. And they all exist actually, not potentially ; otherwise they would be generated and destroyed ; but as it is, Being itself is not gener- either predicate something wrongly of X, or analyse X wrongly.

<sup>b</sup>  
 30 γίγνεται οὐδὲ φθείρεται ἕκ τινος γὰρ ἂν ἐγίγνετο.  
 ὅσα δὴ ἐστὶν ὅπερ εἶναί τι καὶ ἐνεργεῖα, περὶ  
 ταῦτα οὐκ ἐστὶν ἀπατηθῆναι, ἀλλ' ἢ νοεῖν ἢ μῆ.  
 ἀλλὰ τὸ τί ἐστι ζητεῖται περὶ αὐτῶν, εἰ τοιαῦτά  
 ἐστὶν ἢ μῆ.

Τὸ δὲ εἶναι ὡς τὸ ἀληθές, καὶ τὸ μῆ εἶναι  
 ὡς τὸ ψεῦδος, ἐν μὲν ἐστὶν, εἰ σύγκειται, ἀληθές·  
 35 τὸ δ' εἰ μῆ σύγκειται, ψεῦδος. τὸ δὲ εἶναι, εἴπερ  
 1<sup>a</sup> ὄν, οὕτως ἐστίν· εἰ δὲ μῆ οὕτως, οὐκ ἐστὶν. τὸ  
 δὲ ἀληθές τὸ νοεῖν ταῦτα<sup>1</sup> τὸ δὲ ψεῦδος οὐκ  
 ἐστὶν, οὐδὲ ἀπάτη, ἀλλὰ ἄγνοια, οὐχ οἷα ἢ τυφ-  
 λότης· ἢ μὲν γὰρ τυφλότης ἐστὶν ὡς ἂν εἰ τὸ  
 νοητικὸν ὅλως μῆ ἔχοι τις φανερόν δὲ καὶ ὅτι  
 5 περὶ τῶν ἀκινήτων οὐκ ἐστὶν ἀπάτη κατὰ τὸ ποτέ,  
 εἴ τις ὑπολαμβάνει ἀκίνητα. οἷον τὸ τρίγωνον εἰ  
 μῆ μεταβάλλειν οἶεται, οὐκ οἰήσεται ποτὲ μὲν  
 δύο ὀρθὰς ἔχειν ποτὲ δὲ οὐ (μεταβάλλοι γὰρ ἂν),  
 ἀλλὰ τὶ μὲν τὶ δ' οὐ, οἷον ἄρτιον ἀριθμὸν πρῶτον  
 εἶναι μηθένα, ἢ τινὰς μὲν τινὰς δ' οὐ ἀριθμῶ δὲ  
 10 περὶ ἓνα οὐδὲ τοῦτο· οὐ γὰρ ἔτι τινὰ μὲν, τινὰ δὲ  
 οὐ οἰήσεται, ἀλλ' ἀληθεύσει ἢ ψεύσεται ὡς αἰ  
 οὕτως ἔχοντος.

<sup>1</sup> ταῦτα A<sup>b</sup> Alexander: αὐτά E.J.

ated (nor destroyed) : if it were, it would be generated out of something With respect, then, to all things which are essences and actual, there is no question of being mistaken, but only of thinking or not thinking them Inquiry as to *what* they are takes the form of inquiring whether they are of such-and-such a nature or not

As for being in the sense of truth, and not-being in the sense of falsity, a unity is true if the terms are combined, and if they are not combined it is false. Again, if the unity exists, it exists in a particular way, and if it does not exist in that way, it does not exist at all Truth means to think these objects, and there is no falsity or deception, but only ignorance—not, however, ignorance such as blindness is ; for blindness is like a total absence of the power of thinking. And it is obvious that with regard to immovable things also, if one assumes that there are immovable things, there is no deception in respect of time. *E g*, if we suppose that the triangle is immutable, we shall not suppose that it sometimes contains two right angles and sometimes does not, for this would imply that it changes ; but we may suppose that one thing has a certain property and another has not : *e g*, that no even number is a prime, or that some are primes and others are not. But about a single number we cannot be mistaken even in this way, for we can no longer suppose that one instance is of such a nature, and another not, but whether we are right or wrong, the fact is always the same.

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