OXFORD STUDIES IN METAPHYSICS

Volume 1

Edited by
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CLARENDON PRESS · OXFORD

OXFORD
UNIVERSITY PRESS
Great Clarendon Street, Oxford OX2 6DP

Oxford University Press is a department of the University of Oxford.
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Oxford New York

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Published in the United States
by Oxford University Press Inc., New York

First published 2004

British Library Cataloguing in Publication Data
Data available

Library of Congress Cataloging in Publication Data
Data available

ISBN 0-19-926772-3
ISBN 0-19-9267731 (pbk.)

1 3 5 7 9 10 8 6 4 2

Typeset by Kolam Information Services Pvt. Ltd, Pondicherry, India
Printed in Great Britain
on acid-free paper by
Biddles Ltd., King's Lynn, Norfolk

5. A Theory of Properties

Peter van Inwagen

1. IT WOULD BE BETTER NOT TO BELIEVE IN ABSTRACT OBJECTS IF WE COULD GET AWAY WITH IT

In their book *A Subject without an Object: Strategies for the Nominalistic Interpretation of Mathematics*[1] (the main topic of the book is well conveyed by its subtitle), John Burgess and Gideon Rosen suggest that—in fact, they argue at some length for the conclusion that—the motivation for undertaking nominalistic reconstructions of mathematics has not been clearly and persuasively formulated.[2] This seems to me to be wrong. At any rate, it seems to me that it is not hard to formulate the motivation (or a sufficient motivation) for this project clearly and persuasively. Suppose one could show this: it would be better not to believe in abstract objects if one could get away with it. Or this, if it is not the same: it would be philosophically desirable to accept only philosophical positions that do not require their adherents to affirm the existence of abstract objects. I will take it that it is evident why someone who accepted this conclusion (or either of them, if they are different) would have a strong motivation for wishing that a nominalistic reconstruction or interpretation of mathematics were available.

In this section I will present an argument for the conclusion that not believing in abstract objects would be a Good Thing—for the conclusion, that is, that one should not believe in abstract objects unless one feels rationally compelled to by some weighty consideration or argument. If we call the thesis that there are abstract objects *platonism*, my conclusion is that a philosopher should wish not to be a platonist if it's rationally possible for the informed philosopher not to be a platonist. And I'll take it for granted that, if one takes this attitude toward platonism, one should take the same attitude toward any theory from

[1] John Burgess and Gideon Rosen, *A Subject without an Object*, (Oxford University Press, 1997).

[2] Ibid., Part 1A, "Introduction", *passim*.

which platonism is deducible. Thus, if a theory T entails platonism, that is a good reason not to accept that theory. (This bald statement requires qualification, however. If T is a very attractive theory, the fact that T entails platonism might be a good reason for accepting platonism. Its existence and the fact that it entailed platonism might in fact be just the "weighty reason" for accepting platonism that showed that one should, after all, be a platonist. My point is really a truism: if Theory One entails Theory Two, and is known to do so, then the question whether either of the theories should be accepted or rejected cannot be considered in isolation from the question whether the other should be accepted or rejected.) If, moreover, a theory might, for all anyone knows at present, entail platonism, that is a good reason to try to find out whether it in fact entails platonism—just as, if a theory might, for all anyone knows, entail a contradiction, that is a good reason to try to find out whether it in fact entails a contradiction.

