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FORM AND UNIVERSAL IN ARISTOTLE

by

A.C. LLOYD

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FRANCIS CAIRNS

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PREFACE

This small book owes a large debt to the encouragement and criticism of friends and colleagues. It argues for an interpretation of Aristotle to which I have committed myself in print, though only with brief and sometimes as I now think incorrect arguments, for more than ten years; and it combines an interest in Aristotle with an interest in his ancient commentators which are both of much longer standing. For these reasons I must confine myself to thanking some of those to whom I am most recently or most directly indebted.

W. Charlton, Anthony Kenny and A.R. Lacey generously read and gave me their comments on a draft of the chief arguments for my interpretation. (In Alan Lacey's case the absence of reference to them is a nigardly reflection of what I learnt from his remarks.) I had already profited at the Thessaloniki Aristotle congress from conversations about Aristotle with Joseph Owens, about Boetius with G. Verbeke, and about the availability of Porphyry and Alexander to the Latin West with Sten Ebbesen who subsequently sent me the *Cahiers de l'Institut du moyen-âge grec et latin*. Discussions at a seminar kindly arranged for me at Edinburgh University by George Davie were also of great help; and some of my translations of Alexander have benefited from corrections contributed by members of the joint Manchester-Liverpool seminar for ancient philosophy.

To attribute 'particular forms' to Aristotle has only recently been a familiar notion for most British and American scholars. So the reader might expect to find a discussion of R. Albritton's 1957 article which is often, and rightly, respected as pioneering. This has been precluded by the fact that the views I express would represent too tangled a web of agreement and disagreement with his arguments; and the same holds of some later rejoinders to him.

My thanks are also due to the patient typing of exacting material by Mrs S.M. Russell.

CHAPTER I

AN ALTERNATIVE TO THE CONVENTIONAL PICTURE

Conventional historians of philosophy, or at least English speaking historians, say that Aristotle replaced an ante rem theory of universals by a more plausible in re theory; Plato's Ideas were ante rem universals, Aristotle's forms in re universals. Many Aristotelian scholars, among them of course many of these historians, have accepted that opinion. It has therefore to be met with scholarly arguments. For I believe that it is a mistake, and one which has caused people at crucial points to misunderstand Aristotle, or more often perhaps to find themselves unable to understand him at all. I take this 'in re' theory to imply that there is a 'common nature', as the Schoolmen called it, which is present in, and therefore shared by, more than one particular. This common nature is, save for certain irrelevant cases, independent of anyone's thought or language. The theory is therefore no less a realist theory of universals than is an ante rem theory. The only difference, though not of course a small one, is that an ante rem theory denies that the existence, or subsistence, of universals depends in any way on the existence of particulars. Nor is this position changed when the 'in' of the universal in the particular is qualified so as to make the substantial universal or 'sortal' (to use a contemporary noun resuscitated from Locke's adjective) in some sense identical with the particulars which share it.¹ Several scholars have credited Aristotle with this qualification: but in so far as they have not distinguished his form from his universal they do not escape from the mistake, as I believe it to be and which I wish to combat.

1. 'It being evident that things are ranked into sorts of species . . . the essence of each genus or sort comes to be nothing but that abstract idea, which the general or "sortal" (if I may have leave so to call it from "sort", as I do "general" from *genus*) name stands for' (*Essay concerning human understanding* III.3.15; cf. STRAWSON 1959, 168ff.).

In my view neither the form of pale possessed by an individual man Socrates nor the form of man with which (I agree with these scholars) Socrates is in some sense identical is a universal, for neither is one and the same, that is numerically the same, form as either of those possessed by or identical with any other pale man. What is common to, shared by, pale men must be described, according to Aristotle, not as the properties paleness and humanity, but either as the predicates pale and man or perhaps as the fact that pale and man are truly predicated of all the pale men there are. But these predicates, which are the universals, belong to thought or language. The Aristotelian theory of universals is not therefore in *re* but post rem.

Since at least the nomenclature of these distinctions is less commonplace than it used to be, the reader may be reminded that a post rem theory is not necessarily a nominalist one. For a universal to be post rem is for it to be, as such, not 'real', that is to say not part of the external world. Traditionally there have been two versions of a non-realist theory of universals. Universals have been seen as essentially linguistic entities, the 'general names' of grammatical classification. Alternatively they have been seen as consisting not so much in naming what we call common features of the external world as in thinking of such features as common. 'Nominalism' is an ambiguous label. Sometimes it has been used to cover any non-realist theory and is therefore equivalent to 'post rem'. Sometimes it has been used more narrowly to cover only such extreme versions which identify universals with the general words – say adjectives, common nouns and verbs – of language. In this narrow sense Aristotle is no more a nominalist than Aquinas or indeed Ockham. The traditional label which should be attached to him is that of conceptualism. The common features that we attribute to the external world are not names, in so far as names do not belong to language but to this or that language. They are to be found in what is for Aristotle logically prior to language, namely thoughts, of which 'concepts' is a synonym. Following Aristotle himself mediaeval philosophers called them '*actus mentis*'.

I shall assume for convenience a notion of 'proposition' which may be a little old fashioned. It was Russell's, but I believe it to correspond in the relevant respects to Aristotle's. (Anthony Kenny suggested to me that 'thought' would be a better term because 'proposition' implies an abstract entity, which is not an Aristotelian idea. Certainly that connotation must be ignored.) One can then summarise as follows the initial thesis which is to be attributed to Aristotle. Utterances and sentences belong to this or that language. Propositions do not belong to a language; they are combinations of concepts, and they are what utterances and sentences mean. Things and states of affairs are what make utterances and sentences true. Universals are concepts and therefore belong to propositions. Forms belong to things and states of affairs.

At the same time, but with a qualification, universals are forms. For the content of the thought, the concept, is a form, but one made general by being abstracted in thought. One is reminded at once of Locke's abstract general ideas which exist as such in the mind alone but are abstractions from the ideas or qualities which exist in the external world and which as so existing are particular. It follows that the thesis which will be presented as the alternative to the conventional history can appear equally as the denial that forms are to be identified with universals, and of course the equivalent claim that (as such) forms are particular, or as the thesis that forms can be spoken of as they exist (when they are particular) or as they are thought of (when they are general). Understood in this way it would not be wrong to say that Aristotle held a post rem theory of universals and an *in re* theory of forms.

These distinctions of sentence, proposition and state of affairs do not represent an idealised model: but it is certainly a tidied up model, so far as Aristotle's language goes. So his customary descriptions of universals as what can be predicated of many or what can belong to many (see *Bonitz*, Index 356b) does not resolve our problem about their ontological status. For it is notorious that his diction allows at least three categories of things to be 'said of' or predicated of something: (a) linguistic

entities, i.e. predicate expressions, (b) extra-linguistic entities, i.e. properties, (c) entities which are possibly intermediate, i.e. the 'terms' of his logic.

To simplify the arguments for my general thesis, or the case for attributing the foregoing theory of form and universal to Aristotle, I have divided them into direct and indirect arguments. The distinction is only relative, depending only on how explicitly he can be found referring to particular forms or mental universals. But common sense dictates that the theory should as far as possible be made intelligible in itself and coherent with other doctrines of Aristotle. There is clearly a problem what sense to make of the apparent identification of a substance with its specific or substantial form, and there is a problem what function is left to matter. Again, even those who have been sympathetic towards a conceptualist account of universals have not been prone to analyse the sense in which the universal is an act, or an object, or whatever it is, of thought. These kinds of question have implications and an interest beyond what is narrowly the present subject. So some of them will be constantly under discussion; but others at the cost of interrupting the main thesis will have excursions of their own.

On the other hand some readers may doubt the philosophical tenability of my version of conceptualism more than they doubt its ascription to Aristotle; and they must remain disappointed if they expect that doubt to be properly examined. What they will find appended as an assessment of the validity of that version is intended to suggest, and suggest only tentatively, a way of placing it among traditional solutions to a traditional 'problem of universals'. This placing is itself meant to be a means of clarification rather than a philosophical defence taken up as it were outside an historical framework.

It is often said that the ontological status of universals is a post-Aristotelean problem — bequeathed, it is commonly added, to the disputatious Middle Ages by a famous sentence in Porphyry's *Isagoge* (p.1.10-14 Busse). In fact nearly all Aristotle's Greek commentators took for granted the interpretation of him which I am suggesting and which only much

later came to be ignored or rejected. At several points Aristotle was certainly obscure and on several points he left gaps in his account. The commentators consciously aimed at elucidating obscurities and filling gaps; and on the subject of forms and universals they were to my mind often successful. There are a number of other reasons why I have thought it worth while to add a sketch of their contribution. Among these commentators at least Alexander of Aphrodisias whose work (around 200 A.D.) was the fountainhead is a talented philosopher in his own right. Some of them were influential in the middle ages or the Renaissance; and to present (I hope) an accurate version of texts which are at least in the metaphorical sense rather inaccessible may be useful to specialists in these periods. Moreover such specialists may recognise expressions which became formulas on the subject of universals but whose origins may be less familiar.

But the sketch will restrict itself to noticing some of the obscurities which Alexander and later Imperial philosophers tried to elucidate, some of the gaps they tried to fill and thirdly some of the formulas which they proposed. It may be read also for consolation. A man who cultivates his garden may be frustrated by some soils, some pests. Visiting a distant land, he may be comforted if he finds the natives frustrated by just those soils, just those pests. What is emphatically not my purpose is to use ancient views of Aristotle as in any way evidence for the truth of a particular interpretation of him. Apart from initial presumptions of his reasonableness, that evidence will come from the examination of his own words.

CHAPTER II

THE DIRECT EVIDENCE

1.

There is a passage of Aristotle which was often quoted to support the general claim that everything real is individual or non-universal and the particular claim that this holds for forms. This is *Metaphysics* 1071a20-29 where he says explicitly that the 'causes' or principles of individuals (particulars) are not the universal but individual (particular). These causes or principles are the matter of an individual and also the individual's efficient cause. They can be spoken of universally, or as we should say generalised: but universal causes do not exist — there is no one who is man in general, that is, the product of man as the generalised 'principle', 'only Peleus the principle of Achilles, your father the principle of you, this SP of this S'. It follows (27-28) that your form and your matter are not identical with my form and my matter. (This will be the case even if we translate ἡ σὴ βῆη καὶ τὸ εἶδος as 'your form and matter' meaning the composite.) Spoken of universally of course, as Aristotle himself adds (29), they are identical. What I have translated 'spoken of universally' is τῶ καθόλου λόγῳ: for although what he says is true of the definition the expression does not mean the definition, but less narrowly any occurrence of the relevant term, or an expression identical with it as the subject of a universal proposition. This is why Aristotle can sometimes use the noun 'universals' to mean terms in universal propositions without the commoner, metaphysical use implying any equivocation. Indeed that the two are logically connected comes out clearly when perception and knowledge are distinguished at the beginning of *Posterior Analytics* I 31: a universal is not a determinate individual in a determinate time and place, and therefore not what is perceived, 'for we call universal what is always and everywhere'.

Universals are the particular and existent forms spoken of universally or — as elements of the proposition rather than the sentence — thought of universally. For this is equivalent to their being *thoughts* of the particular forms, just as oak trees 'thought of universally' will be the thought or concept oak or tree. But because, as we shall see, Aristotle's 'generalisation' is narrower than ours by excluding accidents, the concept can be obtained equally from any true description of a particular; and this too was implicit in the word λόγος. The philosophical use of the word 'concept' rests partly on the first translations of *De interpretatione* 1, where 'conceptiones' was the alternative version to 'intellectus' for the mental thoughts that words are said to signify.

In a passage of *Metaphysics* Θ Aristotle uses ἀπλως, i.e. 'simpliciter', to express the same meaning as 'spoken of universally' or 'in general': wood is the matter of a chest, 'wood simpliciter of a chest simpliciter, this wood of this chest'. This is really a grammatical way of distinguishing the particular from the general. A particular form is one to which a demonstrative or equivalent modifier belongs, this or that form, yours or mine, while the form in general, the universal, is unqualified. It will at once be evident that the universal is signified on Aristotle's theory not just by the subjects of universal propositions but by the (grammatical) predicates of all propositions. To say that Socrates is a man is to say that he is some man, and 'some man' is not (in the modern terminology) a referring expression like 'the man'. Or if the proposition is analysed as 'S. is identical with the man he is', 'the man he is' must contain a predicative and non-referring expression; otherwise it would not be possible to say unequivocally of two men that they are both men. In *De interpretatione* 7 ad fin. Aristotle recognises that in 'some man is wise' 'man' signifies the universal. The case is of course more glaring with 'Socrates is wise', which means (to use the theory or terminology that I used for expository purposes) that the wisdom Socrates possesses is wisdom in general but that what makes the sentence true is his possession of his particular wisdom. In the context of logic his regular definition of a

universal expressly represented it as a predicate — ‘that which by its nature is predicated of many things’ (*De interpretatione* 17a39-40, adhered to in *Metaphysics* Z 1035b27-28). But that does not prevent it from functioning also as a subject: in a scientific syllogism the middle term *must* be able to occupy both positions.

Καθόλου is literally καθ’ ὅλου, ‘attributed to the whole’, and in virtue of that ‘common to all members of the whole or class’ (τὰ δὲ καθόλου κοινὰ τὰ γὰρ πλείωσιν ὑπάρχοντα καθόλου λέγουται, *De partibus animalium* 644a27). It is also itself a whole (*Physics* 184a25). For as *Metaphysics* Δ explains one meaning of ‘whole’ is ‘that which contains its contents in such a way that they are one thing’, and one way of doing this is ‘for every one of them to be one thing’. The sense of this ambiguous condition is given by an example. What is contained by the universal animal is man, horse, god and the rest, and each and every one of these is ‘one thing’, namely animal, because (by definition) a universal is what is predicated of what it embraces, or contains (1023b26-32). It follows that a universal is a whole. This is evidently the universal as a class or set. But it can be noticed that in this passage Aristotle treats the expression ‘said in general’ (ὅλωρ λεγόμενον, 1.29) as substitutable for ‘universal’ (καθόλου).

Although he is willing to say that these forms ‘spoken of in general’ are *common* to the particulars they are predicable of, they are not as such, i.e. as universals, *in* these particulars but *in* the mind. This is illustrated by *Metaphysics* Z 15 which sets out to explain why substance identified as the form is definable and the object of science, while substance identified as the composite of form and matter is not. To define something one has to know that the definiendum exists; and in the case of contingent things, which are those that contain matter, there is no guarantee of existence. (Both points had already been made in the *Posterior Analytics*.) But even in the case of a contingent thing the substance that is a form is ‘constant’ and ‘preserved in the soul’ — σωζομένην τῷ λόγῳ ἐν τῇ ψυχῇ τῶν ἀνθρώπων (1040a4-5). We cannot take λόγῳ here to mean just ‘definitions’, for the point of the passage is that contingent things as such, the

composite individuals, do not have definitions. The first four lines of the chapter have used λόγος quite plainly to mean the form that is ‘the substance without the matter’ and that is exemplified there by *house* in contrast with *this house* (1039b25). It is this, I believe, which is said to be ‘in the soul’, and the reason is that it is an abstraction of thought.

