precedes. There is no reason to doubt its authenticity, but probably it was not a part of the original *Categories* but was tacked on by an editor.

The concept of categories plays an important part in many of Aristotle's works, specially the *Metaphysics*. But it undergoes developments and refinements as Aristotle's thought develops. So the study of the *Categories* is only a first step in an investigation of Aristotle's ideas about categories.

3. The first five chapters of the *De Interpretatione* introduce and seek to define the terms 'name', 'verb', 'sentence', 'statement', 'affirmation', and 'negation'. The main body of the work (Chapters 6–11) treats of various sorts of statement, and of some of their logical properties and relationships. Chapters 12–13 are concerned with modal statements. Chapter 14 discusses a special problem about contrariety.

It is probable that Chapter 14 was originally an independent essay or lecture. The passage 23ª21–26, if by Aristotle at all, is also a later addition to the original treatise. The unhelpful title of the work (like the title of the *Categories*) is not due to Aristotle, and so need not be discussed.

The topics handled in the *De Interpretatione* recur in many other Aristotelian treatises, but particularly in the *Prior Analytics*.

# *CATEGORIES*

## CHAPTER 1

1ª1. The word translated 'animal' originally meant just that; but it had come to be used also of pictures or other artistic representations (whether representations of animals or not).

The terms 'homonymous' and 'synonymous', as defined by Aristotle in this chapter, apply not to words but to things. Roughly, two things are homonymous if the same name applies to both but not in the same sense, synonymous if the same name applies to both in the same sense. Thus two things may be both homonymous and synonymous—if there is one name that applies to both but not in the same sense and another name that applies to both in the same sense. From Aristotle's distinction between 'homonymous' and 'synonymous' one could evidently derive a distinction between equivocal and unequivocal *names*; but it is important to recognize from the start that the *Categories* is not primarily or explicitly about names, but about the things that names signify. (It will be necessary in the translation and notes to use the word 'things' as a blanket-term for items in any category. It often represents the neuter plural of a Greek article, pronoun, &c.) Aristotle relies greatly on linguistic facts and tests, but his aim is to discover truths about non-linguistic items. It is incumbent on the translator not to conceal this, and, in particular, not to give a misleadingly linguistic appearance to Aristotle's statements by gratuitously supplying inverted commas in all the places where *we* might feel that it is linguistic expressions that are under discussion.

The contrast between synonyms and homonyms, between same definition and different definition, is obviously very crude. Elsewhere Aristotle recognizes that the different meanings of a word may be closely related. Thus at the beginning of *Metaphysics* Γ 2 he points out that though the force of 'healthy' varies it always has a reference to health: a healthy person is one who enjoys health, a healthy diet one which promotes health, a healthy complexion one which indicates health. Similarly, he says, with 'being': it is used in different ways when used of things in different categories, but there is a primary sense (the sense in which *substances* have being) to which all the others are related. Though the *Categories* gives emphatic priority to the

category of substance it does not develop any such theory about the systematic ambiguity of 'being' or 'exists'. Chapter 1 makes it seem unlikely that Aristotle had yet seen the importance of distinguishing between words that are straightforwardly ambiguous and words whose various senses form a family or have a common nucleus. (See Aristotle's suggestions about 'good' at *Nicomachean Ethics* 1096$^{b}$26–28.)

1$^{a}$12. 'Paronymous' is obviously not a term co-ordinate with 'homonymous' and 'synonymous', though like them it is applied by Aristotle to things, not names. A thing is paronymous if its name is in a certain way derivative. The derivativeness in question is not etymological. Aristotle is not claiming that the word 'brave' was invented after the word 'bravery'. He is claiming rather that 'brave' *means* 'having bravery'; the brave is so called because of ('from') the bravery he has. For an *X* to be paronymous requires both that an *X* is called *X* because of something (feature, property, &c.) which it has (or which somehow belongs to it), and that '*X*' is identical with the name of that something except in ending. To say that an *X* gets its name from something (or is called *X* from something) does not necessarily imply that there is a name for the something (10$^{a}$32–$^{b}$2), or that, if there is, '*X*' has any similarity to that name (10$^{b}$5–9). But only if these conditions are fulfilled does an *X* get its name from something *paronymously*.

Paronymy is commonly involved when items in categories other than substance are ascribed to substances. If we say that generosity is a virtue or that giving one's time is a (kind of) generosity, we use the name 'generosity'; but if we wish to ascribe generosity to Callias we do not say that he is generosity, but that he is generous—using a word identical except in ending with the name of the quality we are ascribing. Sometimes, indeed, the name of an item in a category is itself used to indicate the inherence of that item in a substance. In 'white is a colour' 'white' names a quality; in 'Callias is white' 'white' indicates the inherence of the quality in Callias. Here we get homonymy or something like it, since the definition of 'white' in the former sentence cannot be substituted for 'white' in the latter: Callias is not a colour of a certain kind (2$^{a}$29–34, 3$^{a}$15–17). There are also the possibilities mentioned above: an adjective indicating the inherence of something in a substance may have no similarity (or not the right kind of similarity) to the name of the something, or there may be no name for the something. So the ascription of qualities, &c., to substances does not always involve paronymy; but it very often does.

The whole idea of an *X*'s being called *X from something* (whether



paronymously or not) is of importance in the *Categories*. The categories classify things, not words. The category of quality does not include the words 'generosity' and 'generous'; nor does it include two things corresponding to the two words. It includes generosity. 'Generosity' and 'generous' introduce the very same thing, generosity, though in different ways, 'generosity' simply naming it and 'generous' serving to predicate it. Aristotle will frequently be found using or discussing distinctly predicative expressions like 'generous', because though they are not themselves names of items in categories they serve to introduce such items (e.g. the item whose name is 'generosity'). The person called generous is so called *from* generosity.