My thesis is no clearer than the term 'abstract object', and, unfortunately, I have nothing very useful to say about what this phrase means. I will note, however, that it is possible to divide the terms and predicates we use in everyday and scientific and philosophical discourse into two exhaustive and exclusive classes by a very simple method. We stipulate that one class shall contain the terms and predicates in the following list: 'table', 'the copy of *War and Peace* on the table', 'Mont Blanc', 'the Eiffel Tower', 'Catherine the Great', 'neutron star', 'intelligent Martian', 'elf', 'ghost', 'angel', 'god', and 'God'. We stipulate that the other shall contain 'number', 'the ratio of 1 to 0', 'proposition', 'sentence' (as in 'the same offensive sentence was scrawled on every blackboard in the building') 'property', 'angle' (as in 'the sum of the opposite angles of a right triangle is equal to a right angle'), 'possibility' (as in 'that possibility is still unrealized'), 'the lion' (as in 'the lion is a large African carnivore of the genus *Felis*'), '*War and Peace*' (as in '*War and Peace* has been translated into thirty-nine languages'), 'the English language', and 'the mixolydian mode'. We then ask philosophers (it had better be philosophers; it's unlikely that anyone else will cooperate) to place each term or predicate of our discourse (let's leave mass terms out of the picture, just to simplify matters) in the class where it will be most at home. (We make it clear that the classification is not to depend on whether the person doing the classifying believes that a term to be classified denotes anything or believes that a predicate to be classified has a non-empty extension. We have, in fact, included such items as 'the

ratio of 1 to 0' and 'elf' among our "paradigms", items, that is, that by everyone's reckoning have no semantical correlates, to make our intent on this point clear.) I say that this procedure will yield pretty consistent results. Perhaps not as consistent as the results would have been if the paradigms comprised the names of twenty even numbers and twenty odd numbers and the "new" words our respondents were asked to classify were all names of natural numbers. But pretty consistent. Some of the terms in our list of paradigms may be ambiguous and might be understood by different philosophers in different ways. And some philosophers may have idiosyncratic theories about the items in the extensions of some of these terms. (Most philosophers would put '{Catherine the Great, {the Eiffel Tower}}' in with 'property' and 'the lion'; but the author of *Parts of Classes* might be inclined to think that this term was more at home with 'Catherine the Great' and 'the Eiffel Tower'.) And some terms may just yield inconsistent responses: Amie Thomasson would say that our whole scheme of classification was in at least one respect objectionable, since '*War and Peace*' isn't a clear candidate for membership in either class—for it denotes an object that is non-spatial and has instances (like many of the items in the second list), and is, nevertheless, a contingently existing artifact (like some of the items in the first). Nicholas Wolterstorff would say that our classification scheme was unobjectionable, and that '*War and Peace*' clearly belonged right where we had put it, since it denoted something that was much more like a proposition than it was like a volume on a library shelf. He would add that the idea of a contingently existing, non-spatial object that had instances was incoherent.[3] (I don't think that either of these philosophers could be said to have a theory of the ontology of the novel that was "idiosyncratic" in the way Lewis's theory of classes is idiosyncratic.)

When all the possible qualifications and doubtful cases have been noted, however, there will be, or so I maintain, really substantial agreement as to which class any given term or predicate should be placed in. (There will also be substantial agreement on this point: every term can be placed in one list or the other.) And this implies that, with respect to most terms, most philosophers will be in substantial agreement about the truth-values of the propositions that are substitution-instances of the following schema:

[3] For Amie Thomasson's views, see her book *Fiction and Metaphysics* (Cambridge University Press, 1999); for Nicholas Wolterstorff's, see his *Worlds and Works of Art* (Oxford University Press, 1980).

> If X is really, as it appears on the syntactical face of it to be, a term, and if it denotes an object, it denotes an abstract object.

Where did the words 'abstract object' come from? 'Abstract object' as I see it, is just the general term that applies to the objects denoted by the terms in the second class—provided, of course, that those terms have denotations. This is no substantive thesis, not even a substantive thesis about meaning. It is simply a stipulation. By a similar stipulation, we can call the items denoted by the terms in the first class *concrete* objects. (The word 'object', as I use it, is simply the most general count-noun. It is synonymous with 'thing' and 'item' and, no doubt, with 'entity'. That is to say, everything is an object. That is to say, 'For every x, if x is an object, then x is F' is equivalent to 'For every x, x is F' and 'For some x, x is an object and x is F' is equivalent to 'For some x, x is F'.) A similar point applies to the schema 'If X is really, as it appears on the syntactical face of it to be, a predicate, and if it has a non-empty extension, its extension comprises abstract objects.' The qualification 'if X really is a term' is a concession to anyone who thinks (and no doubt this is a very reasonable thing to think in some cases) that some words or phrases that have the syntax of terms do not really "function as denoting phrases".