No reader of Aristotle will wish to dispute that except for prime movers forms without matter are found in the soul, not in the external world: but some readers have strangely failed to put two and two together by recognising that to abstract a form from its matter is exactly to turn it into a universal. But was not that the familiar lesson of *Posterior Analytics* II 19? Moreover the *De anima*, Book II, attributes the fact that the exercise of knowledge is voluntary, while that of perception is not, to the fact that the agents and objects of knowledge are universals, which ‘are in a way in our own souls’, while those of perception are particulars and external to us (417b19-24). The ‘in a way’ refers only to the fact that their existence is potential until they are actually thought. Until then what they are actually — as I hope we have already seen — is the real, external, particular forms; and this is the meaning of Aristotle’s endorsement, when he returns to the subject in the next Book, of the saying that ‘the soul is a place of forms’ (429a27-29).

How can it make sense to equate oak trees thought of with the thought of oak trees? Burning trees turns them into carbon but thinking of them does not turn them into something mental. The short reply is that it would make sense and would represent Aristotle’s position if for this purpose (and at the cost of English grammar) we spoke of ‘oak trees thought’ instead of ‘thought of’. The logical status of this ‘thought’ corresponds to the grammarians’ internal accusative — the dance that is being danced, the dream that is being dreamt. For it is what the thinking consists of in the same way as the dream is what the dreaming consists of. Oak trees as *thought* in this way is how Aristotle envisages what we mean by ‘any oak tree’ as grammatical subject or ‘an oak tree’ as grammatical predicate, and it is what he introduces in this manner as a ‘universal’ (καθόλου) in

contrast with a 'particular' (*καθ' ἑκαστον*) thing in *De interpretatione* 7. At least in the rationalist tradition of philosophy it is what is called a concept; and it is found in Kant's first *Critique*.

Aristotle does not stress the mental character of the universal but takes it for granted. He is a philosopher of science, which is concerned, as he repeatedly tells us, with species. One word, *eidos*, does for 'form', which may or may not be universal, and for 'species' which is only universal: but this produces no ambiguity because the species is nothing but the universal form, which is nothing but the mental generalisation of the particular form. Or rather there is occasional ambiguity for the reader who is interested in the second order question of the ontological status of some form which is mentioned. But it is rarely that such a question has any bearing on the argument in hand. Aristotle's commentators did want systematic answers to such questions, and they did stress the mental character of the Aristotelian universal.

It will not however be out of place to range rather more widely over his account of thought. Some of this excursus is speculative; and much though not all of it is independent of my general thesis about form and universal. But it will help to justify the account of universals as concepts; and it may incidentally remove what I believe to be misunderstandings of some other but important doctrines of Aristotle's.

Excursus on thought: the concept of 'thinking X'

Aristotle regularly distinguishes two kinds of thoughts, the simple and the complex. The first are, or correspond very closely to, the terms of propositions, and the second to the propositions. For a proposition or judgment is the compounding (synthesis) of units of meaning in such a way that the result has a truth value: for example compounding man and footed as

'man is footed'.¹ This is basic theory common to *De interpretatione* (Chs. 1-4), *Metaphysics* (E4, Θ10) and *De anima* (III 6). (The treatment of negations in E4, though following *De interpretatione* 16a12, would call for a qualification but does not matter here.) Moreover all three works describe these units or elements of meaning as thoughts or concepts in so far as they are what words 'signify' rather than the words themselves (e.g. *De interpretatione* 1, *Metaphysics* E1027b27-34, *De anima* 430a28).

It has been disputed whether the 'simples' of *Metaphysics* Z17 and Θ10 are (a) essences, (b) separate matterless forms or (c) concepts, i.e. terms of a proposition.² I can stand aside from the controversy because I think that the protagonists have ignored the fact that some of the relevant passages are about more than one of the proposed alternatives. My own view is that E1 is about (a), E4 about (c), Z17 about (a) and/or (b), Θ10 about (c), *De anima* III 6 ad fin. about (a) and (b) and (c). Moreover since (a) and (c) are both abstractions from particular forms most of what can be said of the one can be said of the other. (For example, that they present a case of either being thought or not thought rather than of truth or falsity.)

To these elements and to their compounds, propositions, a further and familiar Aristotelian distinction applies. They can exist, that is, in somebody's mind, either dispositionally as a capability (the *hexis* or *habitus*) or as the capability exercised (the *energeia* or *actus*). A young child does not have the concept two footed, an older child does, either because he has acquired it from experience, memory and an innate capacity to

1. 'Units of meaning': μέρος σηματικόν κεχωρισμένον, *De interpretatione* 16a20, b27; cf. *Metaphysics* Γ 1006a29-1007a20 (e.g. ὁρμα σηματικὸν ἐν, 1006b12); Γ 1052a30 (ἀδύνατος in number or species = ὅτι ἡ νόμος μία).

2. See particularly P. Aubenque 'La pensée du simple dans la Métaphysique ...' in AUBENQUE 1971; E. Berti 'The intellection of indivisibles' in LLOYD AND OWEN 1978.

abstract, or because he has been taught it by someone else. It is a universal, a thought, an element of meaning, a potential term in a proposition – all these being different ways of saying the same thing according to Aristotle. It therefore belongs to the faculty of intellect: but just how intellectual or verbalised it is, that is, how far from an ability to discriminate a property by reacting discriminably to it and how near an ability to define it, is a question that he ignores and is probably right to ignore. In one sense it may be only a potential thought since even the older child can be aware of it only occasionally. The same of course holds for the compound thoughts, which are the beliefs, pieces of knowledge possessed but not always exercised by someone, such as the proposition that man is two footed, to be strict we should probably have to say 'the propositions he is capable of understanding', which would bring out the vagueness that corresponds to the vagueness in the notion of possessing a concept. The exercise or actual occurrence, as opposed to the potential existence, of the simple thoughts or concepts, consists in their occurrence in true or false compound thoughts, which he is aware of, that is judgments which he is actually making. For example, in *thinking that* man is two footed one is *using the concepts* of man and two footed. Aristotle identifies acts of thought and their contents, and he regards the use of a concept as being as much an act of thought as the making of the judgment. It is in this way that the concepts or terms of a proposition are as much 'internal accusatives' (like the dream that is dreamt) as the proposition. This is what may be called the Aristotelian concept of 'thinking X' as distinct from thinking about X. As an answer to the question 'what are you thinking?' it is easy to accept 'that man is two footed' and to accept a 'that...' clause as identifying a proposition. Aristotle's idiosyncrasy is to suppose that this involves thinking man and thinking two footed in the same sense of 'thinking' as that in which one thinks that *p*.

All this is what Locke believed that he was repeating in his *New Way of Ideas*. But his own repentant explanation that he

might have used the 'notion' or 'species' in place of 'idea' failed to forestall Berkeley's and generations of his successors' misunderstanding because the historical antecedents of the terms were no longer recognised.¹

What has been said so far does not however explain how men when thought or oak trees when thought can be identified with the thoughts, and so Aristotelian concepts, of man or oak tree. The internal accusative has been applied only to our thinking the concept. It is tempting to say that (i) we think *of* or *about* men by (ii) using the concept of man; that (ii) might be described as thinking the concept of man, but this cannot (iii) involve thinking men in the sense that we have introduced. In fact Aristotle's refusal to exclude (iii) does have to be qualified, but only to the extent that it would distort his theory more if we excluded (iii) from it than if we made room for it.

This may not have been the case when he wrote *De interpretatione*. There, with concepts as 'likenesses' of things in the external world, we have a representative theory of thinking that is consistent with what we were tempted to say. It is the theory which is encapsulated in the mediaeval formula 'voces significant res mediantibus conceptis', is repeated by Hobbes and reappears in Locke's unfortunate statement that 'Words are the sensible signs of his ideas who uses them',² it still lives in the triangular diagrams of 'meaning' in old fashioned books about language. But when the theory of forms, which play no part in the *Organon*, is taken into account the position is changed. The effect is to introduce the factor we labelled (iii) in the analysis of thinking about X's into the factor labelled (ii).

For the concept is a form, namely the form of X's (or of X as a general term) abstracted from the particular matter which any individual X possesses in order to exist. Qua concept it is what we think, not what we think about, e.g. men. For it is the class, Man (the 'species', as such a universal *eidōs* is

1. *Reply to the Bishop of Worcester's answer to his Letter.*

2. Hobbes, *Leviathan* I ch.4; Locke, *Essay* III ii §2, although he also has sounds as 'signs of internal conceptions' (ib. III i §2).

normally translated), and this *is*, exists only as, its members. It may be objected that this account is only possible if one makes a gross confusion between a class in extension and a class concept. But that objection depends on a picture of Aristotle's metaphysics which is conventional enough but which it is my whole thesis to make out false. It suggests that the form of man or of oak is not identical with men or oaks but with what men or oaks have in common, and that the predicate 'man'/'oak' *stands for* this common nature, not them. It is a dualistic picture in which there are forms in rebus and universals in mente, as though these universals had an existence of their own — a mental one — provided that they existed in a non-universal and non-mental way as forms. Or perhaps rather that they had once existed as forms, that is, before they were abstracted. An analogy would be butterflies that were once caterpillars. We should then be enabled to understand why we can think of things which no longer exist or why a predicate, say 'puce', does not cease to be meaningful merely because the only puce things have ceased to exist; and otherwise there would be a confusion, it seems, between sense and reference. For the doctrine of forms in re must not blind us to the fact that the *Posterior Analytics* account (II 19) of concept formation leaves room for this continued meaningfulness. What it does not leave room for, it could be supposed, is a priori acquaintance with universals, and it is this kind of acquaintance which is the ante rem, or Platonic theory.

This picture may well represent conceptualism as it has been understood by some philosophers. But it belongs to a 'Platonism' which is rejected by Aristotle because his difference with Plato is not merely epistemological. There is no question for him of universals having an existence of their own *anywhere*, 'in' things or 'in' minds; for that would mean for him either that they were substances or that they were components of substances. So his theory of thinking cannot be classed as a representative one since the representatives would not have an existence independent of what they represented.

Because the concepts of men and oaks *are* in a way the

forms (and not in the way that the butterflies might be said to be the caterpillars) and the forms *are* men and oaks, the concepts are the men and oaks thought (as internal accusatives) not thought of or about. Certainly human beings and trees are material objects, while thoughts are not. But as I understand Aristotle's theory of forms a form of X-without-its-matter is X-thought, which is X-generalised or the class of X. At the same time all these *are* only X's-thought, modes of awareness of X, or even modes of presentation of X to our awareness.

The identification of these substantial forms with the substances and the problem posed by the non-substantial forms have still (the reader may be assured) to be considered. But the account of concepts which I have just given is, I think, confirmed by his claim that images are necessary to thought. Images are necessary to concepts according to *De anima* 432a8-14;¹ they are necessary to judgment according to *De anima* 427b16, and thirdly to discursive thinking according to 431a14-17. His grounds for saying so shew that these are not three claims but one claim in which the second and third statements follow from the first. He appears to give two grounds. He says that the images in thinking correspond to the immediate objects of perception. They are the bearers for example, of the predicates or thinkable forms, good and bad, in the same way as percepts are the bearers of predicates or sensible forms, pleasant and painful (*De anima* 431a14-17); they are 'like percepts, only without matter' (432a10). He explains also that nothing exists apart from sensible magnitudes, and the objects of thought must be abstractions from these. There is some ambiguity whether the images are not objects of thought, if, as he has said, they are without matter: but he is content merely to deny this and conclude that they are necessary accompaniments of thought. But neither of the two grounds given nor the conjunction of them yields the conclusion. Nothing in them prevents a schoolboy who was brought up among marble pediments in Athens from

1. Where the context and *De memoria* 449b31-450a10 shew that *πρότερα νοήματα* are concepts.

employing the concept of triangle to exercise his geometry in a cabin at sea, without having mental pictures of anything triangular. But this possibility is just what is denied in *De memoria*:

... the same effect occurs in thinking as in drawing a diagram. For in the latter case although we do not make any use of the fact that the size of the triangle is determinate, we none the less draw it with a determinate size. And similarly someone who is thinking, even if he is not thinking of something with a size, places something of a size before his eyes, but thinks of it not as having a size.

(449b30-450a4, transl. Sorabji)

Here the equation of having a concept of something, turning it into an object of thought and abstracting a form or forms, without the matter or 'determinations' is clear. The object of the abstracting is identical, as an occurrent, with the act of abstracting it — it is an 'internal accusative'. But what is now also clear is that Aristotle has been taking for granted that each occurrence of such an act has to be performed not just on an existent bearer of the form but on a bearer which is present to the agent. This is the assumption that lies behind the explicit grounds for the necessity of images. And with a certain qualification it is tantamount to ignoring the distinction between thinking X's where 'X's' are the internal accusative of the thinking, and thinking of/about X's, or what is sometimes called the distinction between content and object of thinking. For one of the points of making the distinction is to emphasise that while thought must in a sense be present to the thinker what it is of/about may be absent. Aristotle was reluctant to follow this picture, I have suggested, because it was 'Platonist' by implying a separate, if only mental, existence of concepts. More immediately, he is constrained by the dubious programme of the *De anima* which rested on the analogy between thought and sense. The qualification to be made is that in this context we are concerned only with general propositions, not singular ones. Thinking means for Aristotle using concepts, which are universals and necessarily represented in sentences by general terms. We are able to think *of* men by thinking man because we

can abstract and have as the content of our thought the form or species man, in other words by thinking of men *as* a class. This 'class' is not synonymous with its extension; for Aristotle is a conceptualist not a nominalist. His argument in the *Prior Analytics* (I 10) that syllogism is not a *petitio* depends on this fact. Outside thought the class exists as its members: but in that context the fact that men are two footed would have to be represented by singular propositions. But since Aristotle does not have a theory of proper names and singular terms we do not know what he would say about thinking of Socrates.

On the other hand it is false to say, as critics have said, that he was unaware of the distinction between sense and reference, or connotation and denotation. (These critics rely on his equivocal use of *σημαίνω*.) Doubtless there are occasions when we should wish that he had attended to it, and doubtless he did not attend to many of its implications. But it is explicit at *Metaphysics* Γ 1006b13-17, where he expresses it as the distinction between *σημαίνω* *ἐν* and *σημαίνω* *καθ' ἑνός*.

The identity of act and object of thinking is well known in Aristotle; and it is easy to understand when we bear in mind that it applies to an X which is thought, rather than thought of. But we must also bear in mind what follows: the 'objects' (if that is not a misleading term) will be universal, whether they are described as propositions or as concepts. I am not aware that Aristotle ever names an individual to illustrate the identity. When it is explained in *De anima* III 4 and *Metaphysics* Λ it is said to occur in theoretical science/knowledge because it holds in the case of things without matter, or essences (430a2-5; cf. *Metaphysics* Λ 1072b20-22).

Implications for God's thinking

One of the problems therefore which this excursus on thought bears on is the problem how Aristotle understands God's activity. But what I have to say is speculative and not essential to my thesis. Given the Aristotelian postulates it can

only be what Aristotle says it is: 'thinking of himself', and also a 'thinking of thinking'. For suppose we start by distinguishing generally

- (i) a thinker
- (ii) his mind
- (iii) the act of his thinking
- (iv) his concepts
- (v) the object or reference of this thought.