## CHAPTER 2

1$^{a}$16. What does Aristotle mean here by 'combination' (literally, 'inter-weaving')? The word is used by Plato in the *Sophist* 262, where he makes the point that a sentence is not just a list of names or a list of verbs, but results from the combination of a name with a verb; this line of thought is taken up in the *De Interpretatione* (16$^{a}$9–18, 17$^{a}$17–20). In the present passage Aristotle's examples of expressions involving combination are both indicative sentences, and his examples of expressions without combination are all single words. Yet he ought not to intend only indicative sentences (or only sentences) to count as expressions involving combination. For in Chapter 4 he says that every expression without combination signifies an item in some one category; this implies that an expression like 'white man' which introduces two items from two categories is an expression involving combination. Nor should he mean that all and only single words are expressions lacking combination. For he treats 'in the Lyceum' and 'in the marketplace' as lacking combination (2$^{a}$1), while, on the other hand, a single word which meant the same as 'white man' ought to count, in view of Chapter 4, as an expression involving combination. There seem to be two possible solutions. (*a*) The necessary and sufficient condition for an expression's being 'without combination' is that it should signify just one item in some category. The statement at the beginning of Chapter 4 is then analytic, but the examples in Chapter 2 are misleadingly selective, since on this criterion a single word could be an expression involving combination and a group of words could be an expression without combination. (*b*) The distinction in Chapter 2 is, as it looks, a purely linguistic one between single words and groups of words (or perhaps sentences). In Chapter 4 Aristotle neglects the possibility of single words with compound meaning and is indifferent

to the linguistic complexity of expressions like 'in the Lyceum'. Certainly he does neglect single words with compound meaning in the rest of the *Categories*, though he has something to say about them in *De Interpretatione* 5, 8, and 11..

1ª20. The fourfold classification of 'things there are' relies on two phrases, 'being in something as subject' and 'being said of something as subject', which hardly occur as technical terms except in the *Categories*. But the ideas they express play a leading role in nearly all Aristotle's writings. The first phrase serves to distinguish qualities, quantities, and items in other dependent categories from substances, which exist independently and in their own right; the second phrase distinguishes species and genera from individuals. Thus Aristotle's four classes are: (*a*) species and genera in the category of substance; (*b*) individuals in categories other than substance; (*c*) species and genera in categories other than substance; (*d*) individuals in the category of substance.

Aristotle's explanation of 'in a subject' at 1ª24–25 is slight indeed. One point deserves emphasis. Aristotle does not define 'in *X*' as meaning 'incapable of existing separately from *X*', but as meaning 'in *X*, not as a part of *X*, and incapable of existing separately from what it is in'. Clearly the 'in' which occurs twice in this definition cannot be the technical 'in' of the definiendum. It must be a non-technical 'in' which one who is not yet familiar with the technical sense can be expected to understand. Presumably Aristotle has in mind the occurrence in ordinary Greek of locutions like 'heat in the water', 'courage in Socrates'. Not all non-substances are naturally described in ordinary language as *in* substances, but we can perhaps help Aristotle out by exploiting further ordinary locutions: *A* is 'in' *B* (in the technical sense) if and only if (*a*) one could naturally say in ordinary language either that *A* is in *B* or that *A* is of *B* or that *A* belongs to *B* or that *B* has *A* (or that . . .), and (*b*) *A* is not a part of *B*, and (*c*) *A* is inseparable from *B*.

The inseparability requirement has the consequence that only *individuals* in non-substance categories can be 'in' individual substances. Aristotle could not say that generosity is in Callias as subject, since there could be generosity without any Callias. Only this individual generosity—Callias's generosity—is *in* Callias. Equally, white is not in chalk as subject, since there could be white even if there were no chalk. White is in body, because every individual white is the white of some individual body. For a property to be in a kind of substance it is not



enough that some or every substance of that kind should have that property, nor necessary that every substance of that kind should have it; what is requisite is that every instance of that property should belong to some individual substance of that kind. Thus the inherence of a property in a kind of substance is to be analysed in terms of the inherence of individual instances of the property in individual substances of that kind.

Aristotle does not offer an explanation of 'said of something as subject', but it is clear that he has in mind the distinction between individuals in any category and their species and genera. (Aristotle is willing to speak of species and genera in any category, though, like us, he most often uses the terms in speaking of substances.) He assumes that each thing there is has a unique place in a fixed family-tree. What is 'said of' an individual, *X*, is what could be mentioned in answer to the question 'What is *X*?', that is, the things in direct line above *X* in the family-tree, the species (e.g. man or generosity), the genus (animal or virtue), and so on. Aristotle does not explicitly argue for the view that there are natural kinds or that a certain classificatory scheme is the one and only right one.

It is often held that 'said of' and 'in' introduce notions of radically different types, the former being linguistic or grammatical, the latter metaphysical or ontological; and that, correspondingly, the word translated 'subject' (literally, 'what underlies') means 'grammatical subject' in the phrase 'said of a subject' and 'substrate' in 'in a subject'. In fact, however, it is perfectly clear that Aristotle's fourfold classification is a classification of things and not names, and that what is 'said of' something as subject is itself a thing (a species or genus) and not a name. Sometimes, indeed, Aristotle will speak of 'saying' or 'predicating' a *name* of a subject; but it is not linguistic items but the things they signify which are 'said of a subject' in the sense in which this expression is used in Chapter 2. Thus at 2ª19 ff. Aristotle sharply distinguishes things said of subjects from the names of those things: if *A* is said of *B* it follows that the name of *A*, '*A*', can be predicated of *B*, though from the fact that '*A*' is predicable of something it does not follow that *A* is said of that thing. At 2ª31–34 Aristotle is careless. He says that white is in a subject and is predicated of the subject; he should have said that white is in a subject and its name is predicated of the subject. But this is a mere slip; the preceding lines maintain a quite clear distinction between the things that are said of or in subjects and the names of those things. Being said of a subject is no more a linguistic property than is being in a subject—though Aristotle's

adoption of the phrase 'said of' to express the relation of genus to species and of species to individual may have been due to the fact that if *A* is the genus or species of *B* it follows that 'A' can be predicated of *B*.

