HOW
THINGS
ARE

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Introduction

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I

One of the earliest and most influential treatises on the subject of this volume is Aristotle's *Categories.* Aristotle's title is a form of the Greek verb for speaking against or submitting an accusation in a legal proceeding. By the time of Aristotle, it also meant: to signify or to predicate. Surprisingly, the "predicates" Aristotle talks about include not only bits of language, but also such nonlinguistic items as the color white in a body and the knowledge of grammar in a man's soul. (*Categories* l/ii) Equally surprising are such details as Aristotle's use of the terms 'homonymy' and 'synonymy' in connection with things talked about rather than words used to talk about them. Judging from the evidence in the *Organon,* the *Metaphysics,* and elsewhere, Aristotle was both aware of and able to mark the distinction between using and mentioning words; and so we must conclude that in the *Categories,* he was not greatly concerned with it. For our purposes, however, it is best to treat the term 'predication' as if it were ambiguous and introduce some jargon to disambiguate it. Code, Modrak, and other authors of the essays which follow use the terms 'linguistic predication' and 'metaphysical predication' for this.[1]

The sentence 'Socrates is a man', used to say something about Socrates, is an example of *linguistic predication;* and — depending upon how one chooses to parse it — the word 'man', the phrase 'a man', or the phrase 'is a man' is a linguistic predicate. Someone who is interested in linguistic predication would be concerned with the syntax and semantics of the sentence and the bits of language which go to make it up. In contrast, Socrates (the person, not the name, 'Socrates') being a man is an example of *metaphysical* predication, as are such items as Whitey Herzog spitting on the dugout steps; Aubrey Bogen being a redhead (and her hair being red); Carlota Bogen being bigger than a breadbox and younger than her uncle; Thelonius Monk dying; the inner city of Claremont,

California, undergoing a mild economic upswing; etc., etc. Someone who is interested in metaphysical predication would be concerned with what kinds of nonlinguistic things there are and how they stand when various sorts of linguistic predications are true or false. That linguistic predication is different from metaphysical predications should be clear from the fact that the things we talk about are different from the words we use to talk about them.

It will be obvious to readers of this volume that Plato, Aristotle, and other predication theorists it discusses were primarily concerned with metaphysical predication. They paid close attention to linguistic predication when they believed it provided data requiring an account, and clues an ontologist should take seriously. But they did not believe that metaphysical predication is uniquely determined by the syntax or semantics of linguistic predication, let alone that a theory of linguistic predication could take the place of an ontology. That is why this book is called '*How Things Are*' instead of 'How We Talk about Things'.

II

While it should not be difficult to see the difference between linguistic and metaphysical predication, the connections between linguistic and metaphysical or ontological investigations are complex and hard to make out. The problem is seeing just how ontological or metaphysical conclusions are warranted by facts about linguistic predication.

An extreme view, suggested by such logical positivist writings as Carnap's "Empiricism, Semantics, and Ontology"[2] is that sentences which purport to make claims about metaphysics are meaningless unless understood as disguised or misleadingly phrased claims about language. Thus the apparently ontological thesis 'there are numbers' is, Carnap thought, to be understood as recommending us to speak a language which includes numerals, variables for which they can be substituted, etc. And, if meaningful, the sentence 'there is a prime number greater than 100' should be understood as saying of some specified language that at least one value of the function 'x is a prime number greater than 100' is provable in that language. This view arose from constraints (e.g. that no sentence should be

considered meaningful unless it is either empirically verifiable (or confirmable) or analytic) which are, for the most part, no longer accepted.[3] None of the authors represented in this volume would subscibe to it.

Another extreme view is that an adequate account of the syntax and semantics of a natural language would show us straightway what items should be included in an ontological inventory and what kinds of connections between them constitute metaphysical predications. The idea is to take a sentence, say,

(1) Alice's nose is red,

list the items which would be contained in its intended model if it were true, and classify these extra-linguistic items into groups which parallel the syntactical categories to which the parts of the sentence belong. Thus, we might say that if (1) is true, the world contains a nose belonging to Alice, something which corresponds to the predicate 'red', and a relation (e.g. inclusion) between the two.

But it's not that easy. Ordinary English provides sentences whose truth conditions are the same as those of (1) but whose syntactical forms seem to be quite different from one another. Among these are

(2) Red is the color of Alice's nose,

(3) The color of Alice's nose is red,

(4) Alice's nose is a red nose, and

(5) Alice's nose has the color red (has a red color).

on the view just sketched, we would have to say that a world in which these sentences are true contains not only a relation corresponding to the word 'is' in (1), (2), and (3), but also another relation corresponding to 'has' in (5). Furthermore, the 'is' relation would have to connect different items (red and the nose) for (1) than it connects for (3) (red, and the color of the nose).

The resulting ontological bloat could be avoided by finding a canonical form for the linguistic predication. We would look for a sentence in English, or an artificial language (e.g. predicate calculus notation) whose syntax mirrors the real structure of the predication. This suggestion is by no means anachronistic. Aristotle selected

sentences from Greek and sometimes invented technical locutions for this purpose. Ockham and Buridan believed that the structures of metaphysical predications are mirrored by a language of thought whose syntax differs from that of spoken languages. But the grammatical sentences of a natural language can be rendered into different formulae of different syntactical forms. On the program under construction, different ontologies should result from the selection of different notations as canonical. To pick the right notation, the ontologist would need guidance which syntactical theory cannot provide all by itself.