Ordinarily, (i) is not identical with (ii) according to Aristotle, but (ii), (iii) and (iv) are identical with each other because an actual nous is not something over and above its contents (*De anima* 429b30-31). But in the case of God (i) is identical with (ii) since unlike Socrates or Coriscus God is nothing but a nous, and (iv) is identical with (v) since the objects of his thought are general not particular. Consequently (i) is identical with (v) and (v) is identical with (iii).

At first sight God's activity may now seem to differ from human theoretical activity, or the entertaining of universal propositions, only by the fact that the actor is a disembodied mind, or set of thoughts. If so the problem of narcissism or of emptiness often found in the divine activity on Aristotle's account does not arise. God's universal thoughts will be thoughts of the world, at any rate to the same extent that the human zoologist's thoughts of species or classes are thoughts of individual animals. (This is argued for in NORMAN 1969.) The identity between content of thought and external object of thought that I argued for was, so to speak, a technical one, belonging to the theory of forms and resting on the coalition of the intensions (in the concepts) and the extensions (in the non-abstracted forms) of classes. It has therefore a general application. But this view of the prime mover meets two formidable obstacles.

(1) It would make his thinking dependent on something outside himself. 'Essences' are matterless because they are abstractions from particulars which exist outside the thinker. Once they had got there, it is true, the knowledge of them in God's mind would be knowledge of his own thinking — but

how could they have got there without contradicting the self-sufficiency that Aristotle infers from God's non-contingency? For the theory of forms made the particulars prior to the essences. (It is incompatible, for example, with later Judaeo-Christian and Muslim creation theories which conflated the Demiurge's Model in the *Timaeus* with the pre-existing contents of the Creator's mind.)

(2) If divine thinking is the same as human universal or theoretical thinking, it will involve knowledge of the world, that is the particulars subsumed under the forms. But *Metaphysics* M 10 argues either (a) that thinking universally (as humans do) is itself only potential knowledge or (b) that the implied knowledge of the particulars is only potential. It is unclear which: but (a) and (b) would both contradict the proposition that there must be nothing potential in a prime mover.

The strongest and perhaps the only point on the other side is the statement of Λ 7 that (a) God thinks eternally in the way that (b) we think infrequently (1072b15 and 25, with which we may wish to align *Nicomachean Ethics* X 8). But even this is not as unequivocal as Norman takes it to be. (1) It is not clear that it means that (b) is the same as (a) except in respect of constancy, rather than like it — e.g. by being non-discursive. (2) Still less is it clear that the sameness is not meant to refer only to the fact that (a) and (b) are both energeiai (actual exercises of nous) and to the consequences of that fact, namely that each is the best activity and pleasurable. (3) Lastly but less probably, (b) could refer (although *Nicomachean Ethics* X 8 does not) to our thought of the prime mover and/or movers, perhaps non-discursive or mystical, and evidently much less frequent than geometry, zoology and the like.

The balance of probability falls fairly heavily against any awareness, on the part of Aristotle's God, of the cosmos which depends on him only as a final cause. What positive content is left to his thought seems, if my arguments have been right, only to be what Alexander of Aphrodisias supposed, intrinsically (or non-abstracted) matterless forms (*De anima*

pp. 87-88).¹ The only such form or forms identified for us, perhaps recognised, by Aristotle are prime movers; and God's awareness would seem to consist in the awareness of what it is to be a prime mover. This has often been found offensive, which cuts no ice in the history of philosophy. It has sometimes been found nonsense: but that too may be unhistorical, or a matter of translation. Aristotle did not suppose that 'God' was the name of a person. Nor – more important – did he, or all his predecessors or all his successors, suppose that 'thinking' is confined to what people can do: we should perhaps recall the belief, which Aristotle himself may have shared at the time of the *De caelo*, that the stars were moved by intelligent souls. This was acceptable to Alexander too.

It may be that divine awareness or self-awareness would be non-discursive, in the sense of excluding a transition from subject to predicate. I argued in 1970 that the Aristotelian concept of 'thinking X' and its relation to the theory of terms and propositions left room for mystical or non-discursive thought; for this would properly be counted as thought because it depended on the same 'thinking X' on which discursive or propositional thought depended. (see LLOYD 1970.) I did not find these notions philosophically valid, but concluded that according to Aristotle such non-propositional thought might be a possibility for humans, and a fortiori for God.

From the outset of this excursus it has been apparent that the whole theory of thinking depended on the distinction between potential and actual. The actuality of the thoughts we call concepts consists in their being actually thought. But what is their potential existence?

A problem about the intellect in habitu

Since they are also universals the question bears on the status of universals. But to say, as we have done so far, that

1. He subscribes to (3) in my preceding paragraph. Norman's belief (loc. cit., pp. 72-73) that he is supported by Alexander is based on a slip: the commentary on *Metaphysics* Λ is not by Alexander.

they are the forms in the external world would be irrelevant; for the question is not about abstractions as such but potentialities within the abstractions; if universals are mental acts these are mental possibilities of such acts. Nor can we say that the question answers itself: that their existence is only a Berkeleyan existence, describable only in hypothetical terms. For in the first place it seems that for Aristotle there is no such thing as an actual but mere potentiality; he did not apparently recognise dispositions, as we put it, which did not belong to states. More accurately, there could not be a disposition, located in some subject, that did not entail a state of that subject and was not identifiable independently of the disposition. ('State' is not being used as a translation of Aristotle's *'hexis'*, which may or may not be a disposition. His terminology is no guide to answering the largely anachronistic question I am concerned with.) Secondly there is a difference between the scholar asleep (*potentia secunda*) and the dunce asleep (*potentia prima*). It is safe to presume that the states entailed in the case of feeling or perceiving were material conditions of the sense organs; so, whether or not teaching is involved, your ability and my inability to distinguish an A flat from an A sharp go along with a physical difference between your auditory organ and mine which could be described non-tautologically, i.e. without referring to its power of discrimination. But what corresponding state is there to go along with your ability and my inability to distinguish Barbara from Celarent? Not only are minds not material but they do not, according to Aristotle, use organs.

This suggests that, although we may be vague about other relations between dispositions and states, the assumption which we can call for short 'no dispositions without states' is one that Aristotle did not make in the case of thinking. The intellect in habitu is just the concepts or potential thoughts which it has learnt. But suppose that they become actual by being abstracted anew, let us say from images, every time they are used, the scholar differs from the dunce simply by possessing more abilities to abstract. The concepts in so far as they are potential are now seen to be just these abilities. And Aristotle's claim that

the faculty of thought is not 'in' something as sight is 'in the eye' may imply and be meant to imply that its manifestations neither consist in, nor entail a dependence on any 'underlying conditions'. One may understand this by contrasting it with the account in *Physics* VII 3 of dispositions such as virtues which are not alterations but involve alterations (246a6-8, b8-247a19), while supposing that the remainder of the chapter is non-committal about intellectual dispositions. That Aristotle made that contrast is not to be inferred from the *De anima*'s claim that learning is not an ordinary kind of alteration (417b12-16). Nor is it to be inferred from what he says about the effect of old age on our powers of thought – that 'they are impassive but fade because something else in us is destroyed' (*De anima* 408b24-25). For that is a tentative suggestion (there is a characteristic 'perhaps' at 1.20). But it does not follow either that he did not make the contrast. And if he did then latent knowledge will be a set of skills, which in modern terms are absolute dispositions over and above states. In *Posterior Analytics* II 19 knowledge (or scientific understanding) is classed alongside arts or skills (100a8-9); and concept formation as a result of experience is said baldly to be something that 'the soul is the kind of thing to be able to undergo' (*ib.* 13-14).

None the less what material we have can equally be made to point towards a solution that would preserve the 'no disposition without state' assumption. First we can clarify the assumption by noticing what of course experienced readers of Aristotle need no reminding of, namely how misleading it is to speak of concepts – possessed in sleep, say – 'becoming actual' (or 'being actualised'). It is not the house that becomes actual when the roof is put on but the bricks and mortar that become an actual house. There are not two kinds of concept, the potential ones which compose the intellect in habitu and the actual ones when someone is aware of them, any more than there are two kinds of house, the potential ones which have not been built and the actual ones which have. In each case the potential is something *else* which can be said to be potentially what it may be actually. In Aristotelian theory the something

else is the substrate or matter (sometimes presumably, intelligible matter) of that which it may be actually. The abstractions which the sleeping scholar but not the dunce is capable of are abstractions from the images stored in the soul of the scholar but not (with certain qualifications) in the soul of the dunce. These images function by possessing the properties which when abstracted as occasions arise are the concepts, or universals, i.e. the thoughts which we have on the occasions we have them. The images are therefore the substrate of the actual concepts; and we may answer our original question, 'What is the potential existence of concepts?' by 'the images of the experienced man'. It is not important whether or not images are literally material as bricks and mortar are, given that they are substrate. But it has to be admitted that at least part of the problem will merely have been shifted to the qualification 'experienced' man.

What Aristotle says about memory may support this solution. (i) Knowledge (i.e. the 'disposition') can be included under it (*De memoria* 451a23-28); (ii) memory is our potential possession of what will initiate a causal chain of recollection, i.e. the possession within ourselves of something which will when used start the chain (452a10); (iii) this is the image, on which the external factors of mnemonic devices are as it were parasitic.

Aristotle's answer may have been along either of the two lines I have suggested, or he may have had no answer. But if we deny dispositions without underlying states we must not suppose that underlying images are sufficient by themselves to account for concepts. That would be to suppose that images were responsible for abstracting their own properties. Certainly a hexis or potentia secunda does not require an agent for its actualisation according to *Physics* VIII 4. But Aristotle nowhere suggests that a mental picture of a man will of itself be the thought of a two footed animal if only some impediment were removed, in the way that a hot poker will burn something unless it is prevented. That would be implausible unless we invented some modification of images imposed on them by 'experience'. Aristotle's commentators believed that the extra factor or

agency required for abstraction was the active intellect of *De anima* III 5. It is unclear whether Aristotle did and whether he saw the problem in the way I have put it.

Return to the main thesis

We can now return to the main thesis.

2.

The second piece of positive or direct evidence for it is that particular forms (as I shall continue to call them) are explicitly and unambiguously mentioned in the following places. Unlike those which Aristotle normally argues about they are, in these places, accidental ones.

(i) *Categories*, ch.2: the particular or individual white is in a subject but not said of a subject (1a27-29), thus making one of the four possible combinations of these criteria and their negations. G.E.L. Owen's claim (OWEN 1965) that particular instances of whiteness were not being referred to was unconvincing: but I think the case against it has been sufficiently argued in, for example, MATTHEWS and COHEN 1967, pp. 640-43.

(ii) *Metaphysics* M 1087a19-20: 'sight sees the universal colour incidentally, for this colour which it actually sees is also colour'. 'This colour' does not mean 'this shade or species' for the sentence goes on to add a second example of this (i.e. token) *A* which the grammarian studies and which is incidentally the (i.e. type) letter *A*.

(iii) *Physics* 228a6-9: attributes such as health or pallor cannot recur in an individual as numerically identical with their previous occurrences. We can of course conclude a fortiori that Aristotle would have rejected the numerical identity of the health possessed by two individuals. He has been dealing with the types of identity one by one and in the lines we are concerned with he is dealing with numerical identity. (For the correct interpretation of the passage see Ross ad loc.) So the

implication is that for every healthy individual and every uninterrupted period of his health there is a particular form of health.

Physics 242b39 mentions the change 'from this white to this black' (ἐκ τοῦτε τοῦ λευκοῦ εἰς τὸ τεῖνον μέλαν): but although the context is qualitative change that is not enough, pace ENGMANN 1978, p.22, to ensure that 'the white' and 'the black' (in Greek) are not some white and black physical objects. I exclude it therefore from unambiguous references. Anyway all but the first of (i) to (iii) have usually escaped notice. ('Nowhere else in Aristotle's works is the doctrine [of particular forms] put forward', AARON 1967, p.10).

3.

Aristotle says several times that forms are destructible or perishable. One minute they are there another they are not, for an oak can be chopped down so that the form of oak is replaced by that of timber, and when a person blushes pallor may be replaced by crimson. But this is not consistent with there being a single form of oak and a single form of crimson which are the two universals. Otherwise the destruction of one oak tree would remove all oaks at a blow and when one person blushed nobody could remain pale. Forms must be particular.

(i) *Metaphysics* K 1060a21-24 denies Platonic Ideas on the bald ground that form is destructible. In other words the premiss is used to infer an in re theory of forms or at least deny an ante rem one: but this does not prevent our using our foregoing argument to make the further inference that an in re theory of forms is incompatible with an in re theory of universals. I think that the reason Aristotle does not say that forms are particular is not so much that the question was too anachronistic as that the point was too obvious. But his commentator Alexander did expressly connect the thesis of destructibility with the thesis of particularity.

(ii) Z 15, 1039b23-26 says that forms just are and then are not, because there is no coming to be and being destroyed in their case;

(iii) H 1044b21-24 uses the same formula, and classes them for this purpose with mathematical points. This follows B 1002a32 ff., where the formula is applied to points, lines and surfaces; for example the division of a body creates two surfaces which cease to exist if the body is put together again.

(iv) H 1043b15 says that essence is either eternal or destructible without being destroyed, where the first alternative is not Aristotle's but the Platonists' as we know from the other passages. His own is not an Irishism. It is a quasi-technical formula which referred when it first appeared in the *Metaphysics* to accidents contrasted with substances, and meant that they appear and disappear without there being a process, as there is for substances, of their generation and destruction. (See E 1027a29-32 with 1026b15-24; B 1002a30; Z 8, 1033b17 and A 107a1-4 to the same point.) Aristotle may there have meant attributes in general: but in any case it applies later to all forms, as (ii) and (iii) shew.

(v) *De anima* 417b3: 'destruction by its opposite', which characterises being acted on, is destruction of a form.

(vi) *Physics* 246a16: a change to vice is a destruction of virtue.

(vii) *Physics* 246b13-15, which says that all states or habits come into being and are destroyed, does not qualify this with the *Metaphysics* formula. For here Aristotle is talking about the physical basis of alteration. The *Metaphysics* is interested in the production of substances and in that process the coming and going of a form is not a process. But in the totality of physical change, from which the production of substances is an abstraction, the production of a state or habit is a process.

While not Aristotelian the expression 'particular forms' is unobjectionable. Certainly for the purpose of talking about a common property any abstracted, universal form is particular or individual in exactly the way that quantifying over predicates makes properties individuals. But my form of man, your form of man, and my present form of health and yours are also four particulars which differ numerically, although the first pair are

identical with their respective owners and the second in them (I mention this to retract a muddled argument against such numerical difference in LLOYD 1970, pp.522-23, which I am grateful to A.R. Lacey and A.J.P. Kenny for questioning.) Considered thus as particulars, forms of man, or of health, are specifically identical, so that all men are specifically identical. That the forms are specifically identical is an analytic truth, for that is what a form is — or as one might say, what a form is for: only so can it perform its logical function of making the concrete individuals specifically identical. (Cf. *ἡ κατὰ τὸ εἶδος λεγόμενη φῶς ἡ ὑγιαίνουσα*, *Metaphysics* Z 7, 1032a24; A 1014b35-1015a13. How this is to be applied to the case of accidental forms like health we shall consider later.) The fact is on all fours with the fact that the standard metre rod is one metre long.