As regards 'subject', it is true that if virtue is said of generosity as subject it follows that the sentence 'generosity is (a) virtue'—in which the name 'generosity' is the grammatical subject—expresses a truth. But 'virtue is said of generosity as subject' is not about, and does not mention, the names 'virtue' and 'generosity'. It would be absurd to call generosity a *grammatical* subject: it is not generosity but 'generosity' that can be a grammatical subject. Again, if *A* is in *B* as subject then *B* is a substance. But this does not require or entitle us to take 'subject' in the phrase 'in a subject' as *meaning* 'substance' or 'substrate'. It is the expressions 'said of' and 'in' (in their admittedly technical senses) which bear the weight of the distinctions Aristotle is drawing; 'subject' means neither 'grammatical subject' nor 'substance', but is a mere label for whatever has anything 'said of' it or 'in' it. Thus at $2^{b}15$ Aristotle explains his statement that primary substances are subjects for all the other things by adding that 'all the other things are predicated of them or are in them'.

The distinctions drawn in this chapter are made use of mainly in Chapter 5 (on substance). In particular, it is only in his discussion of substance that Aristotle exploits the distinction between individuals and species or genera. He seems to refer to individuals in non-substance categories at $4^{a}10$ ff., but they are not mentioned in his chapters on these categories. Why does Aristotle not speak of primary and secondary qualities, &c., as he does of primary and secondary substances?

### CHAPTER 3

$1^{b}10$. Aristotle affirms here the transitivity of the 'said of' relation. He does not distinguish between the relation of an individual to its species and that of a species to its genus. It does not occur to him that 'man' functions differently in 'Socrates is (a) man' and '(a) man is (an) animal' (there is no indefinite article in Greek).

$1^{b}15$. In the *Topics* ($107^{b}19$ ff.) Aristotle gives this principle about differentiae as a way of discovering ambiguity. If sharpness is a differentia both of musical notes and of solid bodies, 'sharp' must be ambiguous, since notes and bodies constitute different genera neither of which is subordinate to the other. At $144^{b}12$ ff. he argues for the principle, saying that if the same differentia could occur in different



genera the same species could be in different genera, since every differentia 'brings in' its proper genus. He goes on to water down the principle, allowing that the same differentia may be found in two genera neither of which is subordinate to the other, provided that both are in a common higher genus. In later works Aristotle preserves it as an ideal of classification and definition that the last differentia should entail all preceding differentiae and genera, although he recognizes that in practice we may fail to find such definitions and classifications (*Metaphysics* Z 12). In the *Metaphysics* Aristotle is motivated by a desire to solve the problem of the 'unity of definition' (*De Interpretatione* $17^{a}13$), but no such interest is apparent in the *Topics* and *Categories*. Here he is probably influenced by the obvious cases of ambiguity like 'sharp', and also by the evident economy of a system of classification in which mention of a thing's last differentia makes superfluous any mention of its genus. Certainly the *Categories* gives no argument for the principle here enunciated. The principle may help to explain what Aristotle says about differentiae at $3^{a}21$–$28$, $^{b}1$–$9$.

The last sentence probably requires emendation. As it stands it is a howler, unless we take 'differentiae of the predicated genus' to refer to differentiae that divide it into sub-genera (*differentiae divisivae*) and 'differentiae of the subject genus' to refer to differentiae that serve to define it (*differentiae constitutivae*). But there is nothing in the context to justify such an interpretation. Only *differentiae divisivae* are in question. A correct point, following naturally from what goes before, is obtained if the words 'predicated' and 'subject' are transposed. That Aristotle is willing to describe the differentiae of a genus *X* as differentiae of the genus of *X* is clear; for he mentions two-footed as well as footed as a differentia of animal at $1^{b}19$, though the genus of which two-footed is an immediate differentia is not animal but a sub-genus of the genus animal.

### CHAPTER 4

First, some remarks about the translation. 'Substance': the Greek word is the noun from the verb 'to be', and 'being' or 'entity' would be a literal equivalent. But in connexion with categories 'substance' is the conventional rendering and is used in the present translation everywhere (except in Chapter 1: 'definition of *being*'). 'Quantity': the Greek is a word that serves both as an interrogative and as an indefinite adjective (Latin *quantum*). If Aristotle made use also of an abstract noun it would be desirable to reserve 'quantity' for that; since he does not do so in the *Categories* (and only once anywhere else)

it is convenient to allow 'quantity' to render the Greek interrogative-adjective. 'Qualification': Aristotle does use an abstract noun for 'quality' and carefully distinguishes in Chapter 8 (e.g. $10^{a}27$) between qualities and things qualified (Latin *qualia*). So in this translation 'quality' renders Aristotle's abstract noun, while his corresponding interrogative-adjective is rendered by 'qualified' or 'qualification'. 'A relative': Aristotle has no noun meaning 'relation'. 'A relative' translates a phrase consisting of a preposition followed by a word which can function as the interrogative 'what?' or the indefinite 'something'. In some contexts the preposition will be rendered by 'in relation to' or 'related to'. 'Where', 'when': the Greek words serve either as interrogatives or as indefinite adverbs ('somewhere', 'at some time'). 'Place' and 'time' are best kept to translate the appropriate Greek nouns, as at $4^{b}24$. 'Being-in-a-position', 'having', 'doing', 'being-affected': each translates an infinitive (which can be used in Greek as a verbal noun). The examples of the first two suggest that Aristotle construes them narrowly (posture and apparel), but the labels used are quite general. 'Being-affected' is preferred to alternative renderings because of the need to use 'affected' and 'affection' later (e.g. $9^{a}28$ ff.) as translations of the same verb and of the corresponding noun.