III

A natural place to look for guidance is semantics. Familiar accounts of truth characterize 'is true' as a predicate to be applied to sentences of a language, *L,* just in case they stand in some specified relation ("satisfaction", for example) to a set of objects, *O,* whose members constitute the intended model for *L*. If *L* is a natural language, the program calls for translating the sentences of *L* into a canonical language, *L*1, whose syntax can be characterized precisely. *L*1 must be logically consistent and it must preclude the construction of the Liar and the other semantic paradoxes. *L*1 must provide translations for all of the sentences of *L* which are considered to be true or false by speakers of *L*. And the syntax of *L*1 should allow us to construct a simple and elegant semantical theory in which the truth conditions of all of its sentences can be specified. We wondered earlier if any of the sentences (1)...(5) available in English for saying that Alice's nose is red should be taken as determining what to include in an ontological inventory. If *L*1 were the only, or by far the best canonical notation available for translating *L* sentences and defining their truth conditions, our worries would be over. Sentences (1)–(5) would be given one and the same translation in *L*1, and the ontologist would posit different kinds of extralinguistic items for syntactically different verbal elements in *L*1. If two different notations, *L*1 and and L2, allowed for equally good definitions of truth in *L,* we could at least rule out notations which differed significantly from them.

Suppose the canonical translation of some natural language sentence is '*Fa*' and that '*Fa*' belongs to language *L*1. Suppose the

semantical theory for *L1* treats the intended model, O, as including objects $o_1, o_2,..., o_n$, and subsets of objects, $S_1, S_2,..., S_n$. Suppose it assigns object o_i to the name '*a*', and subset S_k to the predicate '*F*'.[4] Then '*Fa*' (and the natural language sentence it translates) will be true just in case o_i belongs to S_k. The ontology should then include the objects and subsets of O and should characterize them in such a way as to allow for the possibility that o_i belongs to S_k.

   If we agree that '*Fa*' is true just in case object o_i belongs to subset S_k, this tells us something about what an adequate theory of metaphysical predication should be like. But it does not tell us terribly much. Unfortunately, it is compatible with drastically different theories of what it is for an object like o_i to belong to a subset like S_k. Thus, it does not tell us how to adjudicate the following dispute between a Platonist, an Aristotelian, and a highly austere nominalist. When he wrote the *Phaedo*, Plato would have said (for some properties at least) that unless o_i is a Form (The Beautiful Itself, The Large Itself, etc., etc.), o_i belongs to S_k just in case (1) there is a Form, the F Itself, which is not identical to o_i and which exists whether or not o_i exists, and (2) o_i stands in some relation, R ("participates in," "has a share in," etc.), to The F Itself. This is one account of what it is for o_i to belong to S_k, and hence, of what makes '*Fa*' true. But Aristotle held that there can be no relation of the kind "participation" was supposed to be and excluded Forms (like The F Itself) from his ontology. For some predicates, he holds that if '*F*' signifies anything, it signifies something in the individual to which '*F*' applies and which can *not* exist without the individual. In such cases, o_i belongs to S_k because of the item signified by '*F*' and belonging to o_i. In other cases (for example, predications of 'is a man' and 'two-footed animal' to Socrates, discussed by Lewis, Code, and Modrak in this volume), different accounts of o_i's membership in S_k are offered, but they do not require either Platonic Forms or participation. An austere nominalist would deny that the linguistic predicate '*F*' signifies *anything* in terms of which the inclusion of o_i in S_k is to be explained.

   A theory of metaphysical predication may be considered to be a

theory of the intended model for a canonical language like L_1. The Aristotelian, the Platonist, and the austere nominalist may cheerfully agree to accept L_1 as the canonical notation of choice and O as its intended model. They may also accept the semantic assignment of 'a' to o_i and 'F' to S_k. And, they may agree that 'Fa' is true just in case o_i belongs to S_k. But, because they can still disagree about what it is for o_i to belong to S_k, the requirements of an adequate semantical definition of truth in L_1 are far too weak to tell us which theory of metaphysical predication — which account of the intended model — to accept.

In order to see how features of linguistic predication can be used to support or oppose specific accounts of metaphyiscal predication, we must consider further constraints on ontological theories. The papers in this volume can be understood in part as articulating constraints on theories of metaphysical predication and strategies by which various theories attempt to abide by them.[5]

IV

An historically early constraint on metaphysical theories of predication can be appreciated by considering that where 'a', 'b', and 'c', etc., name numerically different individuals and 'F' is a linguistic predicate, it should be possible that

(1) even if 'Fa', 'Fb', etc., are true, a is different from b and all of the other individuals of which 'F' is truly predicated, and

(2) what 'F' predicates of a is the same as what it predicates of the other individuals.

A natural way of accounting for (2) is to say that, when 'Fa', 'Fb', etc., are true, what the individuals have in common is that they are all F, e.g. that red individuals are all red, individuals who are men are all men, etc., etc. But if a is F, and b is F, how can a and b differ from F (from whatever the linguistic predicate 'F' signifies)? And, if they are not different from F, how can a differ from b, as required by (1)? This problem gives rise to a constraint which Turnbull calls 'Zeno's Stricture':

(C1)

Where *F* is any metaphysical predicate, no individual *is F* if it is different from *F*.

(C1) allows true *linguistic* predications of the form '*x* If *F*' only because the structures of linguistic and metaphyiscal predications can differ. What (CI) rules out are accounts of (2) under which *a* and *F* are different extra-linguistic items even though *a* is *F*. And, if canonical notations are supposed to reveal the structures of metaphysical predications, (C1) makes expressions of the form '*x* is *F*' noncanonical where '*F*' and values of x signify different items. Turnbull argues that characteristic features of theories of Plato, Aristotle, and Plotinus, as well as fundamental disagreements between them can be understood as stemming from differences in their understandings of and attempts to abide by (C1).