CHAPTER III

THE INDIRECT EVIDENCE

The arguments which follow are more by way of an indirect case for my thesis of particular forms and abstracted individuals than the three previous arguments. But they are necessary in order to shew how the statements of the texts so far appealed to are systematic. At the same time they may help to remove various difficulties that will certainly have occurred to the reader.

1. Aristotle is not normally interested in our ontological question about forms. Even when these are substantial (sortal) forms he is normally concerned with them as specific forms, that is in their function as representing species. In other words he is 'speaking/thinking of them universally'. This is the reason for formulas to the effect that 'form signifies a such not a this'. The conventional story takes for granted that such a formula commits him precisely to forms as in re universals. That it does not commit him to this can be seen from the crucial but somewhat neglected fact of his arguing that to identify universal and ousia would entail both the Third Man (*Metaphysics* Z 13) and the Sail Cloth (Z 14, 1039a33-b2) refutations. For him the Sail Cloth holds against any realist theory of universals, not just an ante rem version.

Chapter 13 of *Metaphysics* Z argues that substance is not to be found among universals, or universal terms. 'Substance' here does not mean *a* substance, but the substance *of* something; this is the same thing as $\tau\acute{o} \tau\acute{\iota} \tilde{\eta}\nu \epsilon\tilde{\iota}\nu\alpha\iota$ (1038b14), often translated 'essence', and had already been identified with the specific form in Z 7 (1032b1-2). But, says Aristotle, if this were a universal (or perhaps a universal term), each of the things that it was substance of would lose its identity, since things whose substance or essence is the same are themselves the same (1038b

10-15). Certainly he is arguing from the Platonist assumption that substance *of* is *a* substance. This is what forestalls the objection which some readers have felt, that sharing the substance/essence need have only the harmless consequence of specific or generic identity for the sharers, not that of numerical identity. For on the Platonist assumption it is no longer a common property but a single individual. For this purpose however an in re essence is no better than an ante rem one. That distinction is irrelevant. What is required to prevent the numerical identity in consequence is that the substance of members of the set in question should not be numerically identical: but this requirement is ruled out not by the ante rem Platonist assumption but by the assumption which identifies substance *of* with the universal. For the universal is by definition numerically one, or common to the set (cf. 1038b11).

Exactly the same point explains why the Sail Cloth and the Third Man hold against numerical identity of form, whether the form is Platonic or Aristotelian. In Z 13 and 14 Aristotle is not concerned to point this out. I think he would have thought it obvious.

As well as what is for the moment irrelevant, the ante rem hypothesis of the chapter, Aristotle seems to apply these three anti-Platonist arguments only to the relation of genus to species not that of species to individual. In this he is following the policy of Books A and B that was chosen, I think, because of its ad hominem force (cf. LLOYD 1962, 71). But it may raise a question whether particular forms of individuals can even indirectly be inferred from Z 13. In fact the arguments must be equally applicable to the 'man' which is the substance of Socrates and Coriscus; and when the numerical identity argument begins by referring to the substance 'of each thing' that cannot belong to any other thing (1038b10), the ambiguity over what 'each thing' denotes is very likely deliberate. But in B 999b21-22 the same argument does use individuals as an example. Secondly, after mentioning various arguments including the Sail Cloth, Chapter 14 adds, 'Again, these consequences and

even more absurd ones occur in the case of the perceptible things' (1039b16-17): and this must mean perceptible individuals since the genera and species which have just been considered are in any case of perceptible things.

Aristotle had already identified substance and form that is, specific form, in Z 7 and does so again at the end of the Book: form also appears regularly as a universal and is regularly represented by a predicate, i.e. a general/universal term. But now in Z 13 we have him apparently claiming that substance is not to be found among universals. There is of course no contradiction if one distinguishes, as I have distinguished, the form in its existential aspect from the form in its propositional aspect. In the first aspect it is either in or identical with a substance; in the second aspect it has been abstracted and is not in *rerum natura* but a thought/concept, and only in this aspect is it a universal. If one does not make this distinction, the contradiction is glaring. One bold move is then to say that Aristotle is not even apparently claiming that substance is not to be found among universals, but claiming that apparently substance is not to be found among universals. This move depends on his prefacing his claim with the word *εἰς* at 1038b8, with the effect perhaps of 'prima facie'. Aristotle may mean only that he is not committing himself to all the arguments which follow.¹ But the three which I have mentioned look not only strong but Aristotelean.

Another move has been made by M.J. Woods (1967). He wants to draw a critical line between 'a universal' and 'something universally predicated'; only the second, he believes, is not allowed to be a universal; but specific forms are not predicated (or at least genuinely predicated) because their relation to their subjects is identity. To this I have two objections which are independent of my own general thesis. (i) It is a priori implausible if not impossible to attribute to Aristotle a distinction

1. Notice the 'or' which introduces them in the next sentence; and cf. BURNYEAT (ed.) 1979, 127.

between universals and things predicated universally; for, he defines universals as 'what are predicated of many' (see Bonitz Index 356b). (ii) Though agreeing that the *Categories* predicates species Woods says that Aristotle gave this up: but even ignoring *Posterior Analytics* we find *Metaphysics* Δ 1018a3-4 predicating 'man'.

2. That forms exist only as particular forms is implied by Aristotle's account of the last stage in the production of a substance. Naturally the implication is valid only for the case of substantial forms, i.e. those of the lowest species. The generic differentiae in the specific forms. In a proper division, one does not need to say, for example, 'two footed animal', let alone 'two footed footed animal', since 'two footed' means 'two footed animal'. (Two-footedness is a *per se* attribute of animals. See also *Metaphysics* Z 7.) As for accidental forms, their problem must be taken up later. The last stage is the composite or individual itself, some oak or man, say. But 'this composite', he says, 'is by that point the form of such and such a kind in this flesh and bones — Callias, or Socrates' (*Metaphysics* Z 8, 1034a 5-7. In this sentence *Καλλίας καὶ Σωκράτης* is in apposition to *τὸ τοῦδε εἶδος* which is grammatically predicate.) In Z 10, 1035b 27-31 the point is combined with 1., the first of our indirect arguments: the *man* or *horse* which we predicate of particulars is a universal but not a substance; this does not mean that in a *logical* sense it does not have a material element; it is a composite comprising a certain kind of form and a certain kind of matter, each of these being thought of universally; the real individual which comprises the final stage of this kind of matter is (for instance) just Socrates. But what is even more striking, at the end of Book H 'the last stage of the matter', we are told, 'is one and the same thing as the form' (1045b18). Certainly Aristotle adds 'the one potentially, the other actually'. But that in no way prevents the obvious (though not compulsory) inference to particular forms, as we can see from the explanation at © 1050a16: 'matter is potential because it *would* proceed to the

form, but once it is actual then it is (included) in the form'. Because of the purely abstract and metaphysical nature of our subject matter it may be necessary to remind ourselves that both matter and form by themselves, saving matterless forms, are mere abstractions (cf. *Physics* 209b20).

Excursus on matter

Aristotle not infrequently equates genus with matter. His reason is that both represent potentiality. A man is capable of exercising knowledge because he is one of the creatures that do have knowledge; in other words 'his genus or matter is such' (*De anima* 417a27: the Greek is *καί*, but cf. *Metaphysics* Δ 1024b28; Z 12, 1038a6; H 1045a35). A genus normally indicates alternative possibilities: 'x is an animal' is equivalent to 'x may be a fish or a bird or a man or . . .', 'x is coloured' to 'x may be red or green or . . .'. What species have in common is a certain kind of matter. An animal is what is composed of flesh and bones, or to take a subordinate genus, a fish is what is composed of flesh and bones with the 'difference' that these are of the kind to form parts and organs which are capable of living in water. Certainly differentiae represent the formal element of a species: but the introduction to the lectures on biology is explicit that animals are to be classified according to their material parts (*De partibus animalium* I 644b7-11. Cf. 642b10-20; *Politics* 1290b21). Nor is this to dispense with teleology: *De generatione animalium* emphasises that matter is necessary to the final cause as the vehicle of the efficient cause (742a32-35).¹

This interpretation of genera has been misunderstood, I think, at several points, particularly in the objections made by Marjorie Grene. There should be no question of making genus and matter 'one concept'; genus does not on this interpretation 'mean' matter (pace GRENE 1974, 57, 59). And certainly not

1. All this appeared more fully, but in a rather complicated setting, in LLOYD 1962.

all cases of matter are cases of genus. But in a natural science the relation of genus to species is *in fact* that of matter to specific form. Nor need this restriction of the doctrine to natural science be seen as at all arbitrary or ad hoc. This is not just a special case of genera and species, for from an ontological point of view these are the only real ones in so far as they are abstractions from real individuals. And in nature Wieland's objection (ib. 65) that the genus is not that 'out of which' does not hold.¹ It has also to be understood that the matter in question is some matter 'taken universally' (for a genus is a universal). Hence it is no objection (pace p.59) that what are numerically one are one in matter whereas what are generically one are said to be in the same category (*Metaphysics* Δ 1016b32-34); for numerical unity concerns the same *piece* of matter, generic unity the same *kind* of matter (although this is not mentioned in the Book Δ passage). The same consideration removes the objection (p.65) that in a definition the generic element is not material. It is not however *any* condition of matter that makes a genus, but only one which is represented by substances, in which the class 'divides into individuals' (cf. LLOYD 1962, 84-90).

The interpretation should be seen not so much as assimilating matter to genus as assimilating genus to matter. It will be less liable then to be seen as a 'spiritualising' of matter in the manner of Neoplatonism. Aristotelian matter is certainly not an 'hypostasisation of possibility', as Bäumker described it.² In a valuable article on the matter of the four elements R. Sokolowski complained that to take body as the genus of animal, as Aquinas said one could, would reflect 'a neoplatonic tendency to make matter a constituent of the form instead of its foundation' (SOKOLOWSKI 1970, 279 n.28). But in the production of a natural substance Aristotle does think that the matter is absorbed into the form. That was the point of his identification of the last stage of it with the form. At that point the form is

1. Cf. D.M. Balme in a reply quoted by Grene, p.69.

2. *Problem der Materie*, p.253, 9. SOKOLOWSKI 1970, 285.

no longer just a predicate of an underlying material.¹

At the same time this does not entail that it has lost its characteristics of being stuff and being extension. And this for a simple reason; identity is a symmetric relation, and to the extent that some matter is some form that form is that matter. What stands in the way of this being seen is a conventional assumption that a form is a universal.

The interpretation of genus as matter can be aided by a glance at the matter of the simple bodies, or elements. It is a long way of course from being a normal genus, since the elements are not four individuals (*Metaphysics* Z 16, 1040b5-16). In *De caelo* 310b31 their matter is said to be closest to substance/existence. Aristotle's position would be more easily gathered from the equivalent proposition that their substance/existence is closest to matter – to move is as Sokolowski says (loc.cit., p.274) the last thing a being can do, but for an element it is, in *De caelo*, the first and only thing it can do. In nature the final cause should coincide with the formal cause, but *Metaphorica* IV 12 explains that it becomes less recognisable the closer we go to the elements, that is the greater the predominance of matter (390a3-5). Sokolowski has also brought to our attention the fact that they are enabled 'to remain what they are within higher substances', unlike say a plant which when eaten ceases to be a plant (p.275). But this is the other side of the same medal. For to account for it this limitation on their development can be seen for what it also is, namely, the very wide range of their potentiality. They are 'appropriate' to almost anything.

This leaves room too for an actual, and not abstract, opposition between matter and form. 'A man's existence, for example, is in constant peril not because of his form of humanity but because of the matter that supports this form, since the matter is always capable of betraying him and becoming some-

1. In his reply to M. Grene's paper R. Rorty rightly connected three problems: (i) individual as form (ii) unity of definition (iii) genus as kind of matter (H 6 ad fin.) (RORTY 1974, 71-72; see further ID. 1973).

thing else' (ib. p.284). The paradigm for this – because it is in the last analysis what *constitutes* change – is that elements can be and are transformed by mere contiguity. Again matter is not just a metaphysical principle.

As well as the problem of matter as genus there is a problem of matter as principle of individuation. That principle (as I tried to explain in LLOYD 1970) has to be distinguished from the principle that accounts for an individual/substance being one thing, not a mere aggregate say of arms and legs and so on, or a mere continuum without a boundary like air or water. This principle of unity is certainly form. But if two individuals are instances of the same (specific) principle of unity what makes them two, the principle of their numerical difference, is matter. About this kind of individuation Aristotle says much less, and almost nothing directly. We ought to understand 'the form of x' and 'the matter of x' as 'x in respect of, or from the point of view of, its form' and 'x in respect of, or from the point of view of, its matter', so that both expressions are *about* the composite. (Cf. *Metaphysics* 1035a6-9, and *Physics* 247b2, where *τὸ ἐν ὁρισμῷ* is virtually a synonym of *ἐν ὁρισμῷ*.) X qua matter is x qua substrate or subject. Three different questions have the same answer: (i) when someone has specified a change, 'What was not-φ and is φ?' (*Physics* I 7); (ii) when someone has specified a substance, 'What is (now) a house?' (*Metaphysics* Z 17); (iii) when someone has specified two of a kind, 'What are both pennies?'. In each case the matter which will be referred to is *stuff*: but it cannot be just that. Otherwise none of the questions is answered. And there will be unnecessary difficulties about matter as a subject of predication, even in the wide, grammatical sense. (For these cf. BLACKWELL 1955; RORTY 1973, 401; BRUNSCHWIG 1979.) Matter will begin to look like Spinoza's God or Bradley's absolute, the logical subject of all judgments. Perhaps this was what the Stoics did make of Aristotelian data . . . It is not on account of metal, but of this piece of metal, that this penny is not that penny. For this reason one should not be satisfied by the explanation (roughly that of ANSCOMBE 1953) that matter as stuff is the

principle of individuation.

To be individuated is to be countable; what can be counted are the members of a class. Certainly these are the individuals themselves. But seen merely from the point of view of their being countably many they are the individuals seen from the point of view of their having the class concept predicable of them. This is their matter as substrate or subject. At the same time 'this piece of metal' is not the same description as 'this penny' although it is a description of the same thing. For this reason one should not be satisfied by the claim (roughly that of CHARLTON 1972) that Aristotle did not have a principle of individuation because it could only have been the individual itself. But the interpretation I have suggested seems to me to incorporate what is true in Miss Anscombe's and in Charlton's alternatives. It falls short of course of a practical criterion of individuality; and it too may therefore be thought less than satisfactory. If so, one must look to the consequences of matter. These are accidents; and it has been argued that Aristotle's principle of individuation should be called matter as identified with accidents (RORTY 1974, p.73). Apart from finding it difficult to *identify* matter with accidents, I think that this version might obscure if not endanger the priority of essence to accident and of the individual to everything else. But while there is no doubt that Aristotle the scientist thought that to study individuals as such would have been to study accidents, any explicit adoption of this criterion as the theoretical principle was a later development, and not undisputed.