The labels Aristotle uses for his ten categories are, then, grammatically heterogeneous. The examples he proceeds to give are also heterogeneous. Man is a substance and cutting is a (kind of) doing; but grammatical is not a quality and has-shoes-on is not a kind of having. 'Grammatical' and 'has-shoes-on' are predicative expressions which serve to introduce but do not name items in the categories of quality and having.

How did Aristotle arrive at his list of categories? Though the items in categories are not expressions but 'things', the identification and classification of these things could, of course, be achieved only by attention to what we say. One way of classifying things is to distinguish different questions which may be asked about something and to notice that only a limited range of answers can be appropriately given to any particular question. An answer to 'where?' could not serve as an answer to 'when?'. Greek has, as we have not, single-word interrogatives meaning 'of what quality?' and 'of what quantity?' (the abstract nouns 'quality' and 'quantity' were, indeed, invented by philosophers as abstractions from the familiar old interrogatives); and these, too, would normally collect answers from different ranges. Now Aristotle does not have a category corresponding to every one-word Greek



interrogative, nor do all of his categories correspond to such interrogatives. Nevertheless, it seems certain that one way in which he reached categorial classification was by observing that different types of answer are appropriate to different questions. This explains some of his labels for categories and the predicative form of some of his examples. The actual examples strongly suggest that he thinks about answers to questions about a *man*. Certainly he will have thought of the questions as being asked of a *substance*. This is why he often (though not in the *Categories*) uses the label 'what is it' as an alternative to the noun 'substance'. For what this question, when asked of a substance, gets for answer is itself the name of a substance (cp. *Categories* $2^{b}31$). One must not, of course, suppose that in so far as Aristotle is concerned to distinguish groups of possible answers to different questions he is after all engaged in a study of expressions and not things. That 'generous' but not 'runs' will answer the question 'of-what-quality?' is of interest to him as showing that generosity is a different kind of thing from running.

Alternatively, one may address oneself not to the various answers appropriate to various questions about a substance, but to the various answers to one particular question which can be asked about any thing whatsoever—the question 'what is it?'. We may ask 'what is Callias?', 'what is generosity?', 'what is cutting?'; that is, we may ask in what species, genus, or higher genus an individual, species, or genus is. Repeating the same question with reference to the species, genus, or higher genus mentioned in answer to the first question, and continuing thus, we shall reach some extremely high genera. Aristotle thinks that substance, quality, &c., are supreme and irreducibly different genera under one of which falls each thing that there is. This approach may be said to classify subject-expressions (capable of filling the gap in 'what is . . .?') whereas the previous one classified predicate expressions (capable of filling the gap in 'Callias is . . .'), though, as before, the point for Aristotle is the classification of the things signified by these expressions.

The only other place where Aristotle lists ten categories is in another early work, the *Topics* (I 9). Here he starts by using 'what is it' as a label for the category of substance. This implies the first approach, a classification derived from grouping the answers appropriate to different questions about some individual substance. But later in the chapter the other approach is clearly indicated. It is plain, Aristotle says, that 'someone who signifies what a thing is sometimes signifies substance, sometimes quantity, sometimes qualification, sometimes

one of the other predicates. For when a man is under discussion and one says that what is being discussed is a man or is an animal, one is saying what it is and signifying substance; whereas when the colour white is under discussion and one says that what is being discussed is white or is a colour, one is saying what it is and signifying qualification; similarly, if a foot length is being discussed and one says that what is being discussed is a foot length, one will be saying what it is and signifying quantity.' In *this* passage, where the question 'what is it?' is thought of as addressed to items in *any* category, Aristotle can no longer use 'what is it' as a label for the first category but employs the noun for 'substance'. The whole chapter of the *Topics* deserves study.

It is not surprising that these two ways of grouping things should produce the same results: a thing aptly introduced in answer to the question 'of-what-quality?' will naturally be found, when classified in a generic tree, to fall under the genus of quality. The two approaches involve equivalent assumptions. The assumption that a given question determines a range of answers that does not overlap with any range determined by a different question corresponds to the assumption that no item when defined *per genus et differentiam* will be found to fall under more than one highest genus. The assumption that a certain list of questions contains all the radically different questions that may be asked corresponds to the assumption that a certain list of supreme genera contains all the supreme genera. It should be noticed, however, that only the second method gets *individuals* into categories. For one may ask 'what is it?' of an individual in any category; but items introduced by answers to different questions about Callias are not themselves individuals, and a classification of such items will have no place for Callias himself or for Callias's generosity. It has, indeed, been suggested that individuals have no right to a place in Aristotle's categories because the Greek word transliterated 'category' actually means 'predication' or 'predicate' (it is in fact so rendered in this translation, e.g. $10^b21$). However, it is substance, quality, quantity themselves which are the 'categories', that is, the ultimate predicates; items belonging to some category need not be items which can themselves be predicated, they are items of which that category can be predicated. Thus the meaning of 'category' provides no reason why Callias should not be given a place in a category, nor why non-substance individuals should be left out.