    As noted, Plato maintained (in *Phaedo,* for example) that where *a* is different from *F*, the metaphysical predication which makes '*a* is *F*' true is the obtaining of a two-term relation, "participation", between *a* (a lump of burning coal, for example) and The *F* Itself (e.g. The Hot Itself). This meets Zeno's stricture. The Hot Itself *is* hot because hot is just what it is. And Plato does not have to say the coal *is* hot; the linguistic predication is true because the coal *has* heat, i.e. it stands in the participation relation to the Form. A different version of the same basic maneuver is attempted by Aristotle for accidental (κατὰ συμβεβγκὸς) predication. According to the *Categories,* there is a bit of heat in each hot thing. The *heat* in the coal *is* hot; but the linguistic predication 'the coal is hot' is true, not because the coal *is* hot, but because a bit of heat is *in* it. Instead of a single form, there is heat in each hot thing. Instead of participation, there is the "in" relation between each hot thing and the heat it has. But, as in Plato, the truth of '*a* is hot' is explained by a relation between a and what *is* hot. In contrast, the formula 'two-legged animal', predicated of the species man, tells us what the species *is;* the linguistic predicate does not signify something which is in the species in the way heat can be in a piece of coal. This leaves open the question of how to understand the metaphysical predications which make it true to say of Socrates both that he is a man and that he is a two-legged animal. The difficulties involved in this area are discussed by Code and Lewis and will be mentioned briefly in the next section of this

V

The early sections of *Parmenides* show that Plato had terrible trouble and little success in trying to say what sort of relation participation is. The difficulties provided Aristotle with an arsenal of arguments against the theory of Forms. The most severe lead to the following dilemma: on some accounts of participation, the Form which participates cannot be a single individual, whereas accounts which preserve Form's individuality do not seem to allow participation to be the kind of relation Plato needs.

Why did Plato have so much trouble with this? It certainly isn't a general problem for two term relations. After all, Bach retained his unity while standing in the "father of" relation to many different children; and a few years ago, Deborah Harry maintained her unity while standing in the "admired and imitated by" relation to hordes of young women. The difficulty is peculiar to "participation", and it comes from an additional constraint on theories of metaphysical predication:

(C2) Extra-linguistic entities, relations, etc., posited to account for the truth values of linguistic predications must to able to figure informatively in adequate scientific explanations of features of the things of which the linguistic predications are true.

A good deal of Plato's troubles with participation come from this, together with the intuition, shared by ancient thinkers, that the characteristics (e.g. heat, justice, size, etc.) to which a science appeals to explain features (including behaviors) of individuals had better be constituents of those individuals.[6] Explaining why a cake is sweet by saying it contains sugar, and why a wine is thin by saying it contains more water than it should are instances of the pattern of explanation which fits this intuition. If the sugar were not contained in the cake, or the water in the wine, they could not provide satisfactory explanations. This, I think, is an important reason why Plato considered treating participation as a relation of containment or inclusion. While this meets (C2), it runs afoul of Plato's account of (2), which requires that true linguistic predications of the form 'x is F'

should predicate the same thing. If the *F* Itself is a single, countable individual, it cannot be wholly contained in each of the different individuals of which the relevant linguistic predications are true. If it is thought to consist of discrete parts or bits, each one of which is contained in a different individual, it is hard to see how the Form can be one thing and thus how (2) is to be accounted for. On the other hand, if participation is not some sort of inclusion or containment, and The *F* Itself stands apart from the individuals which have it, it is hard to see how it could explain features or behaviors of those individuals. How, for example, could Socrates's wisdom explain the clever things he does if Wisdom (The Wise Itself, or part of it) isn't somehow contained within Socrates?

Aristotle's account of the truth of such linguistic predications as 'Socrates is musical' in terms of knowledge in his soul, 'Socrates is pale' in terms of a bit of color in his skin, etc., treats the metaphysical predicates (e.g. pallor) as constituents of the individual whose features they are used to explain. The importance he attached to this is shown by his repeated objection against Plato that because Platonic Forms are entirely removed from the items a science should explain, nothing we could know about the Forms (even if there were such things) could be of any help to science. But the other horn of Plato's dilemma remains. If the *F* in one individual is not the same as the *F* in another, what prevents the explanations '*a* has (does) such and such because *Fa*' '*b* has (does) such and such because *Fb*' from mentioning *different* explanatory factors? This would be unacceptable to Aristotle and anyone else who thinks the explanatory principles of a science should hold universally. And, how can linguistic predications of '*F*' say the same thing of different individuals if each one has its own *F* in it and there is no numerically one thing they are share? Aristotle's answer seems to have been that what the instances of *F* to be found in different individuals have to do with one another is that they cause similar perceptions in normal observers. The perceptions they cause give rise to a single concept of *F* in the soul of a person who perceives and comes to know something about various objects which have *F*. The instances of *F* are called the same thing ('*F*') because they fall under the same concept.[7] But this is not worked out in enough detail by Aristotle to allow us to say exactly what it amounts to or how satisfactory a

response it is to the question whether all explanations of the form '... because x has F' are real and not just trivial instances of the same explanatory principle.

A parallel problem arises for nonaccidental predication. The essence of a living thing is supposed to explain what it does by nature (e.g. its reproduction, development, and growth) in addition to grounding its classification in a biological taxonomy. The essential features of such inanimate natural things as earth, air, fire, and water are supposed to explain their unforced motions. And some of the features of manufactured articles may be explained by their essences. This means that the essence of each thing must be intimately connected to it; a single Platonic form separated from all of the individuals whose essence it purports to be won't do. Aristotle's *Metaphysics* provides a very intimate connection between individuals and their essences. Each thing is a compound of form (essence) and matter, and the form (essence) is the substance of the compound. But each member of a kind should have the same essence so that the same explanation can be given, e.g. for the normal growth patterns of each one. For example, the essence of two parents is supposed to explain why their offspring should belong to their species.[8] Accordingly, sentences of the form 'x and y are armadillos', together with an account of the essence of armadillos, should explain the species of normal baby armadillos. But, then the essence should be the same for every member of the species. That makes it look as though (a) essences should be universals metaphysically predicated of a number of different individuals. But (b) Aristotle also calls them substances, and substances are not supposed to be metaphysical predicates.