How a substance is a particular form

To return to the argument that the last stage in the genesis of a substance such as a dog can be identified not just with an individual but with a (particular) form, this applies only indirectly to a generic form because that is only what may be a dog. But to have a specific form is not only a necessary but a sufficient condition of being an individual. For ontologically, in

other words not as a thought or what we *mean* by some term, every such form *is* this or that particular. And as soon as the flesh of an embryo is such that it is no longer so much flesh and so many bones but — perhaps rather also — a man or a dog, i.e. one man or dog, then that is what the stuff is, a man or a dog. The indefinite article does not shew that it is not a form but that it is not a universal.

Readers who find it hard to see how an individual such as Callias or Socrates is identical with the (particular) form that he is might look instead from the other side at how the form man is identical with the disjunction, Callias or Socrates or . . .

A warning however must be given. *Metaphysics* Z 6 says, and it is repeated in Z 11, that those things, but only those things, which are 'said per se' are identical with their essences. It has quite often been supposed that such things include individuals like Cerberus or Socrates. If this were so we could infer directly that forms were particular; for essences are forms, and the individuals are particular. In fact the class is restricted to species of a genus. This was already implied in Z 4, which said that what had an essence could be only what was described by a definition (1030a6 ff.). But by the end of Z 11 such species can be interpreted in the wider logical sense rather than the scientific sense, i.e. they are not confined to classes whose members are substances/individuals. What *is* to be excluded is the presence of matter. They are 'substances in the primary sense' (*πρῶται οὐσίαι*); and this is not used with the same meaning as the 'something primary' in ch. 4 (1030a10) which meant the primary subject of predication, so as to exclude things like musical men (as in *Posterior Analytics* 83a1-23). More important the expression does not refer to what it did in the *Categories*: it is intended to exclude a very abstruse class of things, the so called 'coupled terms' like snubness, which cannot be defined according to Aristotle in abstraction from matter. But for our concern, which is not directly Aristotle's in this chapter, the point is that these 'primary substances', which alone are identical with their essences, are forms such as concavity, which *are* in abstraction from matter — and cannot

therefore be concrete individuals.

It has also been supposed that at least in the case of human beings the individual will be identical with his essence, for this is his soul and *soul* is a per se term which is identical with *being a soul*. The relevant passages are Z 6, 1032a7-9; Z 10, 1036a16; Z 11, 1037a5-10; H 1043a29-b4. But in every one the identification of a man with his soul is mentioned only hypothetically, so as to illustrate a logical distinction. It is in fact a Platonic dogma that is unacceptable to Aristotle, as Z 11 itself indicates at 1036b24-30.

The upshot is that this rather difficult theory about per se terms cannot be taken to entail the thesis of particular forms. But it is consistent with it. For Aristotle is talking not just about intensions, but talking intensionally not extensionally. The essence of X is intensionally identical with X when X is X qua form (for the essence is the abstracted form); but X qua form is X 'said per se'. Suppose that X is some man or oak, in general some F: clearly its form, and so X qua form, is F, and F is a species. This is what Aristotle had concluded in Z 4 from his argument that what had an essence could only be what was described by a definition: 'the conclusion is that essence can belong only to genuine species of genera and to nothing else' (1030a11-13).

3.

We can get a much more general if less overt argument for distinguishing forms from universals when we consider the successive positions about substance taken up by the chapters of *Metaphysics* Z and H. One cannot fail to notice how they present now grounds requiring it to be particular, or at least 'individual', now grounds requiring it to be general (cf. OWEN 1978). Aristotle sometimes calls form 'a this' (*τὸδε τι*), notably in *Metaphysics* Δ 1017b25 (Ross ad loc. cites also H 1042a29, Θ 1049a35, Λ 1070a11 and 13-15, as well as *De generatione et corruptione* 318b32). I suggest that one should bear in mind three points. (i) He is referring to a substantial form/sortal.

(ii) He means that such a form is what some individual is or as we might say 'is called' (cf. 'predicated' at Θ 1049a35), in other words a kind of thing it is identified as, such as this *man*, this *log*. (iii) The expression implies that the form exists as a particular form. Otherwise one has to suppose that he means merely that a form is a simple or determinate notion. But this is much less plausible.¹ In the first place it would not be worth saying since it holds of anything whatever — like the 'some single thing' which any term must signify in his argument for the law of contradiction (*Metaphysics* Γ 1006b7, 14). For even if it does not apply to forms whose properties are privations (the argument of *De generatione* 318b22) the upshot will still be that of (i) and (ii), from which (iii) will follow. Secondly, what is not the case on our interpretation, he would be using the expression in a way which is different from his normal, almost technical use. Nor, if it is to keep the same use, is it sufficient to explain that form is individual 'on the grounds that form is what *makes* matter into countable units' (KIRWAN 1979, 149; cf. LACEY 1965, 66) or 'gives individual character' (Ross l.c.): what makes oxen fat does not have to be fat. What is needed is that forms should be the countable units, as we have argued that they are by being particular and identical with the countable substances.

Furthermore without this identity we shall have the same difficulties over the expression 'separate'. For in the passage at the end of Δ 8 the form was described as 'a this and separate', and the same conjunction is made for substance at Z 3, 1029a28. No doubt it is possible for it to mean 'separable in thought, or definition': but everywhere else when he means this Aristotle says so. Applied to a concrete individual 'separate'/'separable' presents little difficulty. (There are well judged remarks on separability and thinness, including Tugendhat's metaphysical interpretation of thinness as *Selbständigkeit*, in SOKOLOWSKI 1970, 282-83.) But once again ancient commentators felt that the description of the form which we have been looking at

1. Cf. OWENS 1978, 389-90.

could have been clearer.

If it is granted that a form is a this in as much as it is what some individual is it must also be noticed that in the context – the end of Δ 8 – he seems to rely on the fact that we talk equally well of something as ‘a substance’ and of ‘the substance of something’. But this would not be to the point unless the latter, the substantial form, could be in a sufficient sense identical with the particular or individual in question. Z, chapter 4, in fact starts from the statement that considered abstractly the essence of each thing is what it is said to be per se (1029b 14), and chapter 6 from the statement that each thing seems to be identical with its own substance, which is what is meant by its essence (1031a17-18). The sufficient sense in which the form is identical with the particular arises when it is not considered abstractly but in respect of its existence in the external world.

OWEN 1978, 17 draws to our attention the interesting fact, which Aristotle claims in Z 8, that when something is being produced it is a ‘such’, whereas the product will be a ‘this such’ (1033b22-26). In terms of our thesis the ‘such’ is a generalised ‘this’, which is in fact the abstraction from several ‘thises’; in other words it is a universal. In the process of production the formal cause functions as a final cause, which is a form considered independently of any individual matter and is thus a universal. (One may notice how it follows that, considered as a process, reproduction cannot help being seen as preservation of the species.) Some modern philosophers may wish to describe the fact by saying the producing – like looking for contrasted with looking at – has an intentional object. And this may amount to much the same if we understand intentionality as importing a description and so a propositional element. The bronze sphere which will, or rather may, be produced does not exist while it is being produced, and cannot be pointed to or touched, only described. Unlike a sphere which has been produced its existence (according to this account) and not merely its description depends on a set of predicates, or propositional entities. And on our thesis a ‘such’ is a form ‘thought/spoken of universally’, which is a term in an Aristotelian proposition.

4. A final indirect argument will need few words, for although no doubt its implications are many I shall not pursue them. But it is as substantial as it is simple. It is that unless forms are not in themselves universals, separate forms that were individuals, prime movers, would be so obviously impossible that Aristotle could not have countenanced them. (Cf. OWENS 1949-50.)

The status of accidental forms

In spite of false short cuts to the inference, the substantial forms (sortals) were able to be described as identical with the substances that Aristotle occasionally describes them as ‘in’ (e.g. *Metaphysics* Z 8, 1034a5). We cannot of course say ‘... the substances that they are attributed to’, for the forms that are attributed (in a proposition) are universals, while the identity holds for each singular form with some singular substance that belongs to the species named by the form as a common noun. But what of the accidental forms?

These are in the substances because, while Socrates is a man, he is not a pale. Is the notion of ‘form’ then equivocal? No: the logical position of an accident stands in a fairly precise analogy to that of a substantial form. Just as a particular form of man is identical with some man so a particular form of pale is identical with some pale thing – or rather would be, if there were such a thing, that is to say if pale things were substances. Such quasi-substances are distinguished from substances as incidental (accidental) subjects of predication from proper or primary subjects of predication (*Posterior Analytics* 81b25-29; 83a1 ff.; *Metaphysics* Z 4, 1029b31ff.). But we do not need to be entangled in difficulties about Aristotle’s own concept of identity by asserting that the pale thing or the wooden thing is identical with Coriscus, say, or this log: it is enough to say that there are not two pairs of things occupying two places. We are thus left, as I believe Aristotle intended us to be left, with only

substances and particular accidents which they possess.

Some passages in Aristotle can be read in this way, as W. Charlton has pointed out to me, and I reproduce his cautious words [from a private communication].

In *Metaphysics* Δ 1015b17-23 *τὸ μὴ οὐκ ὂν* seems to be identical with and not just present in Coriscus, and in *De anima* 418a21 *τὸ λευκόν* is Diates' son. But what exactly is being claimed in *Metaphysics* Z 6, 1031b22-28? He looks as if he is going to say: '*τὸ λευκόν* signifies (i) the man, (ii) what supervenes on (is present in) the man; and (iii) is, whereas (i) is not, the same as the essence of white'. But in fact he seems to say: '*τὸ λευκόν* signifies (i) the man, (ii) what supervenes on the man; and *τὸ λευκόν* is the same as the essence of (i)'. This seems to me consistent with holding that the actual form is (per accidents) identical with the man.

Inasmuch as the accidents are identical with the quasi-substances and these are incidentally (per accidents) identical with substances, the accidents are incidentally identical with the substances. This incidental identity, I want to suggest, is the kernel of the analogy between the two kinds of form.

But the analogy shews itself in another feature. The matter or substrate represented by the logical subject of (a) an essential (substantial) predicate is indeterminate, relatively close like the four elements to prime matter. The matter or substrate represented by the logical subject of (b) an accidental predicate is determinate and individualised. It is something wooden, i.e. some wood, which is (a) a box: but it is some box, i.e. a box, which is (b) wooden. (see *Metaphysics* Θ 1049a24-36, with Apelt's reading at 1.28.) This, by the way, is a valuable improvement on the distinction that *Categories* chapter 2 used between 'said of a subject but not in a subject' and 'said of a subject'.

As for the notion of 'possessing' an accident or of an accident being 'in' a substance, the combination of two things replaces any idea of defining that notion. These are the analogy holding between the accidental categories and the category of substance and the priority of explanation in terms of substance.

I doubt if Aristotle had much use after the *Categories* for the distinction between 'said of' and 'in'. And the intuitive picture that he seems always to be relying on is that 'in' must be understood simply as the counterpart in the external world of the relation in speech or thought between a predicate and a subject. I doubt if he thought one could go further.

A final warning about terminology. Forms exist by being either identical with substances or in them; there are as many forms as there are substances and quasi-substances. To say this is to say that forms are not universals. It is sometimes said that forms are individualised in particulars. This might mean the same thing: but if so it is a dangerous way of saying it. It suggests that there is something which is prior to the individuals of a species — and prior in more than the trivial logical sense — but which is somehow not 'yet' an individual. Even if this made sense it would presumably have to be the species in intension, and thus what was called a 'common nature'. This back door Platonism seems to have been espoused by Avicenna; and because of Avicenna's obvious influence on Aquinas' *De ente et essentia* ch. 3 it is not difficult to read this chapter as a confuting if not confused version of it. But as we shall see it may also be traced back to an innocent formula which itself goes back at least to Alexander.

In this century English speaking philosophers have often spoken of universals and their instances. It is a harmless and non-committal usage, but for that reason it has no power (as some friends have suggested to me that it has) of explaining what Aristotle meant. Instances are only the particulars that fall under some universal; the term does not even convey to us whether an instance of pallor is some pale thing's pallor or some pale thing. Certainly one can have a theory about instantiation, and different philosophers have used the word to expound different theories. Of itself it names our problem not its solution.

A philosophical assessment

In explaining Aristotle's theory it has been constantly necessary to emphasise that only *as such* are universals not forms, for they are forms as they are thought not as they exist in themselves. It is therefore a non-realist theory in a qualified way, which is expressed in the scholastic description of its universals as 'post rem cum fundamento in re' – the 'foundation' being the particular forms. And the non-identity of form with universal can be expressed by saying that it has a different function, namely that of being the foundation of the universal. But this at once suggests an objection which is worth looking at briefly, though less with the hope of removing it than as a step towards clarifying the place of the theory among other theories of universals. There is a simple reason why the validity of Aristotle's position cannot be assessed in the comparatively timeless frame of reference – one comparatively free from interpretation – which is often expected of philosophers. His position rests on an indissoluble connection between universals and forms, and forms are an idiosyncratic notion. In his language the term is virtually primitive. But while we have as it were an agreed metalanguage which contains, say 'class', 'species', 'genus', 'predicate', 'individual' and even 'universal' as well as a logic of their relations, we do not have an agreed metalanguage which contains 'form'.¹

The objection that may be made to distinguishing form as foundation of universal is that this foundation still performs the traditional function of a universal. That function is to account for specific identity. One might say that Aristotle's way goes round the absurdity of a common nature which is in two places at once, but pays the price of equally bizarre behaviour on the part of a form, which exists by being individualised in or as particulars. To describe a form in these terms is, as I have

1. This is not of course to say that the independent debate, of which MOORE, STOUT, DAWES-HICKS 1923 is a classic example, over particular characteristics of particulars is irrelevant.

already suggested, likely to be mistaken. For in so far as there is a non-individualised form it is a creature of the understanding and posterior to individual forms. But if this is so, how does the presence of these forms, which are logically independent of being thought, account for specific identity among the particulars? For specific identity belongs intrinsically to nature while species is the forms thought. The only answer seems to be that that is their logical function. I compared earlier on the fact that numerically distinct forms are specifically identical with the fact that the standard metre rod is one metre long.

The form may thus escape the charge of behaving in an absurd or a bizarre manner. Nor is its idiosyncrasy quite the same as the common nature's: but it is just as idiosyncratic, and there for the same purpose. M.J. Cresswell has recently proposed a simplified logical model of Aristotle's theory of universals which explicitly uses specific identity as a primitive notion (CRESSWELL 1975). This model does not mirror what we have in Aristotle, which would of course be 'pre-theoretical' for formal purposes: but he claims with some justification that it represents Aristotle's underlying thought.

It may be that there is a dilemma between an unqualified realism and an unqualified nominalism, so that there is no room left for a distinctive nominalism with a 'real foundation'. If so the traditional way of rebutting the dilemma is the nominalism of a John Stuart Mill which reduces specific identity to similarity between individuals. Aristotle would have found that position untenable because for him the notion of a kind would have to have been logically prior to that of similarity. Individuals could not be similar as such, but only as individuals of a kind, because their existence would have to be prior to their relations of priority and their existence was as individuals of a kind. And kinds could not be reduced to mere class extensions, because these would be individuals and we should have a circle or an infinite regress.