Some general points: (1) Aristotle does not give argument to justify his selection of key questions or to show that all and only the



genera in his list are irreducibly different supreme genera. When speaking of categories in other works he commonly mentions only three or four or five (which nearly always include substance, quantity, and quality), but often adds 'and the rest'. In one place he does seek to *show* that 'being' cannot be a genus, that is, in effect, that there must be irreducibly different kinds of being (*Metaphysics* $998^b22$). (2) Aristotle does not seem to doubt our ability to say what answers would be possible to given questions or to determine the correct unique definitions *per genus et differentiam* of any item we consider. When he looks for features peculiar to a given category ($4^a10$, $6^a26$, $11^a15$) he does not do this to suggest criteria for categorial classification; his search presupposes that we already know what items fall into the category in question. He assumes also that we can tell which words or expressions signify *single* items rather than compounds of items from different categories. He does not explain the special role of words like 'species', 'predicate', &c., nor warn us against treating them, like 'animal' or 'generosity', as signifying items in categories. (3) Aristotle does not adopt or try to establish any systematic ordering of categories. Substance is, of course, prior to the rest; and he argues in the *Metaphysics* ($1088^a22$) that what is relative is farthest removed from substance. (4) Aristotle does not in the *Categories* indicate the value of the theory of categories either for dealing with the puzzles of earlier thinkers or for investigating new problems. Nor does he, as elsewhere, develop the idea that 'is', 'being', &c. have different (though connected) senses corresponding to the different categories (*Metaphysics* $1017^a22$–30, $1028^a10$–20, $1030^a17$–27, *Prior Analytics* $49^a7$).

## CHAPTER 5

$2^a11$. The terms 'primary substance' and 'secondary substance' are not used in other works of Aristotle to mark the distinction between individual substances and their species and genera, though the distinction itself is, of course, maintained. The discussion of substance in *Metaphysics Z* and *H* goes a good deal deeper than does this chapter of the *Categories*. Aristotle there exploits the concepts of matter and form, potentiality and actuality, and wrestles with a whole range of problems left untouched in the *Categories*.

Aristotle characterises primary substance by the use of terms introduced in Chapter 2. But he does not, as might have been expected, go on to say that secondary substances are things said of a subject but not in any subject. Instead he describes them as the species and genera of primary substances and only later makes the point that they are

said of primary substances but not in any subject. The reason for this may be that he is going to say (surprisingly) that the differentiae of substance genera, though not themselves substances, are nevertheless said of the individuals and species in the genera, and are not in them.

'Called a substance most strictly, primarily, and most of all': does Aristotle mean to suggest that 'substance' is used in two different *senses*? It would be difficult for him to allow that without upsetting his whole scheme of categorial classification. Aristotle is no doubt aware that the distinction between primary and secondary substances is not like that between two categories or that between two genera in a category; 'Callias is a primary substance' is unlike both 'Callias is a man' and 'Callias is a substance'. But he fails to say clearly what type of distinction it is.

$2^a19$. 'What has been said' presumably refers to $1^b10$–15, which is taken to explain why, if *A* is said of *B*, not only the name of *A* but also its definition will be predicable of *B*. The first part of the paragraph is important as showing very clearly that the relation 'said of . . . as subject' holds between things and not words. The fact that *A* is said of *B* is not the fact that '*A*' is predicable of *B*. The fact that *A* is said of *B* is not even the fact that both '*A*' and the definition of *A* are predicable of *B*. This is a fact about language that follows from that fact about the relation between two things.

The second part of the paragraph is also of importance. It shows that Aristotle recognizes that, for example, 'generosity' and 'generous' do not serve to introduce two different things (we should say 'concepts'), but introduce the same thing in two different ways. In saying that usually the name of what is in a subject cannot be predicated of the subject he obviously means more than that, for example, one cannot say 'Callias is generosity'. He means that there is something else which one does say—'Callias is generous'—by way of ascribing generosity to Callias. His point would be senseless if 'generous' itself were just another name of the quality generosity or if it were the name of a different thing altogether.

$2^a34$. Someone might counter the claim in the first sentence by pointing out that, for example, animal is said of man and colour is in body, and man and body are *secondary* substances. Aristotle therefore examines just such cases. It is somewhat suprising that he says: 'were it predicated of none of the individual men it would not be predicated of man at all.' For in view of the meaning of 'said of' he could have made the stronger statement: 'were it not predicated of *all* of the



individual men. . . '. However, what he does say is sufficient for the final conclusion he is driving at, that nothing else could exist if primary substances did not. As for colour, Aristotle could have argued to his final conclusion simply by using the definition of 'in' together with the fact, just established, that the existence of secondary substances presupposes the existence of primary substances: if colour is in body it cannot exist if body does not, and body cannot exist if no individual bodies exist. What is Aristotle's own argument? It was suggested earlier that to say that colour is in body is to say that every instance of colour is in an individual body. If so, Aristotle's present formulation is compressed and careless. For he does not mention individual instances of colour; he speaks as if, because colour is in body, colour is in an individual body. Strictly, however, it is not colour, but this individual instance of colour, that is in this individual body; for colour could exist apart from this body (though this instance of colour could not). Aristotle's use of a relaxed sense of 'in' may be connected with his almost complete neglect, after Chapter 2, of individuals in non-substance categories.

In drawing his final conclusion in the last sentence Aristotle relies partly on the definition of 'in' ('. . . cannot exist separately . . .'); partly on the principle that if *A* is said of *B*, *A* could not exist if *B* did not. The closest he comes to arguing for this principle is at $3^b10$–23, where he insists that secondary substances are just *kinds of* primary substance.

Aristotle's conclusion is evidently intended to mark out primary substances as somehow basic (*contra* Plato). But the point is not very well expressed. For it may well be doubted whether (Aristotle thinks that) primary substances could exist if secondary substances and items in other categories did not do so. But if the implication of existence holds both ways, from the rest to primary substances and from primary substances to the rest, the statement in the last sentence of his paragraph fails to give a special status to primary substances.