The apparent incompatibility of (a) and (b) is part of the motivation for Lewis' discussion of essential predication. He suggests that essential features are predicated universally, not of the individuals whose essences they constitute, but of the matters of these individuals. Each individual is a composite of matter and the essence or form predicated of its matter. The formula or definition of a thing's form can then be thought of as signifying a universal which is predicated of as many parcels of matter as there are individuals which have the same essence. But this is consistent with the theses that the form of an individual is that individual's substance and that

an individual's substance is not predicated of it. It is consistent because the form is not predicated of the compound, but only of its material component. In her reply to Lewis Deborah Modrak grants that this would resolve the apparent contradiction, but questions whether Lewis's resolution was available to Aristotle. She argues that batches or parcels of matter cannot be considered fit subjects for the predication of form and, therefore, that Aristotle could not have said that the form which is an individual's essence is a universal predicated of its matter.

Related issues are discussed by Code. The term 'man' and its definition, 'two-legged animal', signify the essence of the species to which Socrates belongs. According to *Metaphysics Zeta*, a thing's essence is identical to that thing. Thus, 'man' and its definition signify what is identical to the species, man. But, Code argues, since Socrates is not identical to the species to which he belong, what 'man' and its definition signify is not identical to Socrates. Nor do 'man' or the definition signify what is in Socrates, like such accidental features as his color, his knowledge of grammar, etc. This seems an unhappy result. If Socrates is neither identical to the essence (he is not connected to the essence as is the species) nor *has* the essence (it is not *in* him as are his accidental metaphysical predicates), what can the essence have to do with the natural features, behaviors, etc., of Socrates which it should explain? To thicken the plot further, Aristotle seems to claim that 'man' and the definition 'two-legged animal' are true of both Socrates *and* the species in the same way. If that were correct, (C2) would be satisfied; but it is obviously difficult to see how 'man' and 'two-legged animal' can tell us what Socrates is if they signify or characterize something (the species or the essence to which the species is identical) which is not identical to Socrates. If so many difficulties can be traced to the thesis of Zeta vi (that an essence is identical to the thing whose essence it is), one wants to ask why Aristotle committed himself to it. Code's paper attempts to explain this, and Lewis's second paper comments on his account.

VI

The nominalist theories of Ockham, Buridan, and Sellars — discussed respectively by Marilyn Adams, Calvin Normore, and

Wilfrid Sellars are natural responses to the problems of participation and the question of how to account for the fact that '*Fa*' says the same thing of *a* that '*Fb*' says of *b*. Sellars argues that what is said in a natural language by subject-predicate sentences can be said in an artificial language by sentences which lack predicates altogether. The syntax and semantics of the artificial language sentence do not warrant or require the positing of individual things (like Platonic Forms) to serve as referents for such words as 'white' and 'whiteness', Nor do they require us to posit individual whites of the peculiar kind supposed by Aristotle to inhere somehow in white things. Sellars's paper is not, it should be emphasized, anything like a full sketch of the complex metaphysics he advocates. It is intended to show how a number of crucial semantic notions can be understood, and how certain ontological issues can be resolved by a theory which avoids the snares of Platonic and Aristotelian accounts of universal predication.

Early forms of nominalism are discussed by Normore and Adams. Buridan and Ockham held that such things as individual whites do somehow inhere in white objects. According to both of them, forms of a term like 'white' should be understood as standing in some sentences for things which have the colors, and sometimes, for the colors they have. Where Plato thinks that '*a* is *F*' is true just in case the individual designated by '*a*' stands in the "participation" relation to the individual (the Form) designated by '*F*', Buridan and Ockham think it is true just in case '*a*' stands for one of the things '*F*' stands for. And *a* is one of the things named by '*F*' just in case one of the *Fs* inheres in it. For example, '*a* is white' is true just in case 'white signifies *a* (along with other white things), as it does just in case one of the whites is in a. In a sentence like 'white is a color', on the other hand, 'white' is used to designate whites and not the things they inhere in. The sentence is true because 'white' stands for some of the items designated by 'color'. Like Sellars, Ockham and Buridan have disposed of the question how can a "universal" (The *F* Itself, Fness, etc.) be one thing and still belong to all of the different things of which the predicate '*F*' is true by expelling "universals" from their ontologies. If there is no "universal" for individuals to participate in, there are no problems of participation to be solved. But, if there are no "universals", how do we explain why all of the things of which the linguistic predicate 'white' is true resemble one another insofar as

they are white? According to Ockham and Buridan, all the whites in white things just are similar and their similarity does not need an explanation, let alone an explanation in terms of Platonic Forms, "whiteness", or any other "universal" entities of their ilk.

According to the clichés and stereotypes of which surveys of the history of philosophy are made, the nominalists were supposed to have an overriding concern for parsimony. It hardly seems parismonious to include individual qualities like the white in this paper, the white in the next page, the white in the next, and so on, in an ontological inventory. Why not just say that 'whiteness' or 'white' signifies all and only the members of a certain set of objects (the set which contains sheets, pieces of paper, snowflakes, etc.) and that the linguistic predication '*a* is white' is true just in case and only because *a* is a member of that set? If Ockham and Buridan didn't need to posit additional entities to explain the similarity between individual whites, why should they posit the whites to explain the similarity between my white sheets and towels? In this respect, Buridan is even less parsimonious than Ockhan, for his qualities (e.g. the whites in white things) are capable of existing without inhering in anything. Accordingly, they seem to be very much like full-fledged individuals. Something more than parsimony is clearly at work here. According to Normore, Buridan believed that nothing short of free-floating qualities could account for some of the dogmas of the Eucharist. The requirement of conformity with theological doctrine was as strong a constraint on the theories of Ockham, Buridan, and Leibniz as the requirement of conformity with scientific explanations was for other philosophers.