It may be that the traditional problem which we have been facing about the status of universals is a blind alley down which

philosophers should never have gone, although Aristotle and his school made it look like an avenue with a horizon. Instead of the notions of universal and property we could take that of predicate as given, or primitive. (Cf. ANSCOMBE 1961, 28-30.) This would mean that, instead of the fact that someone is pale or a man explaining the fact that pale or man is (or can be) truly predicated of him, the two facts would be identical. And while anyone who adhered to this view would not answer further questions about the 'ground' for such a predication except by reiterating the predication or its truth, that would not of course make the original fact depend on anyone asserting or even thinking it. This view was not Aristotle's, otherwise it would have been superfluous for him to have correlated universals with forms in the way that he did. He did not take *predicate* as a basic notion, but tried to explain it in terms of thought (hence his 'conceptualism'). The alternative would in any case have been largely anachronistic. But if it had been presented to him I think that he would have found it sympathetic. He defined a universal both as what belonged to many and as what was predicated of many. And although he is notoriously indifferent about distinguishing explicitly between reference to linguistic and to non-linguistic objects (even between use and mention) this indifference does not often or obviously indicate that he is confused. Should it not be put down in some measure to his instinctive tendency to believe that linguistic concepts can be basically explanatory? It is easy to speak of an instinctive assumption that language and nature have an 'isomorphic structure' and the like – confused or meaningless as such an assumption may well be. But I think that the matter goes deeper with him than that. To illustrate, suppose that it is the case that for understanding the relation of form to substance, whether the identity of a substantial form or the 'in' of an accidental form, he relied on supposing simply that it was the counterpart of the relation in a proposition between the predicate or soral, respectively, and a subject. I doubt if he supposed that this was merely an explanation by analogy in default of some more accurate knowledge.

What he would have said in a different historical context is, however, speculation. What is a fact is that he did see the particular forms of individuals as ensuring specific identity. If one objects to that idiosyncratic function as true by definition and therefore without power to explain, that would put them on the same level as common natures – it was one of his own complaints about Platonic Ideas. But, whether or not they make sense and are useful, forms are not produced ad hoc to account for specific identity. They have independent explanatory roles in Aristotle's metaphysics and in his science.

In his metaphysics a form is what it is to be some substance. This is 'ousia' translated as 'essence'; and it may not go beyond the concept of a property, at least that of a substantial or soral property, and so not have gone beyond the concept of a universal. But a form is also what it is for some substance to be. This is 'ousia' translated as 'existence'; and it is a notion peculiar to Aristotle. For it has surely to be approached – it would be a bold man who said 'grasped' – from the standpoint of Aristotle's claim that the last stage of the matter in the production of a substance *is* the form, which he calls the entelechy. Every substance is a member of a species. This claim that an individual must be a 'this such' or 'this so and so' has re-appeared with much logical sophistication in English philosophy of the second half of the twentieth century. Its grounds have been that a mere this or that would be an empty notion because it would not be identifiable, that is unambiguously identifiable, or perhaps more important re-identifiable. (See e.g. STRAWSON 1959.) This insight or at least justification is sometimes attributed to Aristotle (e.g. WOODS 1967; HARTMAN 1977). But such an epistemological reason is not in fact the one which Aristotle ever gives for his claim. The reason which he gives in *Metaphysics* I 1007a21 ff. is metaphysical: without the claim the distinction would disappear between what is essentially true of something and what is contingently true of it. For if the existence of something did not entail its substantial form or soral this form would be on all fours with the accidents.

As for the role of forms in scientific explanation as Aristotle conceived it, it will be enough to allude to one example: to do more would be to invite questions beyond the range of our subject matter. In an Aristotelian natural science the specific form, say that of dog, plays a crucial and central part because it is the so called formal cause. But ideally, or when nature works unhindered, this same form is the final cause too, as when canine sperm produces a puppy or broad leaves fall in autumn. Such a functional or teleological theory about causal chains in nature is not deducible from the logical function of forms to imply specific identity. Otherwise it would be impossible for a dog not to produce a dog or for some broad leaves to survive the winter.

CHAPTER IV

PART I: ALEXANDER OF APHRODISIAS

The second Aristotle, as later generations called him, occupied the chair of philosophy in Athens at the beginning of the third century A.D. Alexander not only became the most respected and the most influential interpreter of Aristotle, but can be seen to have possessed a sharp philosophical mind of his own. The logico-metaphysical tracts in the *Quaestiones et solutiones* that have come down under his name have been rather neglected by scholars: four of them contain the theory of universals which our previous chapters have claimed was Aristotle's. Outside what have always been classed as commentaries Alexander commonly considers problems which he judged Aristotle to have left unsolved or, perhaps more interestingly, unconsidered. When he thought his master would have agreed, which is not always, and when not is rarely stated — although I think that an experienced reader can sometimes supply a judgment. We are sometimes faced also with incompatible doctrines and no obvious means of deciding which was Alexander's.

Uniform account of universals

In the present case we are fortunate. The *Quaestiones* presents a consistent version which is also consistent with those of Alexander's *De anima* and his *Topics* commentary, these three works thus giving us a uniform account. Apart from them we find only isolated points; and among them there is apparently one which is not made in the uniform account but in any case is made (if at all) only in the spurious books of the *Metaphysics* commentary. As for his belief that it was Aristotle's account his commentary on the *De anima* which was presumably less independent is not extant. But we have the evidence of the *Topics* commentary; and this is complemented

by an Arabic fragment of the commentary on *Metaphysics* A (Frgm. 22 Freudenthal) shewing that he understood Aristotle to be a conceptualist.

This uniform account is to be got from *Quaestiones* I 3, I 11, II 14, II 28, *De anima* pp.83ff. Bruins and *In Topica* pp. 355-356 Wallies. It claims that forms, restricted here to generic and specific forms, are particular and 'in' individuals such as Socrates or this horse by being identical with them in the sense of being what they are. To destroy these forms is to destroy the individuals themselves, but not the species or genera as such; they exist only in conjunction with matter, which distinguishes one individual of a species from another and manifests itself in accidents. But we can abstract these 'material circumstances', as Alexander calls them; in other words we can think (of) them in abstraction. The genera and species qua universals are the contents of these thoughts; and universals as such exist only in thought. So determined is Alexander to reject realism that at one point he says that the universal is a 'mere name', but he makes it clear that he means no more than that it is a predicate which is a mental entity, not a predicate expression (*Quaestiones* p.78.18-20).

Aristotle had called the universal equally what was predicated of many and what belonged to many. From the second point of view it came to be referred to by the term 'common' rather than 'universal', for instance 'predicated as common'. In Alexander we also find this associated with the fairly fluid Platonic-Aristotelian term 'nature' as a concrete noun and crystallised as jargon.¹ The mediaeval 'common nature' is a slight though tendentious development. He is willing to talk either of a common property that is identical in members of a species or genus (*Quaestiones* 7.31, 8.5, 59.16) or of what would seem philosophically safer for a post rem theory, a

1. The immediate source of this usage is *Metaphysics* Z 7, 1032a24: 'that which is called nature in the sense of the form and which is specifically identical' (cf. ch. II ad fin., supra).

similarity between their forms or between the members themselves (ib. 7.31; *De anima* 83.12; *In Metaphysica* A 51.18, 21). But in fact the identity he means to attribute to in re forms is only specific or generic identity; to mark this the *De anima* passage calls them 'identical in a certain manner' (85.18; cf. also *Quaestiones* 7.31ff.). Similarly a reader of the commentary on *Metaphysics* B might be misled by the statement that the common property is 'one and the same in all the particulars' (p.211,3 Hayduck); he might suppose that it presumed the conventional picture of forms as universals in re. But 'one and the same' does not necessarily mean 'numerically one'. And later on, recalling a slogan of Aristotle's (*Metaphysics* B 999b34-1000a1), Alexander contrasts what is numerically one, which is the particular, with the common property that is attributed to the particulars and which is the species or genus (218.7-9).

Nevertheless at the end of *Quaestiones* I 11b the universal is said to be prior to any given particular on the grounds that to be a particular is to instantiate a (specific and a fortiori generic) universal. This is apparently accepted by Porphyry (*In Categorias* p.90). But from Alexander's standpoint it seems precisely to be confusing the universal with a *form*; in addition it seems to be inconsistent with the account he has just given of generic universals, as Simplicius, though probably with another text in mind, implies (*In Categorias* p.85). It comes at the end of one of a pair of alternative exegeses, and for both the reasons which I have mentioned I doubt whether it reports, or correctly reports, Alexander. At the same time it may be thought to expose what for realists, including Porphyry, is perhaps the Achilles heel of nominalism. The nominalist (conceptualist) interpretation of Aristotle has to tread delicately over the fact that both 'species' and 'genus' are ambiguous names of forms and universals. Anyway I have included the passages in question from Simplicius and from the *Quaestiones* (to which Porphyry does not add anything) in the Appendix.

Two formulas

It is impossible to determine how much of this had already been said. Boethius of Sidon (head of the Peripatos in mid-first century B.C.) was classed with him as having made the universal posterior to the individual (Dexippus *In Categoria*s p.45 Busse). But in any case it can be pieced together, according to my thesis, from the text of Aristotle. (Contrast the more traditional 'deviations from Aristotle' with which Karl Praechter, for example, labels their 'naturalism' and 'nominalism'.) What is encountered at least for the first time in the surviving literature is two formulas which were designed to specify this type of nominalism.

1. Universals are said to have their existence in thought, their subsistence in the particulars.

The usual expression of this is 'einaî' in thought, 'hypothesis' in the particulars (*Quaestiones* pp.59, 78; *In Topica* p.355; but *De anima* p.90 has ὑπαξίς for ὑπόστασις). So as to be literal I have therefore translated 'subsistence', in spite of a quite different use of this term by some later philosophers such as Russell. But a few lexicographical remarks may be useful. 'Hypothesis' refers here to concrete or physical existence. At *Quaestiones* p.106 the objects of mathematics do not have hypostasis because they are separated from physical bodies; at p.18 neither matter nor form on their own can be ἐν ὑποστάσει; but matter with form is ἐν ὑποστάσει καὶ ἡδὴ σώματι (pp.17, 75); the same is said of a genus in the absence of a species at *In Topica* p.161. Hence the contrast between ὑποστάσει and λόγος/ἐπινοία is equivalent to the Aristotelian contrast between 'in substrate' and 'in being/definition' (e.g. *In Metaphysica* p.375.32; Pseudo-Alexander *In Metaphysica* 677.1-2). All this is not entirely logical. The universals and the objects of mathematics are really on all fours, for neither exist as such in the physical particulars, so that either the universals should be denied hypostasis or the objects of mathematics allowed it. The term is being used with a slight, but not troublesome, equivocation. And it is easy to see how our first formula from Alexander

is exactly equivalent to the scholastic specification of Aristotelian nominalism as universals 'post rem (or as 'actus mentis') cum fundamento in re'. (For fundamentum as Aristotelian 'substrate/subject' cf. Boethius *In Isagogen*, ed.1, pp.6-7, 16.1 Brandt.) In a different context Latin writers naturally substituted the word 'substantia'. It should be added too that in later commentators ὑπόστασις is commonly a mere synonym of ὑπαξίς (e.g. Dexippus *In Categoria*s 21.29; Ammonius *In Isagogen* 11.26 and *In Categoria*s 51.57). And ὑπαξίς is commonly used both by Alexander and later to mean 'existence' in a broad sense, probably because 'ousia' as the abstract noun from 'einaî' had been pre-empted in philosophical usage.

Alexander's rather ambiguous usage was cleared up in an influential but tendentious manner by Boethius. 'Genera and species', he wrote, 'are subsistences in universals but possess substance in particulars, so that subsistences which sub-stand as particulars (subsistentias particulariter substantes) were rightly called "hypo-stases"' (*Contra Eutychen et Nestorium*, p.86 Rand-Stewart [col. 1344 Migne]). But 'subsistence' does not here refer to mental existence: it implies a third kind, which is supposed to belong to the form as such, because 'what subsists is that which does not need accidents in order to be' (ibid. p.88). Here again is back door Platonism. One should put it (as MAIOLI 1973, 248-50, does) alongside Boethius's account of the role of accidents, which do not seem to effect a determination of the substantial form. Certainly his logical commentaries are more Aristotelian. But I shall not be entering into the controversy over their historical origin and originality. (For that see particularly COURCELLE 1935 and 1948, SHIEL 1958 and a judicious survey in DE VOGEL 1971.)

2. Universals are said not to be things but accidental properties of things.

While not in Aristotle this formula follows from his definition of a genus as 'what is predicated essentially of many which differ in species' (*Topics* 102a31-32). Apparently trivial, this definition is crucial if we are to understand the distinctions

which were regularly made not just between classes with no members and classes with one member but between those with one member and those with more than one member. Animal, *Quaestiones* I 11 argues, is something which signifies animate sensible substance: but it is not per se universal for it would exist even if there were only one animal – what would not exist being the genus. In fact it exists in many specifically different animals, and its being universal consists in this accident. The argument is designed once again to prevent us from seeing forms as universals in disguise. But its important implication, though not stated by Alexander, is that the existence of a universal is contingent to a degree not always understood. Simplicius (in the sixth century) objected to Alexander's having claimed that the sun, moon and earth were examples of individuals which exist without a universal (*In Categorias* p.85 Kalbfleisch). But Simplicius did equate form and universal, and his objection rests in effect on assuming that the universal is what is predicable, not predicated, of many. See Appendix.

Our second formula from Alexander is found also in *Quaestiones* I 3, and echoed in the commentaries on the *Topics* (p.355.17-20) and on the *Metaphysics* (p.234.33). It is interesting historically because it re-appears in Avicenna, and, by way of Avicenna, verbatim in Thomas Aquinas's *natura/essentia cui accidit universalitas* (*De ente et essentia*, ch.3; for Avicenna cf. ROLAND-GOSSELIN 1948, 26-27n.). I suspect that it has reinforced a notion which I complained of as opening a back door to Platonism. This is the notion of a nature or essence which is in itself neither universal nor particular, and which is neither in the mind nor in things. It is the 'essence per se' which is recognised – I should prefer to say, invented – by Avicenna and Aquinas (see DE RAEYMAKER 1956, 122; and Aquinas loc.cit.). But so long as it is not supposed to go beyond the meaning of Alexander's formula it does no harm.

These formulas may seem a rather scholastic contribution to the understanding of Aristotle. But if we turn to the problems which Alexander judged him to have left unsolved or un-

considered, we can select three of those which we have met in our earlier chapters. For Alexander had ideas of his own on them.