$2^b7$. The two arguments given for counting the species as 'more a substance' than the genus—for carrying into the class of secondary substances the notion of priority and posteriority already used in the distinction between primary and secondary substances—come to much the same. For the reason why it is more informative ($2^b10$) to say 'Callias is a man' than to say 'Callias is an animal' (though both are proper answers to the 'what is it' question, $2^b31$–37) is just that the former entails the latter but not vice versa: 'the genera are predicated

of the species but the species are not predicated reciprocally of the genera' ($2^b20$). The point of view is different at $15^a4$–7, where it is said that genera are always prior to species since they do not reciprocate as to the implication of existence: 'if there is a fish there is an animal, but if there is an animal there is not necessarily a fish'. For this sense of 'prior' see $14^a29$–35.

$2^b29$. Here the connexion between the 'what is it' question and the establishment of categorial lines is made very clear.

The second argument (from 'Further, it is because . . .') is compressed. Primary substances are subjects for everything else; everything else is either said of or in them ($2^a34$, $2^b15$). Aristotle now claims that secondary substances are similarly related to 'all the rest', that is, to all things other than substances. This must be because all those things are *in* secondary substances. All Aristotle says, to establish this, is that 'this man is grammatical' entails 'a man is grammatical'. He means to imply that any non-substance that is in a primary substance is necessarily in a secondary substance (the species or genus of the primary substance). Since he has already argued that all non-substances are in primary substances he feels entitled to the conclusion that all non-substances are in secondary substances. But it will be seen that a further relaxation in the sense of 'in' has taken place. It is now implied, not only that generosity can be described as in Callias (though generosity could certainly exist in the absence of Callias), but also that generosity can be described as in man simply on the ground that some one man is generous (and not, as it strictly should be, on the ground that all instances of generosity are in individual men).

$3^a7$. Why is it 'obvious at once' that secondary substances are not *in* primary substances? It is not that they can exist separately from primary substances ($2^a34$–$^b6$). Nor does Aristotle appear to rely on the fact that a given secondary substance can exist separately from any given individual, that there could be men even if Callias did not exist, so that the species man can exist separately from Callias and is, therefore, not in him. Aristotle seems rather to be appealing to the obvious impropriety in ordinary speech of saying such a thing as 'man is in Callias'. It was suggested in the note on $1^a24$–25 that Aristotle made it a necessary condition of *A*'s being in *B* that it should be possible to say in ordinary non-technical discourse such a thing as '*A* is in *B*' ('belongs to *B*', &c.). Now Aristotle is pointing out that this condition is not satisfied in the case of man and Callias. If this is his point he could have extended it to other categories; no genus or species in



any category can naturally be described as in (or belonging to or had by) any subordinate genus, species or individual. What distinguishes secondary substances from non-substance genera and species is not that they are not in the individuals, species, and genera subordinate to them but that they are not in any *other* individuals, species, or genera; virtue is not in generosity, but it is in soul, whereas animal is not in man and not in anything else either.

One cannot say 'hero is in Callias' or 'father is in Callias'; but if Callias is a hero and a father the definition of 'hero' and 'father' can also be predicated of him. So it might be suggested that the considerations advanced by Aristotle in this paragraph imply that hero and father are secondary substances. But Aristotle is not claiming that any predicate-word which can be replaced by its definition is the name of a secondary substance (or differentia of substance, see below), but that a predicate-word can be replaced by the definition of the item it introduces if and only if the item is a secondary substance (or differentia of substance). 'Generous' can be replaced by the definition of 'generous'—but not by the definition of the item which 'generous' introduces, the quality generosity. Similarly, 'hero' and 'father' can be replaced by definitions of 'hero' and 'father', but not by definitions of the items they serve to introduce, heroism and fatherhood. Aristotle gives no explicit rules for deciding which common nouns stand for species and genera of substance (natural kinds) and which serve only to ascribe qualities, &c., to substances. He would presumably rely on the 'what is it' question to segregate genuine names of secondary substances from other common nouns; but the question has to be taken in a limited or loaded sense if it is always to collect only the sorts of answer Aristotle would wish, and an understanding and acceptance of the idea of natural kinds is therefore presupposed by the use of the question to distinguish the names of such kinds from other common nouns which serve merely to ascribe qualities, &c. Surely it would often be appropriate to say 'a cobbler' in answer to the question 'What is Callias?'.

$3^a21$. The statement that something that is not substance is nevertheless said of substance is a surprising one, which can hardly be reconciled with the scheme of ideas so far developed. If the differentia of a genus is not a substance (secondary substances being just the species and genera of substance), it ought to belong to some other category and hence be in substance. That an item in one category should be said of an item in another violates the principle that if *A*

is said of *B* and *B* of *C* then *A* is said of *C*. Aristotle, indeed, positively claims that the definition as well as the name of a differentia is predicable of the substance falling under it, but this too seems very strange. In a definition *per genus et differentiam* the differentia is commonly expressed by an adjective (or other non-substantive), and this should surely be taken to introduce an item named by the corresponding substantive (as 'generous' introduces but is not the name of generosity). If we say that man is a rational animal 'rational' brings in rationality, but neither the name nor the definition of rationality can be predicated of man. Thus the differentiating property satisfies a test for being *in* substance (cp. $2^a19$–$34$).