A further departure from parsimony appears in connection with "modes". Marilyn Adams argues that Ockham's treatment of linguistic terms for quantity, relations, actions, and passions threatens to require the inclusion of "hows", "ways", or "modes" in his ontology. These are strange items to find in any ontology, let alone a nominalist metaphysics. Adams and Normore point out that Buridan not only includes modes, but does so cheerfully, offering arguments for their inclusion. And, Normore suggests that there may be considerable theoretical gains for a nominalist who does so.

VII

The final group of papers in this volume includes discussions of Leibniz by Robert Adams and James E. McGuire. They deal with two areas in which Leibniz departs from assumptions shared by Plato, Aristotle, and the nominalists (with extensive qualifications in the case of Sellars).

The first is the assumption that truth should be explained as some sort of correspondence between sentences, thoughts, beliefs, or propositions, and the extra-linguistic items we talk about. For Leibniz, true sentences do correspond to the actual world. For example, he would not deny that Arnauld is celebate if the sentence 'Arnauld is celibate' is true, and therefore that certain extra-linguistic items stand to one another in different ways than they would have if the sentence had been false. But truth is not to be *defined* or *characterized* in terms of correspondence. Instead, Leibniz thinks, the truth value of a sentence depends upon whether the concept of what is signified by its linguistic predicate is "contained" in the concept of what is signified by its linguistic subject. If there is containment, then there is correspondence: things are as the sentence says they are. But truth is defined in terms of conceptual containment and not in terms of correspondence.

The conceptual containment theory of truth raises two problems discussed by Adams. The first concerns the distinction between necessary and contingent truths. Intuitively, this seems to be a real distinction for which a theory of predication should account. It was accounted for by Plato and Aristotle in terms of the differences between the ways in which a thing may be connected with its metaphysical predicates. For example, Plato can say it is necessarily true that The Large Itself is large because the predicate 'large' signifies just what that Form is. On the other hand, it is contingently true that Wilt is large because 'large' signifies a Form in which Wilt need not have participated. This marks the distinction if truth is correspondence which depends upon how a given thing stands with regard to particular Form. If there are different sorts of connections between metaphysical subjects and predicates, it should be informative to characterize necessity and contingency by appeal to these differences. But this sort of explanation is unavailable to Leibniz for whom truth depends upon relations between concepts instead of the things of which they are concepts. Furthermore, Leibniz cannot very well explain the distinction by

saying that the concepts which figure in contingent truths are connected differently than those which figure in necessary truths. If some predicate, '*F*', is contained in the concept of something *a*, then no matter what kind of containment it is, nothing can be *a* unless it is *F*, and so '*a* is *F*' cannot be false. Leibniz's way out is to recast the distinction as an epistemological one. In fact, all truths are necessary; and so anyone who possessed a complete and clear concept, e.g. of Arnauld, would see the sentence 'Arnauld is celibate' as expressing a necessary truth. But anyone (including all of us) whose concept of Arnauld is incomplete or unclear would classify this as a contingent truth, for celibacy is not contained in an incomplete or confused concept of Arnauld. Contingency is thus relativized to incomplete concepts, and the general agreement of our intuitions about which truths are and which are not contingent is to be explained in terms of similarities between the incomplete concepts we possess.

If contingent truths are contingent *only* from the standpoint of incomplete concepts, Leibniz faces a number of theological difficulties. God is supposed by Leibniz to have considered all possible worlds and created the best of them. We should expect this to mean, for example, that because Arnauld is celibate, at least one world in which he is celibate is better than those in which he is not. But if celibacy is part of God's complete concept of Arnauld, the idea of a world in which Arnauld is not celibate should be as inconsistent as the idea of a world in which triangles lack three sides. Adams argues that Leibniz accepted this. How, then, are we to understand what God had to choose from in deciding to create this world? And how are we to understand it as a free choice (which is what it should be, if God is ominipotent)? If it is true of God that He chose this world, why doesn't it follow that it is necessarily true and, therefore, that He had no freedom to choose? Finally, if all truths are necessary from the standpoint of the complete concepts God possesses, what room is left for the possibility of miracles? These, together with Leibniz's reason for granting the troublesome consequences of the conceptual containment theory of truth are discussed in Robert Adams's paper.

McGuire's paper takes up issues raised by Leibniz's rejection of a second assumption. With the exception of Plotinus (and extensive qualifications in the case of Sellars), physical objects are generally

considered full-fledged inhabitants of the world in good ontological standing. Of course, Plato thought physical objects were less deserving of a philosopher's attention than the nonphysical Forms in which they participate. But he still considered physical things (including plants and animals) to be genuine individuals, and he appeared to have no doubt that they are the subjects of metaphysical predication. For example, if the linguistic predication 'this statue is beautiful' is true, that is because a physical thing — the statue — participates in The Beautiful Itself. Plato does not suggest any reduction of the statue to more basic nonphysical items whose dispositions constitutes the "real" nature of the participation of the statue in the Form. Similarly, even though Aristotle treats Socrates as a compound with one nonphysical component (a form), Socrates's pallor is said to belong to Socrates, the compound, not its formal or material component.