The problem of abstraction

First the problem of abstraction. It is well known that Aristotle said little about it: but his technical use of the term, for example to describe the objects of mathematics, leaves no room for denying that he supposed abstraction to be a capacity of thought and that it consisted in isolating form from matter. Such a form *is* a thought, or in a more familiar terminology a concept and so a universal. But the terminology of abstracting lends support to – if indeed it does not entail – the conventional picture of in re universals. It makes no difference (as some have suggested it does) if we speak like Alexander of abstracting the material concomitants from the form rather than the form from the material concomitants. For the universal is pictured as what is then left: but what will have been left, it seems, must have been there before the abstracting, only concealed perhaps. The abstracting intellect would simply be finding the universal in the way that Locke seemed to suggest that we found the idea of rational two legged creature in Peter and Paul by ignoring their different heights, personalities and so on. Alexander implicitly avoids this danger by qualifying the notion of universals by abstraction, or rather quietly replacing it with a notion of their *construction* by a thinker who uses abstraction for that purpose. Genera are 'the product of whoever constructs them by means of this mental separation of the accompanying characteristics' (*Quaestiones* II 28 ad fin.). It is true that, rather than 'construction', his term, *συμβεβηκός*, like the parallel 'synthesis of similars' in his *De anima* p.83.12, may suggest the later theory of 'collectio' criticised by Abelard. But there are other indications that he was very conscious of the difference between the material and the end product of abstraction. This is of course in line with the Aristotelian description

of a 'productive' (rather than the conventional 'active') intellect. Alexander certainly believed in a single, divine, active intellect which is 'coming to be in us from outside' whenever our thoughts are matterless forms (*De anima* p.90; *De intellectu* p.108). But the preliminary actualisation of the intellect, as an intellect in habitu was not, according to him, the work of that active intellect. This abstracting of the forms was done by our own 'material', i.e. potential, intellects (*De anima* pp.84 ff.; *De intellectu* p.110). I mention this because it bears on the question how far Alexander and the Renaissance Alessandrists did deviate from Aristotle and because some widely read historians, such as Gilson, have gone astray over it.

The extent of the prime mover's thought

Living in an age of religious philosophies and challenged by Stoic determinism, it would have been hard for a cultured man to have been content with the obscure and non-committal position in which Aristotle left the question of the exact range of God's intellect. For on this depends the range of providence. Apart from the *De fato*, which does not contribute much, several of the *Quaestiones* are about providence and can be attributed at least to Alexander's pupils. They mostly agree that providence extends directly to the preservation and welfare of species, not individuals, and (e.g. *On providence*, THILLET 1960, 321) that Aristotle taught this. But II 21, p.68 tries out an argument that it extends to particulars because the universal as a single property exists (or consists) in the particulars, to which it will therefore be communicated by the universal. Alexander would have been quite capable of explaining the sophistical character of this half truth, and very likely did. (Cf. the entertaining logical exercise of *Quaestiones* I 23.) For the question how far the prime mover's thinking extends we have to go to a tract *On the principles* which has survived only in an Arabic version of a Syriac version, and for which I must rely on the French translation in BADAWI 1968. If its author is not Alexander it is someone close to his views.

As I understand it the thesis which concerns us, and whose parts I have artificially numbered for that purpose, is as follows. All the celestial spheres have souls or intellects. (i) They have self-knowledge, and they move themselves because the prime mover is the object of their love; but the object of their love, or desire, must also be the object of their thought. (ii) When thought is actual it is identical with its object; objects of thought which contain matter can be identified with the thinking of them, but only after the matter has been abstracted from them. (iii) The best object of an intellect is not that which is thought of as multiple: he who thinks many things in a single continuous thought is the best thinker. (iv) God's intellect, which is the noblest thing there is, has only itself as object of thought. For (a) since thought and object are identical it cannot have something else, which would necessarily be inferior, instead as object without producing a contradiction. (b) If it had something else in addition as object, it would have to pass from not thinking it to thinking it, and this would be incompatible with its being wholly in actuality; (v) in fact anything other than itself would be a form that had to be abstracted from matter, and involve change or passage on the part of the thinker. (vi) This is not, however, to say that the prime mover does not think, by its reason, of the things which flow from the motion of the celestial sphere, which is the first of the things moved by it; (vii) it is not motion per accidens. (viii) This eternal movement of the divine body, which comes from desire for the best of the things there are, ensures the order and eternity of the whole, though not as individuals but as species.

The conclusion, (viii), is unquestionably good Aristotle. When it was part of his thesis about providence Alexander, no doubt with Stoic opponents in mind, was content to point out that the sublunar world depends partly on celestial causes (ap. Cyril *Contra Julianum* I 3, P.G. vol. 76, 625b-c Migne; *On providence*, pp.320-21 Thillet). Here we might expect to find the more difficult project of justifying (vi). It seems most natural to take this part of God's awareness — 'les choses qui découlent du mouvement du corps divin' (BADAWI 1968, 135) — to

include at least some phenomena, though of course only kinds of phenomena, of the sublunar world: let us say, the existence of seasons. Indeed if it meant something quite abstract, like the preservation of species, reason could not deduce even this, without also knowing at least the movement of the ecliptic, as Aristotle points out in the chapter our author has in mind (*De generatione et corruptione* II 10). But either (vi) is an unargued assertion or there is an argument for it, if only implicit. In an attempt to find such an argument let us ignore problems raised by contingency and non-deductibility, the modern distinctions of which from necessity and deductibility are in any case often claimed not to be Aristotelian.

There is in fact an argument which can start from the inference in (i) that the intellects of the spheres will have the prime mover as at least one of their objects. (It would, as I suggested in chapter II, be more correct to speak here and throughout of the contents rather than the objects of thought.) The familiar identity of act and object of thought in (ii) will imply the identity of the prime mover's thinking with that of the spheres, since the prime mover qua intelligible is also an intellect. But identity is a symmetric relation, so that it will follow that the prime mover's thoughts will be those of the spheres, while remaining equally true that they will be only of his own thoughts. Assuming that the celestial sphere knows what 'flows from its own motion', it will also follow, as (vi) states, that this will be known to the prime mover. If the assumption cannot be made, because more than the motion of the outermost sphere would be involved, then we may perhaps fall back on (i); for, although they cease to be mentioned later (i) expressly covers all the spheres.

It has to be emphasised that if this was Alexander's argument it is not explicit. But there are two good reasons why that should not deter us from attributing it to him. Most important, the conclusion (vi), which it is to be an argument for, is in no way offered as a conclusion of the tract, *On the principles*, but more as an aside. Secondly, the tract may be from the pen of someone who was reporting Alexander's views

but did not even know the argument. But it is equally to be emphasised that if (vi) is Alexander's view we may choose to slide over the absence of an argument for its truth, but we must expect him to have known an argument for its possibility. In plain terms this is the question how (vi) God's thought of the celestial sphere's, or spheres', thoughts is compatible with the arguments of (iv) and (v) to the effect that his thoughts can be of nothing but himself. As for (v'), if the souls of the spheres are supposed to have a material accompaniment one could say that its abstraction will have been done by themselves and not by God and so not imply change on God's part. More generally the argument that I have constructed, if it is valid, answers the question of possibility a fortiori.

But it is doubtful whether it is valid. For the identity of God's intellect and a sphere's intellect occurs only when the former is the object, or content, of the latter; and this one would expect to mean sole object; but in that case the sphere would not be providing God as it were with thoughts of its own. On the other hand a sphere's desire is not intermittent; and therefore its thought of the prime mover and therefore its identity with the prime mover are not intermittent. This might imply that the prime mover would not be its sole object. For what would its self knowledge which is affirmed in (i) consist in? But it would seem to be at the price of implying that there is only one separate intellect.

Objections to the genus as matter

What is not subject to speculation is Alexander's contribution to the problem of the genus as matter. The debate which formed the subject of a digression in chapter III is not just a modern one. *Quaestiones* II 28, which is entitled 'That matter is not genus', shews that some ancient readers must have been close to interpreting the whole function not to say the concept of an Aristotelian genus as identical with that of matter — much as some modern readers have been understood to be by

their opponents. The tract confines itself to the logical relations between genus, matter, and form or species. Whoever wrote the words, the content — as well as mastery of the subject — is such that it must be credited to Alexander. It was one of the components of the uniform account of universals. But it is not without difficulty, and I offer a summary.

It starts by naming three characteristics shared by matter and genus: each is (i) common to many things, (ii) prior by nature to those things, (iii) is differentiated by being combined with some form. But the two differ in the following ways.

1. Their relations to form or species are not the same. For (a) matter is related as substrate, genus as predicate. (b) The particular instances of matter are common to its forms since each is receptive of the opposites among the qualities; but the particular instances of a genus are not; the animal in Socrates cannot be in anything else.

2. Matter is real, genus qua genus, i.e. generic universal, exists only in thought.

3. The genus possesses only specific indestructibility, i.e. the continuous cycle of reproduction: matter is 'numerically' indestructible, i.e. in respect of particular instances.

The next point presumably refers to Aristotle's so called coupled terms, whose definitions have to include matter or substrate. His standard example was 'snub' contrasted with 'concave', but he claimed that this characteristic applied to everything in the physical world. Alexander probably has in mind *Metaphysics* Z 10 and 11.

4. The genus in a composite or substance [like the animal in Socrates] is itself a composite of form and matter. Animal signifies a certain form with matter. This does not mean, however, that it is one element of the composite, viz. the matter, but that it is the essence of animal to be composed of form and matter. In general matter is separable from form because matter survives destruction of the form [as when a tree is burnt to ashes]. But this matter [i.e. the matter that is included in the meaning of the genus] is not thus separable, for

it does not survive the destruction of genus in or qua particular substance [like the animal, Socrates].

5. The matter which receives the species is, qua matter, free of specific form and receives the whole of it: but the genus [or superordinate species] receives part of the specific form, viz. the differentiae, the remainder of that form having already completed [or formed] the genus.

6. Nor is the genus which receives the differentiae a genuine substrate but an abstraction. For while matter too qua matter has no actual existence it is the immediate principle [Aristotelian 'cause'] of the composite individuals: but the genus is the principle of what has to be abstracted [viz. the species] from those individuals by someone's thought [so the genus is at two removes from reality, matter at one remove].

PART II: THE NEOPLATONIC COMMENTATORS

The large majority of Greek commentators after Alexander were Neoplatonists. From an historical standpoint they are essential to the understanding of the mediaeval treatment of our subject. What this treatment owed to them was fundamentally the contribution of Porphyry reinforced by the work of Boetius. For Boetius not only made a Latin translation of the *Isagoge* — the so called *Quingue voces* which was part of the trivium and quadrivium — but produced two editions of a commentary on it. Porphyry's *Isagoge* and commentaries on the *Categories* had enabled the Aristotelian (non-formal) logic to take and to retain a canonical position in the Platonic schools of philosophy and the concepts of that logic to be understood and taken for granted by students who owed their allegiance to Plato. The uncompromising position of Plotinus (see *Enneads* VI) was not typical. In fact these later commentators' positions of form and universal look much like that of Alexander. Only occasionally does the cloth of their Neoplatonism shew through the unchanged pattern. Universals are abstracted forms whose existence as universals is in the mind. (There is a regular term for this 'post rem' characteristic, *ὑποκειμένης*); they depend on particulars not because they are in them but because they are predicated of them; potential existents, species and genera become actual when they are realised by — that is, as — particulars.

Why did they present an Aristotle who, in contrast with their Plato, was not distorted or allegorised but interpreted as we should say objectively? Certainly they were following what they read in Alexander: but to say that is to repeat the question, not answer it. It is often claimed that the fifth and sixth century Alexandrians (Ammonius, Asclepius, Philoponus, Elias, David) had a special hard-headedness and aversion from 'speculative' Neoplatonism. But the simpler truth is that in the first place all Neoplatonists thought that Aristotle did accept substantial Platonic forms or something like them in Book A

of the *Metaphysics*; and secondly Aristotle's other works were studied in the Schools before Plato and the necessary adjustments of them would be made later (cf. Dexippus *In Categories* p.45. 29-31). A similar comment is made by Boetius when he points out that his account of the status of universals, which follows Alexander (and, he could have added, Porphyry) is only Aristotle's: for it is the *Categories*, he says, which they are expounding, but to choose between Aristotle and Plato belongs to higher philosophy (*In Porphyrii Isagogen*, ed.2, p.167).

Three types of universal

Such an adjustment or assimilation was made possible by the division, which became standard from Middle Platonism onwards, of 'the universal' into three kinds:

- (i) the unity which is prior to the many
- (ii) the unity which is in the many
- (iii) the unity which is predicated of (*ἐπ'*), and so posterior to, the many.

(i) alone is both independent of matter and self-subsistent, a matterless form to which Aristotle committed himself only in *De anima* III and *Metaphysics* A; (ii) is the species or genus which a particular or individual substance is and what Aristotle normally means by a form; (iii) is an abstraction of thought and is the generic or specific universal which we predicate of particular substances. This became a Neoplatonic model used to fit the semantics that was found in the *Categories* and the epistemology that was found in *Posterior Analytics* II 19; and naturally the Neoplatonic side of the equation was liable to vary with the distinctions and complications that generations of Neoplatonists added to their hypostases. For example, the class that falls under (i) was most commonly identified with the contents of the Demiurge's mind (this was particularly the tradition in Alexandria): but since the Platonic form had itself been divided, as it were, into an unparticipable and a participated unity, (i) will also be found identified with the unparticipable and (ii)

with the participated (as in Simplicius *In Categories* pp.69, 82-83). This in effect moves the Aristotelian form up a grade so that it is a universal in its own right. I suggested earlier that it was no accident that Simplicius treated the universal as what could belong to a many, rather than does so belong, for on his interpretation of (ii) provided there is one man there is a universal humanity.

Is it this which suggested to some mediaeval philosophers — for only some accepted it — the conventional picture of in re universals in Aristotle? Did the Neoplatonists by reintroducing the notion of participation, which Alexander rejected, reintroduce the possibility of a realist interpretation of Aristotle's theory? For Boetius, the intermediary, was markedly ambiguous. In fact however they were already set on this path by the three-fold division of the universal which had been current in the Middle Academy. Just because it passed for a division of the universal, whether identified under that name or as 'the common', it made not only no: (iii), the concept, a universal but *also* no: (ii), the in re form. The result is an uncertainty, conscious or unconscious, about the status of the form. For example we find even Simplicius stating that while the genus or species exists only as this and that animal or man, say, the genus or species which is predicated in common of those particulars is nothing but a concept abstracted from them — and more than that is not a 'this' at all but a 'such' (*In Categories* p.84.24-31). And this, which is neither more nor less than the way in which Aristotle rejected common natures in *Metaphysics* Z 13, implies that the 'single undifferentiated essence/substance' that is 'in' the particulars (11.26-27) is one generically or specifically, not numerically. But here Simplicius has simply extracted a passage from Porphyry in order to deal with a standard problem of exposition in the *Categories* (Porphyry *In Categories* pp.90.29 - 91.5; cf. Appendix below). On the other hand we find Philoponus, probably when he is *not* faithfully representing the more Aristotelian exegesis of Ammonius, treating the form as though it did make a common nature in the particulars (*In Analytica posteriora* pp.133.17 - 134.2).