Aristotle is no doubt influenced by the following facts. (1) Species and genera of individual substances are themselves called substances because 'if one is to say of the individual man *what* he is, it will be in place to give the species or the genus' ($2^b32$). If we now consider the question 'what is (a) man?' we shall be strongly inclined to mention not only the genus animal but also the appropriate differentia. The differentia seems to be *part of* the 'what is it' of a secondary substance, and this provides a strong motive for assimilating it to substance even while distinguishing it from species and genera. (2) The principle enunciated at $1^b16$ implies that mention of a differentia renders superfluous (to one who knows the true classification of things) any mention of the genus. To ascribe the differentia 'two-footed' to man is as good as to say that he is a two-footed land animal. Thus the differentia is, in a way, the *whole* of the 'what is it' of a secondary substance. (3) Aristotle uses as examples of differentia-words words which function naturally in Greek as nouns (though they are strictly neuter adjectives). At $14^b33$–$15^a7$ he uses the same words when speaking explicitly of *species* (and so they are translated there by 'bird', 'beast' and 'fish'). Moreover, there are in Aristotle's vocabulary no abstract nouns corresponding to these neuter adjectives (as 'footedness', 'two-footedness'). Such facts are far from establishing that the definition as well as the name of a differentia is predicated of substances. For not all differentiae are expressed by nouns or words used as nouns, and abstract nouns corresponding to differentia-words are not always lacking. In any case, there are plenty of nouns (like 'hero') which Aristotle would insist on treating as mere derivatives from the names of the things they introduce ('heroism'); and the fact that there is no name for, say, a quality does not exclude the possibility that some predicative expression serves to ascribe that quality (though not, of course, paronymously: $10^a32$–$^b5$). Thus, that 'footed' is (used as) a



noun and no noun 'footedness' exists is not a justification for refusing to treat 'footed' in the same kind of way as 'hero' or 'generous', as introducing a characteristic neither the name nor the definition of which is predicable of that which is footed. Nevertheless, the above features of the examples he hit upon may have made it somewhat easier for him to say what he does about differentiae without feeling the need for full explanation. For deeper discussion of the relation of differentia to genus, and of the connected problem of the unity of definition (referred to at *De Interpretatione* $17^a13$), see especially *Metaphysics* Z 12.

$3^a33$. 'All things called from them are so called synonymously': Aristotle is not denying that there are words which stand ambiguously for either of two kinds of substance (like 'animal' in Chapter 1). Things to which such a word applied in one sense would not be 'called from' *the same substance* as things to which it applied in the other sense; and Aristotle is claiming only that all things called from any given substance are so called synonymously, not that all things called by a given substance-word are necessarily so called synonymously.

Aristotle is drawing attention again to the following point (it will be convenient to assume that there is no sheer ambiguity in the words used). There are two ways in which something can be called from the quality virtue: generosity is a virtue, Callias is virtuous; neither the name nor the definition of virtue is predicable of Callias. There are two ways in which something can be called from the quality white: Della Robbia white is (a) white, this paper is white; the name but not the definition of white is predicable of this paper. There is only one way in which something can be called from man: Callias is a man, Socrates is a man, and so on; both the name and the definition of man are predicable of Callias and Socrates and so on.

It is not quite clear that Della Robbia white and this paper are homonymous with respect to the word 'white', in the meaning given to 'homonymous' in Chapter 1. For there the case was that the word (e.g. 'animal') stood in its two uses for two different things with two different definitions. Now, however, we have 'white' in one use standing for a thing (a quality) which has a certain definition, but in the other use not standing for a different thing with a different definition but introducing differently the very same thing. However, an easy revision of the account in Chapter 1 would enable one to say that 'synonymously' in the present passage contrasts with both 'homonymously' and 'paronymously': most non-substances (like generosity)

generate paronymy, a few (like the quality white) generate homonymy; no substance generates either.

'From a primary substance there is no predicate': there is no subject of which Callias is said or in which Callias is. In the *Analytics* Aristotle speaks of sentences in which the name 'Callias' is in the predicate place, and says that this is only accidental predication ($43^a34$, cp. $83^a1$–$23$). He does not make any thorough investigation of the different types of sentence in which a proper name may occur in the predicate place. Nor does he discuss such uses as 'he is a Socrates', 'his method of argument is Socratic'. He would no doubt allow that these are cases of genuine predication but deny that the predicates are 'from a primary substance': the connexion between the characteristics ascribed by '. . . is a Socrates' and '. . . is Socratic' and the individual Socrates is purely historical and contingent; we should not have used '. . . is a Socrates' as we do if there had been no Socrates or if Socrates had had a different character, but we could perfectly well have used a different locution to ascribe the very same characteristics. A similar answer would be available if someone claimed that there are after all two ways in which something may be called from a secondary substance since while Tabitha is *a cat* Mrs. So-and-so is *catty*. It is because of real or assumed characteristics of cats that the word 'cattiness' names the characteristics it does; but the characteristics themselves could have existed and been talked about even if there had never been any cats.

$3^b10$. Aristotle has contrasted individual substances with their species and genera. He has labelled the latter 'secondary' and has argued that their existence presupposes that of primary substances. Nevertheless, much that he has said provides a strong temptation to think of species and genera of substance as somehow existing in their own right like Platonic Forms. In the present passage Aristotle tries to remedy this. It is careless of him to speak as if it were substances (and not names of substances) that signify. More important, it is unfortunate that he draws the contrast between a primary substance and a secondary substance by saying that the latter signifies a certain qualification. For although he immediately insists that 'it does not signify simply a certain qualification, as white does', yet the impression is conveyed that secondary substances really belong in the category of quality. This, of course, Aristotle does not mean. 'Quality of substance' means something like 'kind' or 'character of substance'; it derives from a use of the question 'of what quality?' different from the use



which serves to classify items as belonging to the category of quality. 'Of what quality is Callias?' (or 'what kind of person is Callias?') gets answers from the category of quality. But 'what quality of animal is Callias?' (or 'what kind of animal is Callias?') asks not for a quality as opposed to substance, quantity, &c., but for the quality-of-animal, the kind-of-animal. It is a result of the limitations of Aristotle's vocabulary that he uses the same word as a category-label and to convey the idea of a kind, sort or character of so-and-so. (Cp. *Metaphysics* $1020^a33$–$^b1$, $1024^b5$–$6$, where 'quality' refers to the differentia —in any category—not to the *category* of quality.) It is also clear that he is at a disadvantage in this passage through not having at his disposal such terms as 'refer', 'describe', 'denote', 'connote'; and that he would have been in a better position if he had from the start examined and distinguished various uses of expressions like '(a) man' instead of embarking at once upon a classification of 'things there are'.