Against this sort of background, Leibniz's treatment of physical things is startling: physical objects are not genuine individuals in Leibniz's ontology. Instead, they are "phenomena" to be accounted for in terms of monads which are not spatially extended, let alone physical things. Two of Leibniz's reasons for thinking this are of particular interest. First, he thought that to treat physical objects as genuine and unqualifiedly real individuals would violate constraint (C2). Leibniz held that, unless they are considered phenomena to be reduced or explained in terms of monads and their features, physical objects are not the right kinds of things to appeal to in order to explain completely and correctly the facts with which physics, astronomy, and other sciences must deal. Secondly, Leibniz thought that physical objects lack the sort of unity genuine individuals must have.

The explanatory shortcomings of a science whose ontology is limited to physical objects would appear most clearly, he thought, in connection with teleological explanations. Besides that, Leibniz was keenly aware that, as characterized by Descartes, the occasionalisits, and others, physical ("material") objects must, by nature, be inert or inactive, and are therefore incapable of acting as *efficient* causes. A symptom of the difficulties involved in thinking of physical objects as efficient causes is the extraordinary role assigned to God by the Occasionalists (and, most likely, by Descartes) in accounting for what look to be efficient causal

The attempt to account systematically for different levels of predication is by no means peculiar to Leibniz. For example, Plato's response to Zeno's stricture and to (C2) involved distinguishing between the ways in which heat is predicated of The Hot Itself, of fire, and of the object (e.g. a lump of burning coal) which is hot because it contains fire and therefore participates in The Hot Itself. Corresponding to the different kinds of predication, there are differences in explanations given for heat: the Form is hot by its very nature; the heat of bits of fire is explained in terms of their relation to the Form; and the heat of a burning coal is explained (in one way) by appeal to the fire it contains. A much more elaborate version of the distinction between predicate levels was developed by Aristotle. The matter of Socrates is the aggregate of his limbs and organs, each one of which is analyzed as a composit of flesh or bone (e.g. the flesh of his heart) and form (e.g. what is given by a definition of the human heart). Flesh and bone are, in turn, matter (i.e. two or more of the four elements — earth, air, water, and fire) with forms (the ratios which characterize the combinations of the elements). And some of Aristotle's writings (e.g. his treaties on coming to be and passing away) suggest that each element may itself be considered a form-matter compound. Among the things that are true of Socrates (e.g. that he is a man, that he is two legged, that he is pale) are some which are not predicated and others which are not predicated in the same way of his matter (his organs and limbs). Some of the predicates of his matter (e.g. the property of having five fingers, which belongs to Socrates's hands) are not predicated of flesh, (the matters of the hands). And so on. Furthermore, predications on one level are explained in terms of predications on another. Thus, features of an animal's growth and reproductive patterns are explained partly in terms of the animal's matter — his organs and limbs — and partly in terms of his form or essence.

In these cases and in the case of Leibniz, the assignment of predicates to levels is as much a metaphysical classification of predicates required for an explanatorily adequate science as a syntactical distinction between kinds of grammatical and ungrammatical, deviant and nondeviant linguistic predications.

The requirement of distinctions between levels of predication is yet another constraint under which some ontologists developed their theories of metaphysical predication. The constraint operates in

several ways which a contemporary philosopher should consider congenial. For example, consider the linguistic oddity of the sentences 'the flesh in Socrates's eye sockets is focussed' (in contrast to 'Socrates's eyes are focussed') and 'these organs and limbs are thinking about Xantippe' (as opposed to 'Socrates is thinking about Xantippe'). Such linguistic data must, of course, be considered in assessing the adequacy of notations. But the requirement of levels of predication allows us to use such data as indicative of differences between the subjects of, and kinds of connections which constitute different sorts of metaphysical predication. At the same time, it allows arguments from programs of scientific explanation to claims about what should be included in the syntax and semantics of a canonical notation. Like Zeno's stricture, and the other constraints we have considered, the requirement of predicate levels provides a partial answer to the question of how linguistic data should be deployed in helping to determine the adequacy of a theory of metaphysical predication.

NOTES

[1] I hasten to add that the term 'metaphysical' is by no means used here as a pejorative. The term is meant only to mark the distinction between features of a language and features of the extra-linguistic items we use language to talk about. Thus, the terms 'metaphysics' and 'ontology' are interchangeable throughout this volume.

[2] Included in Rudolf *Carnap, Meaning and Necessity* (Chicago: 1956), p. 205ff.

[3] Such claims as those made by Plato and Aristotle concerning the existence and ontological status of physical objects and various kinds of abstract entities are clearly neither analytic nor contradictory. Nor are they subject to anything like the kind of empirical verification or confirmation required by the logical positivists for the meaningfulness of synthetic propositions or sentences. Accordingly, the positivists had no alternatives besides throwing them out as if they were meaningless, or drastically reinterpreting them in some version of the way Carnap treated existence claims. It goes without saying that the demise of the logical positivists' criteria for meaningfulness and of the idea that confirmation must require inference from sense data, sensations, and their ilk opened up alternatives unavailable to the logical positivists for understanding metaphysical claims.

[4] Note that the assignment of a linguistic predicate to a set leaves open the question what, if anything, the predicate refers to or designates. In particular, we can assign 'F' to S_k and say that 'Fa' is true if $O_i \in S_k$ *without commitment* to the view that 'F' designates or refers to the set.

[5] Plotinus and Leibniz are exceptions to the policy of explaining truth in terms of satisfaction or any other sort of correspondence between sentences and extralinguistic (and extra-mental) models or worlds. But in Liebniz's case at least, something like what I have just been saying can still be made to apply. For Leibniz, the linguistic predication *'Fa'* is true just in case *F*, or its concept belongs to the concept of *a*. But if it does, then whatever is signified by *'F'* is, in some way, metaphysically predicated of whatever is signified by *'a'*. Thus, even though metaphysical predication does not *explain* the truth of linguistic predications, Leibniz can still ask what sorts of things there are and how they stand when various linguistic predications are true. Nothing this clear can be said about Plotinus, who believed — as Turnbull argues in chapter 1 — that all of what I am calling metaphysical predication is a matter of Being's exfoliation and its articulation of itself into a hierarchy of species, subspecies, and further sub-classes. But even so, we must suppose he held some version of the idea that the truth of at least some kinds of linguistic predications allows us to draw conclusions of some sorts about metaphysical predication.