Among the points which they felt that Aristotle had left obscure it is natural for Neoplatonists to have fastened on the priority of the particular to the universal. The question was regularly dealt with when it had to be explained why the *Categories* had called species and genera 'second substances'. Nor was it suggested merely by a difference of metaphysical standpoints. Aristotle himself agreed to the general criterion that, if the destruction or removal of x entailed the destruction or removal of y, then x was to be called 'prior in nature' to y. And the Peripatetic commentators had noticed that the destruction of the individual, say Socrates, did not entail that of the universal or species man, and that this was inconsistent with the individual being prior in nature to the universal (cf. Dexippus *In Categories* p.45.27-29). Porphyry's answer was that the 'first substance' which was prior to the universal meant the whole class, in other words not any instance of the universal but every instance (*In Categories* pp.90-91; see Appendix below). Dexippus (in the fourth century) — who, exceptionally, was influenced by Plotinus — and Simplicius objected to either version of 'first substance' (ibid. p.45; Simplicius *In Categories* p.85.1-17); and Simplicius's argument is sufficiently ad hominem to be interesting, for it is claiming in effect that the crucial distinction between a fundamentum in re and a universal post rem is incoherent (see Appendix below). This would be in line with some of the criticism I referred to at the end of the previous chapter.

Did the commentators after Alexander of Aphrodisias really accept the thesis that Aristotle himself understood forms to be particular? One may be told that the question is anachronistic. It is not. The authority behind the tradition in Alexandria, Ammonius, taught that universals were dependent on particulars not because they were in them, as accidents are, but because they were predicated of them (*In Categories* pp.40.19-21, 41.13-15). Notice that he does not say, as many modern scholars say, that they are dependent on particulars because unlike accidents they are (in some way) identical with particulars. In another place he expressly denies that the *animal*

or *rational* in me is something 'common', for it is qualified, 'circumscribed' as he puts it, by my accidental properties. And accidental properties such as some object's white colour or Odysseus's scar must be peculiar to their owners, he explains with rather less than philosophical cogency, otherwise the scar would not have enabled Odysseus's nurse to recognise him (*In Porphyrii Isagogen* pp.63.19 - 64.2).

Again, we have evidence from a more curious context, that of Byzantine theology. In the sixth century the Church maintained that there were two natures in Christ, the divine and the human. Philoponus defended his monophysitism by the following argument which he understood to be Aristotelian, and which I rationalise a little. (i) Person = hypostasis = individual substance; (ii) nature = (a) the genus or species *qua* universal, which exists only in thought, or (b) the genus or species which exists outside thought; but (b) exists only as identical with some individual(s); therefore (ii) (b) = (i). Therefore, if there are two natures in Christ there are two persons in Christ; but everybody agrees that there are not two persons in Christ. (See Leontius Byzantinus *De sectis*, P.G. vol. 86 i, 1232D-1233B Migne; Joannes Damascenus *De haeresibus*, *ibid.* vol. 94,744.)

All too often however we find our commentators describing the fundamentum in re simply as 'the common', say animal, man or colour in particulars. Did they have in mind a form which is a common nature, or a form which is numerically unique in each particular but specifically or generically identical? It is likely that with varying degrees of awareness they often left the question open. I suggested that some tendentious terms of reference, namely three types of universal, allowed if it did not bias them towards the possibility of common natures. But it would be wrong to claim this as more than a contributory cause of what I have described as the conventional picture of Aristotelian forms. I hope it has emerged that that picture owes something too to the inherent difficulties of the alternative picture.

Accidental forms and the principle of individuation

One of the major gaps in the Aristotelian picture was any direct account of the relation between accidental forms and their universals. Nor is the gap filled, so far as I know, by any of the Greek commentators. I argued that Aristotle intended them to be treated analogously with substantial forms, so that they would subsist as white things, minds knowing grammar and so on, and be abstracted in the same way as the universal forms of species and genera. A casual mention of them in Eustratius seems to imply that this was also the traditional view (*In Analytica posteriora* p.295.5). Eustratius was writing as late as the twelfth century: but no one who has sampled Byzantine lectures will be unaware how century after century could pass without change to their content.

Accidents are the effect of matter. Matter is the principle of individuation. Alexander seems implicitly to have assumed (as does RORTY 1974 explicitly) that it was in its manifestation as accidents that matter individuated. Often the later exegesis even drops the reference to matter. The locus classicus was a sentence in Porphyry's *Isagoge* which defined the individual as a unique bundle of properties (*ἰδιότητων ἄθροισμα*, p.7.21-23). Since the book was expressly an explanation of Aristotelian concepts this formula was taken to represent Aristotle. Indeed if we can trust an alleged quotation of him Proclus characterised it as a philosophical error of the Peripatos (Olympiodorus *In Alcibiadem* p.204 Creuzer). For the wording itself is Stoic, and so is the commonest alternative to it, 'αὐτοδδομή of qualities', which Dexippus takes to be synonymous with the Stoic category of 'individual quality' signified by a proper name (*In Categorias* p.30.23-24; cf. Simplicius *In De anima* pp.217.36 - 218.4).

Is such a set of properties unique because it could not describe another individual? No: Porphyry meant only that it did not describe another individual. When he writes (*loc.cit.*), 'the same properties will not belong to anything else' he means, '... cannot, if they are individuating (unique)'. Boetius takes the

same position in his commentary (*In Porphyrii Isagogen*, ed.2, p.235). So it does not follow that every individual necessarily has such a set. This had already suggested a well known paradox in Stoic theory. In his tract on the Trinity Boetius adds that, while accidents do individuate, in the last resort they must include place (*De Trinitate* i ad fin.). For many Schoolmen this kind of difficulty was to cast doubt on the Porphyrian formula as a correct interpretation of Aristotle.

APPENDIX

ILLUSTRATIVE TEXTS

Universals and definitions

Alexander Aphrodisiensis *Quaestiones* I 3, pp.7,20ff. Bruns

What definitions are of

Definitions are not of the particulars, for the existence of these as whatever they are goes with certain accidents, which are not always the same but changing and which require perception rather than a definition to identify them; nor on the other hand are they of some universal which is separate from the particulars and which is some incorporeal and eternal nature – for how could two-footed be anything incorporeal or mortal be eternal? (But when we define man we say either ‘two-footed animal’ or ‘mortal rational animal’.) What definitions are of is the universals in the particulars, or rather the particulars in respect of the universals in them. In the particulars some features are peculiar to them or particular, but [omitting &] in all those of them which contain common features, indistinguishable in respect of their own nature, these mutually shared features are responsible for the fact that all the particulars which contain them are of one and the same nature. For mortal rational animal understood with the material circumstances and differences that go with the existence of the particulars, and that vary from one to another, makes Socrates and Callias and every particular man. But understood without the material circumstances it becomes a universal, not because it is not in each of the particular men (for the features that are peculiar to them go with the material circumstances) but because it is the same in all of them. It is this kind of thing – universal just in so far as it is common to several particulars – that

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p.8

definitions are of. It follows that definitions of such particulars are not of some incorporeal nature separate from the particulars. For example, the definition of man, two-footed footed animal, is a universal, *in* all the particular men and complete in each, common to them, i.e. universal by being 'the same in many' but not by each of the many 'participating' or possessing a part of it; hence each man is two-footed footed animal. It follows that definitions are not of universals qua universal either, but of things which have the incidental property of being universal in respect of some given nature. If there were only one man in existence the definition of man would be the same. For it is not the definition because it is possessed by many men, but because a man is a man in respect of that nature whether it is shared by many or not.

Definitions are said to be of thoughts or universals on the grounds that it is a function of thought to separate man from the rest of what goes with his existence and understand him *per se*; the definition of man, who exists only with those further properties but is thought of without them and therefore not as he exists – such a definition seems to be of a thought and a universal, since separated from the accidents it is this sort of thing that as an object of thought in each particular is something universal, or the same in many.

Universals are imperishable on account of the 'eternity by succession' of the particulars in which they are, for in the generation of particulars this 'one and the same' stays permanent in all of them. For universals are such as to have their being not just in the particulars which exist simultaneously and thereby make them universal, but in everything which belongs to the same species. For this reason there is nothing to prevent something mortal from being eternal: it is eternal while being mortal as a particular.

Alexander Aphrodisiensis *Quaestiones* II 14, p.59.1-20 Bruns

If universals are concepts but concepts are not bodies, (i) the universal will not be a body, since it will also be the concept of the universal body, and (ii) the definition will not be a definition of body

One might say that universals are not thoughts or concepts simpler but thoughts *from* and *about*, viz. from and about the particulars. They come from the latter, which are not universals, as a result of those particulars being abstracted by thought; differing among themselves *per se* the particulars are particular, and when they are abstracted what remains is the thought or concept.

Or one might say that that which is universal in all the particulars is that which, because it does not subsist just as it is thought, seems to have its existence in the things it is predicated of. Definition is of this kind of thing, viz. what is thought in this way and seems to exist as a result of the thought; it is not of the thought or concept but of the object of what is thought in this way. For the definition informs us of the concept which comes from the thing which is being defined. Concepts are signs of things, while verbal expressions are signs of the concepts *from* things. So even the definition of body will inform us of the concept that we are calling 'from' the body by an abstraction of the attributes of particular bodies, for when these have been abstracted what remains is universal and identical in all bodies. And since it is informative of the nature or essence of body it will not be a definition of something incorporeal; at the same time it will not follow from the fact of *its* being incorporeal that the concept is called something absurd [viz. corporeal, or read *ἀπρόν*]. For a definition is verbal but body is not . . .

Universals post rem

Alexander Aphrodisiensis *Quaestiones* I 11b, pp.22.21 - 24.22
Bruns

What is meant in Book I of the De anima by 'for the universal animal is either nothing or posterior'?

There was a question what was meant by Aristotle's statement in Book I of *De anima*, 'for the universal is either nothing or posterior' [402b7-8]. In my commentary on that book I said that he may have been using *animal* as though it exemplified universals which apply to soul and to anything which is supposed to contain a prior and a posterior, so as to explain their behaviour. For he was saying that we must take care not to leave it unconsidered whether there is only a specific difference between souls or a generic one as well. Once this was decided we would not miss the question whether soul has a single universal, or generic, definition; if they were to be non-homogeneous it would follow that each kind of soul has its own definition – what is common or universal being then in name only, not fact [reading I.2 *ὁνόμεναι* and *πράγματι*]. But in order to shew how each kind of soul would have its own definition he used examples of things which fall under one genus, which made his statement less clear. Suppose, he is saying, horse, dog, man and god were not homogeneous, animal would be their quasi-genus, but it would follow that each of them has its own definition, while the *animal* which is predicated of them in common either signifies no genuine nature but is equivocal, or alternatively if it does so signify it will be in the same case as apparently holds for the terms with several uses and which contain a prior and a posterior. For what is predicated in common in such series does signify some nature but not one which applies identically to all the things it is predicated of – which is why it is posterior to what falls under it. The removal of something predicated as a genus removes all the species under it, none of whose removal removes *it*; consequently it is prior

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by nature. But in the case of series which contain a prior and a posterior the removal of the first term of which it is predicated removes what it signifies, and consequently it is no longer prior but posterior. Soul will be shewn by him to be this type of thing. It is therefore reasonable for him to propose for consideration the question he did, although presenting the argument in terms of *animal*; for when he mentioned the species under it he added, 'and similarly in the case of any other common predicate', shewing that whatever is thus predicated in common of things whose genus it is not will either be nothing at all or else posterior (as has just been said).

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p.24

This then was said in the commentary. It is however possible to expound the statement as applying to the case of animal and what are genuine genera as follows. Since genera are universals and a universal is *of* so and so they must be something to be universal. For obviously something that is a universal and a genus and predicated unequivocally cannot be nothing. There is some subject of which the universal is an incidental property: but while that of which it is an incidental property is a thing, the universal is not *per se* a thing but an incidental property of a thing. E.g. animal is a thing and it identifies a certain nature, for it signifies visible animate substance, but as for its own nature it is not a universal; for it would not cease to exist on the supposition that there were only one animal. But being what it is [viz. a genus] it belongs to it to 'be in many' and a 'many' whose members differ in species. It follows that this is an incidental property of it. For what does not belong to something's substance is an incidental property of it. Now since the genus is in this way not a thing but a property of a thing, Aristotle said 'or else it is nothing' since it is not an existent simpliciter. For wanting to refer to the genus animal he added 'the universal' to the term 'animal' and wrote, 'for the universal animal . . .'. Thus animal qua genus is either nothing because it does not signify anything that is a nature in its own right but

is an attribute which some thing comes to have, or alternatively if one were to call something with that kind of existence an existent it will be posterior to that which it belongs to. The thing must exist before its attribute. That the genus is posterior to the thing is now clear. For when there is animal [i.e. one or more actual animals] it is not necessary for there to be a genus animal – we can suppose that there is only one animal since the universal is not contained in its substance – but if there were to be animal qua genus there would necessarily be animal as well. And if visible animate substance were removed there would be no genus animal (for the non-existent cannot 'be in many'), but if the genus animal were removed it is not necessary that visible animate substance would also be removed, for as I have said it could still be in one individual. This is the explanation of the statement, 'it is either nothing or posterior'. Nevertheless, while posterior to the thing that it is a property of, it will itself be prior to each of the particulars falling under it. This is because being a genus consists in 'being predicable of many with specific differences' while being particular consists in being one among many under some unity, whether genus or species. Hence the removal of one particular under the universal does not entail the removal of the universal, for this is in many: but if the universal were removed not one of the particulars under it would exist, their existence consisting in their possession of the universal.

A Neoplatonic criticism

Simplicius In Categorias pp.84.12 - 85.17 *KalbFleisch*

But if by the removal of man we have removed the individual men and by the removal of animal man, but not conversely, and we said that what removes but is not removed is prior by nature, how can the individual substances be called first substances, while the species are

20 called second and the genera third? . . . As for the argument from removal, the question was not correctly raised. It is not the single individual such as Socrates that is first substance, but all the individuals under man, and consequently each one; and if all the individuals are removed the universal man will have been removed. But it is also the case that the concepts of the individuals come from the individuals, that is, whenever we separate out the common properties or universals from the individuals. For Socrates and Dion may differ from each other in many qualities, but there is none the less in them some single undifferentiated essence [ousia] in respect of which the universal in them is envisaged, and which is conceived as about the individuals and in the particulars. Again, the individuals are what cause the universals to exist. For the prior existence of the individuals consists in each being a 'this': but the universals supervene, each being the concept not of a 'this' but of a 'such'. In fact if the individuals were removed there would be no universal, for the universal possesses the nature that completes the individual substances

p.85.5 Alexander however would not have found such defences [i.e. of Porphyry's] cogent, although he too wants the individual substances to be prior by nature to the universals. Without the existence of the individuals, he says, it is not possible for any of the rest to exist: but his belief is fallacious. Even if the common or universal essence has its existence along with the individuals, nevertheless existing per se it completes the substance and existence of its subjects. It would be better to say that, possessing per se the supreme substance and existence, the universal shares itself out to individuals as well, and is thereby superior 'by nature' to the individuals. But, says Alexander, it is impossible for there to be anything universal without the individual, but there are individuals without a universal: e.g. the sun, the moon and the world. To which one should reply that an independent set of circumstances

has brought it about that in each of these cases the matter has received the specific form only once, but the form is, none the less, so equipped as to be capable, if there had been many suns and moons and so on, of giving itself to all of them.

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