$3^b24$. Aristotle raises the question of contrariety in each of the categories he discusses. On the suggestion that large and small are contraries see $5^b11$–$6^a11$.

$3^b33$. The question of a more and a less is raised in each category. 'We have said that it is': $2^b7$. There is a certain ambiguity in 'more', since to say that a species is more a substance than a genus is to assign it some sort of priority but not to ascribe to it a higher degree of some feature as one does in saying that this is more hot than that.

The point Aristotle makes here about substances applies also, of course, to sorts which he would not recognize as natural kinds: one cobbler or magistrate is not more a cobbler or magistrate than another.

$4^a10$. What Aristotle gives here as distinctive of substance is strictly a characteristic of *primary* substances. For he is not speaking of the possibility of man's being both dark and pale (of there being both dark men and pale men), but of the possibility of one and the same individual man's being at one time dark and at another time pale. (It will then be distinctive of secondary substances that the individuals of which they are said are capable of admitting opposites.) Correspondingly, Aristotle must be meaning to deny, not that species and genera in other categories may in a sense admit contraries (colour may be white or black), but that individual instances of qualities, &c., can admit contraries while retaining their identity. His first example is not convincing. An individual instance of colour will necessarily be an instance of some specific colour and will be individuated accord-

ingly: if *X* changes from black to white we first have *X*'s blackness and then *X*'s whiteness, *two* individuals in the category of quality. (To this there corresponds the fact that one and the same individual substance cannot move from one species to another.) What is required is to show —not that *X*'s blackness cannot retain its identity while becoming white, but—that *X*'s blackness cannot retain its identity while having contrary properties at different times. The sort of suggestion Aristotle ought to rebut is, for example, the suggestion that one and the same individual instance of colour could be at one time glossy and at another matt, this variation not making it count as different instances of *colour*. Aristotle's second example is of the right kind, since the goodness or badness of an action does not enter into the identity-criteria for an individual action in the way in which the shade of colour does enter into the identity-criteria for an individual instance of colour. However, the example is still particularly favourable for him. For 'good' and 'bad' are commonly used to appraise an action *as a whole*, and for this reason one would not speak of an action as having been good at first and then become bad. There are clearly very many cases which it would be less easy for Aristotle to handle (cannot an individual sound sustain change in volume and tone?). The question demands a fuller scrutiny of cases and a more thorough investigation of usage than Aristotle attempts. It would seem that the power to admit contraries is not peculiar to individual substances but is shared by certain other continuants, so that a further criterion is required to explain why these others are not counted as substances.

$4^{a}22$. Aristotle of course treats the truth and falsity of statements and beliefs as their correspondence and lack of correspondence to fact ($4^{b}8$, $14^{b}14$–22, *Metaphysics* $1051^{b}6$–9). Here he first points out that it is not through a change in itself that a statement or belief at one time true is at another time false, whereas an individual substance itself changes; so that it remains distinctive of primary substances that they can admit contraries *by changing*. He next argues ($4^{b}5$) that strictly a thing should be said to admit contraries only if it does itself undergo a change from one to the other; so that, strictly speaking, it is not necessary to qualify what was said at $4^{a}10$–11: only individual substances can admit contraries.

Aristotle might have argued that the alleged counter-examples, individual statements or beliefs which change their truth-value, fail, because my statement now that Callias is sitting and my statement later that Callias is sitting are not the same *individual* statement even



if they are the *same statement* (just as 'a' and 'a' are two individual instances of the same letter). Thus they are not examples of the very same individual admitting contraries. Alternatively, Aristotle could have denied that the statement made by 'Callias is sitting' when uttered at one time *is* the *same statement* as that made by 'Callias is sitting' when uttered at another time. The sameness of a statement or belief is not guaranteed by the sameness of the words in which it is expressed; the time and place of utterance and other contextual features must be taken into account.

## CHAPTER 6

In Chapter 8 Aristotle distinguishes between *qualities* and things *qualified* or *qualifications* of things (between 'generosity' and 'the generous' or '. . . is generous'); his primary concern is with qualities, of which he distinguishes four main types. His treatment of quantity, in Chapter 6, is different in two ways. First, he uses no abstract noun for 'quantity' but employs everywhere the interrogative-adjective; see beginning of note on Chapter 4. Secondly, he does not list or attempt to classify quantitative properties (like the property of being a foot long) or corresponding quantitative predicates (like 'a foot long'). Instead he lists and groups the *owners* of quantitative properties, claiming to list all the (primary) owners of such properties: lines, surfaces, solids, numbers (aggregates), time-periods, places, utterances. Why does he proceed like this, and can his procedure serve as an adequate way of classifying quantitative properties?

As for the first question, some linguistic facts may be relevant. There were not numerous abstract nouns corresponding to the various quantitative predicates, as there were in the case of qualitative predicates. Such general terms as 'length', 'area', and 'time' were ambiguous: a line, for example, could be said to be *of* a certain length, but it could also itself be called a length. Definite predicates like 'a foot long' could not easily be regarded as introducing quantitative properties fitting in to a genus–species hierarchy. (How many species would there be in the genus length, and what would be their differentiae?) Aristotle does not stop to examine carefully the nature of counting and measuring, nor does he survey the different ways in which quantity or quantities may be spoken of; and he does not recognize explicitly the inappropriateness of the genus–differentia–species model to the category of quantity. Such facts as the above may, however, have influenced him towards adopting the approach he does to the problem of classifying quantities.