[6] See Julius Moravcsik, 'Heracleitian Explanation' forthcoming in *The Monist's* issue on the Presocratics.

[7] See Robert G. Turnbull, *'Physics I:* Sense Universals, Principles, Multiplicity, and Motion'.

[8] See James Lennox, 'Teleology, Chance, and Aristotle's Theory of Spontaneous Generation', *Journal of the History of Philosophy* (July 1982).

[9] Though anachronistic, it is worthwhile to note that Sellers has developed a strategy for accounting for the truth of such sentences as 'white is a color' without positing universals. His program is developed in a series of articles beginning with 'Grammar and Existence: A Preface to Ontology', in Wilfrid Sellars, *Science, Perception and Reality* (London: 1971), and including the essays in *Naturalism and Ontology* (Reseda, California: 1981).

Zeno's Stricture and Predication in Plato, Aristotle, and Plotinus

Robert G. Turnbull

Much philosophical insight (to say nothing of scientific insight) has been the result of taking very literally and even simple-mindedly the things which we say and think. Having so taken them, one may, with minimum risk of verbal bewitchment, hold them up to critical scrutiny. What seemed obvious in its standard rhetorical garb may then suddenly appear trivial, highly questionable, or even impossible. Socrates' practice in the early and middle Platonic dialogues is, of course, a standard example of this common philosophical procedure. Sometimes the insight garnered from this procedure comes only after it has been used aporetically or even to promote apparent absurdity. I think, for example, that a number of arguments for philosophical scepticism are of this latter sort. Though an argument designed to enforce or clarify a distinction between knowledge and opinion does not as such promote absurdity, surely one designed to show that knowledge as such is impossible does. I readily acknowledge, however, that the promotion of apparent absurdity has actually led to insight, as the responses of, for example, Augustine, Descartes, or Berkeley to apparently absurd scepticism show. But my concern in his paper is not with scepticism or any responses to it. It is rather with an argument which Plato attributes to Zeno and which promotes quite a different absurdity. What I wish to do is, first, to state the argument and, second, to look rather carefully at what I take to the responses of Plato, Aristotle, and Plotinus to it.

Zeno's argument, as Plato states it, is designed to show that what we ordinarily take to be *predication* is impossible. This is, I submit, an apparent, if not a real, absurdity. I hope to show, however, that the argument imposes a provocative constraint on the efforts of Plato, Aristotle, and Plotinus to show how predication is possible. That constraint I shall be calling 'Zeno's Stricture'.

The philosophical content of *Plato's Parmenides* commences with Socrates' summing up Zeno's treatise (which, as the dialogue opens, Zeno has just finished reading) as follows:

Socrates Zeno, how does your argument go? If the beings are many, then they must be likes and unlikes. But this is impossible, for unlikes cannot be likes, and likes cannot be unlikes. Is this not the thrust of your argument?

Zeno It is.

Socrates And so, if it is impossible for unlikes to be likes and for likes to be unlikes, it is also impossible for many to be. For, if the beings were many, they would be impossibly characterized. And so, is the burden of your arguments nothing other than to contend — against everything commonly said — that the beings are not many?

Zeno Yes.[1]

The purport, in context, of this rather obscure argument is, I believe, as follows:

Suppose that *A, B, C, etc.* are "beings". Their being many is simply a matter of their being more than one. If '*A*', '*B*', '*C*', etc., are not simply to be names for the same thing, the beings must be different from one another and, as different, unlike each other. Suppose further that we allow predication among these beings, i.e., that one or more of them can truly be said to *be* one of the others. Thus, e.g.,*A* may truly be said to be *B*. And so *A* is *B*. But, if *A* really is *B*, it would seem to have to be the same as *B* and, as same, like it. And so, if we allow it to be said that *A* is *B*, we shall have to say that *A* is both like (as being *B*) *B* and unlike (since '*A*' and '*B*' are names for differents) *B*. *A* and *B* would then be both "likes" and "unlikes". But this is impossible, so it cannot be the case that *A* is *B*.[2]

Plato makes it quite clear in context that the argument is used to defend there being *no many* and thus to support Parmenides' insistence upon *One.* Even so, the argument does imply the principle that, if *A* is *B*, then *A* and *B* cannot be different. And it is this principle which I call 'Zeno's Stricture'.

Several comments are in order.

(ὀνόματα)[9] not merely for the commonplace things around us but also for things which are not commonplace and of which we cannot plausibly be said to have sense experience. These latter are such names as 'beauty', 'justice', 'triangularity', 'equality', and other like substantives. Terms of this kind are, in English, commonly formed from adjectives by adding the suffixes, '-ity', '-ness', or '-hood', and Greek has similar means of forming them. Plato also used auxiliary terms for forming such substantives, as 'The *F* Itself ('The Beautiful Itself,' The Equal Itself). He took these terms to he names of intelligible (and non-sensible) things which he called '*forms*' ('εἴδη' 'ἰδέαι'). In his middle period at least, Plato thought that there was no predication problem with respect to them, for he sternly limited such predications to those having the form, 'The *F* Itself is *F*' (The Beautiful Itself is beautiful'), a limitation imposed by the requirement that a form — to be a form — could, only be what it is. Though there is considerable controversy about how such "self-predication" is to be understood,[10] it does not (or does not obviously) run afoul of Zeno's Stricture, i.e. the requirement that, if *A* is *B,* then *A* and *B* cannot be different.

   (2) It is not germane to the present enterprise to offer serious explanation or defense of Plato's theory of forms (at whatever stage), and I shall, for the moment at least, forbear. It is relevant, however to note that middle Plato takes the *F* Itself, the *G* Itself, etc. to constitute reality with a capital '*R*' and the commonplace things around us to be derivative and humdrum by comparison. Minimally, a form *is* what it is and in no way is not. A commonplace thing *is* and is *not* (beautiful now, not beautiful later; beautiful for a woman, not beautiful for a goddess; etc.). And for the latter to *be* at all is for it to "have a share" of a form. This doctrine gives or accompanies Plato's means of explaining predications made of humdrum things without running afoul of Zeno's Stricuture. As suggested just now, Plato had in Attic Greek a handy metaphor, the employment of which helped considerably in explaining such predications, namely, 'μετέχειν' whose literal meaning was `to have a share or shares of' and whose extended employment allowed one to have a share of a public occasion or even of courage or timidity. Using that term and his theory of forms, Plato argued that such sentences as 'Phaedo is tall' are to be understood as having the sense of 'Phaedo has a share of

conventional names for the same thing, as simple repetition of the subject term in the predicate, as individual/species terms, or as species/genus terms. (Thus directly conforming to Zeno's Stricture or conforming by making use of more or less specific names in the manner discussed in the Plato section.) Thus, e.g. 'Dobbin is a horse' or 'A certain horse is an animal'. Both of these predications are, of course, in the category of *thing* (οὐσία). But *said of* or *is a* (*n*) predications occur also in the other categories, as in 'This white is a color'. So in *said of* or *is a* (*n*) predication, the subject term must be the name of something of a kind and the predicate term an appropriate kind-term, or the subject must be a less general kind-term of which the predicate is a more general kind-term. Or, obviously, they may be identical terms.

In *is* or *in* predication, the subject term and the predicate term must be from different categories, though in a true *is* or *in* predication, the two terms must in some manner name the same thing. They can hardly do so, however, as more or less general terms in the same category or sub-category. The paradigm case of *is* or *in* predication has an ouaia or thing term as subject and a term from another category as predicate, as in 'A certain man is white' or 'Socrates is brave'. Both of these have *how qualified* terms as predicates. One of the interesting features of Attic Greek and Aristotle's usage is the sanctioning of *how qualified* (as well as other *non-thing* terms) in the subject place. Thus subject reference by means of 'The white' or 'The brave' is common. And both could be references to the man of our first sentence or to Socrates of our second — though not, of course, *qua* man or *qua* Socrates. And one could go on to say of the white or the brave that he is a father, that he is in the room, that he is lying down, and so on through the categories. Granting this predicational usage and delaying for the moment the matter of the primacy of *thing* or οὐσία terms, it would be correct to say that *is* or *in* predication sentences of the form, '*F* is *G*', are true only if '*G*' could be used in the subject place to name the same thing (though not, of course, *qua F*). In this way, though the subject and predicate terms are not related as less or more general kind-terms, the subject and predicate terms in a true sentence must name the same thing. And in this way Zeno's Stricture is not violated even in *is* or *in*.

(3) In various places, though not, oddly enough, in *Categories*,

Aristotle says that 'being' or 'is' is "said in many ways", that is, in as many ways as there are categories.[45] But he goes on to insist that such "being saying" is all with regard to one ($\pi\rho\grave{o}\varsigma$ $\breve{\epsilon}\nu$), namely, *thing* or *oúσία.* Though this doctrine of what is commonly called $\pi\rho\grave{o}\varsigma$ $\breve{\epsilon}\nu$ ambiguity' is not expressly stated in *Categories,* it is certainly in the spirit of that work. For *Categories* equally emphasizes the role of *oúσία* or *thing* as basic.

As I noted in (2), terms from various categories may be used as subject terms, e.g. 'The white', 'The brave'. And I must note in this context that Artistotle is like Plato in this matter of subject terms. Subject terms drawn from whatever category are in themselves characterizing. Though — again like Plato — Aristotle commonly uses proper names ('Socrates', 'Callias') in illustrations, it is clear enough in context that he is not drawing upon a Russellian distinction between proper names and descriptions. He would have been perfectly satisfied with 'The man' instead of 'Socrates', provided that which man is being picked out is clear. And I must note as well that, when *non-thing* or *oúσία* terms are used as subject terms, though a *thing* may be picked out (not, of course, *qua a thing*), there is the possibility of *said of* or *is a* (*n*) predication within the category of the subject term.[46]

When, however, a non-*thing* or *oúσία* term is used as subject term, as 'The white' or 'The brave', it is always appropriate to ask the question, 'The white what?' or 'The brave what?', expecting some such response as 'Wall' or 'Man'. When, on the other hand, a *thing* or *oúσία* term is used as a subject term, as `The man' or 'The horse', that sort of question is unintelligible. This is the linguistic intuition lying behind the $\pi\rho\grave{o}\varsigma$ $\breve{\epsilon}\nu$ in $\pi\rho o\varsigma$ $\breve{\epsilon}\nu$ ambiguity. Though non-*thing* terms may be used either in subject or predicate places in well-formed sentences, their usage presupposes the applicability of some *thing* or *oúσία* term.

It is this sort of consideration which — leaving some caveats unspoken — leads Aristotle to think that reality with a capital 'R' consists of individual *things* or *oucriai.* Reference to them or the possibility of reference to them is presupposed in all other reference and predication. As we shall soon note, crucial for Aristotle's account of explanation as well as (simple) reference and predication is the idea of reference to things by means of *nature* terms, so that