This is as much as I have to say about the meaning of 'abstract object'. On such understanding of 'abstract object' as what I have said supplies, a "platonist" is someone who thinks that at least some of the linguistic items in the second class really are terms (really are predicates) and really have referents (really have non-empty extensions). If my thesis is wrong—if my lists of paradigms do *not* really partition the terms and predicates we use into two classes, if this is not even an *approximation* to the truth—then my explanation fails, owing simply to the fact that there is no such thing as what I have called 'the second class of terms'.

In my view, as I have said, it is better not to be a platonist—prima facie better, better if we can get away with it. The reason is not profound. I suppose one could classify it as an 'Occam's razor' sort of reason, though I will not make any use of this term.

Think of matters this way. The platonist must think of objects, of what there is, as falling into two exclusive and exhaustive categories, the abstract and the concrete. If x falls into one of these categories and y into the other, then no two things could be more different than x and y. According to orthodox Christian theology, no two concrete things could differ more than God and an inanimate object. But (assuming for the

sake of the illustration that all three things exist) the differences between God and this pen pale into insignificance when they are compared with the differences between this pen and the number 4; indeed, the number seems no more like the pen than like God. The difference between *any* abstract object and *any* concrete object would seem to be the maximum difference any two objects could display. The difference between a topological space and the color the Taj Mahal shares with the Washington Monument is no doubt very great, but each is far more like the other than either is like this pen. (Again, of course, we are assuming for the sake of the illustration that all three things exist.)

Now it seems very puzzling that objects should fall into two exclusive and radically different categories. Rather than suppose that this is so, it would be much more appealing to suppose that at least one of these categories is empty—or that the words we have used to describe one or both of the two categories are meaningless. And we cannot suppose that the category that contains the pen, the category of concrete objects, is empty, for that is the category into which *we* fall, and, as Descartes has pointed out, we know *we* exist. (I set aside Quine's amusing reduction of supposedly concrete things to pure sets; we can't discuss everything. I shall mention this reduction again, but only as an example to illustrate a point.) It seems, moreover, that we know a lot more about concrete things than we know about abstract things. We understand them better. Maybe not *well*, but better than we understand abstract things. At least we understand *some* of them better: simple paradigms of concrete things. We do not understand even the simplest, the paradigmatic, abstract objects very well at all. You say there is such a thing as the number 4? All right, tell me what properties it has. Well, it has logical properties like self-identity and having, for no property, both that property and its complement. And it has arithmetical properties like being even and being the successor of three and numbering the Stuart kings of England. But what others? It is, no doubt, non-spatial, and perhaps non-temporal. It is perhaps necessarily existent. At about this point we trail off into uncertainty. Consider, by way of contrast, this pen. It has the same logical properties as the number. It does not have arithmetical properties, but it has functional properties, like being an instrument for making marks on surfaces, and perhaps the functional properties of an artifact are analogous to the arithmetical properties of a number. It has "metaphysical" properties, properties as abstract and general as those we ascribed to the number: it occupies space, it endures

through or is extended in time, its existence is contingent. When we have said these things, these things that correspond to what we were able to say about the number, however, we do not trail off into uncertainty. There is *lots* more we can say. We could write a book about the pen, albeit not a very interesting one. We could discuss its color, its mass, its spatial and mereological structure, the chemical composition of its various parts and of the ink it contains, the devices by which ink is drawn from an internal reservoir to the rolling ball that distributes the ink on paper, and so—for practical purposes, at least—*ad infinitum*. If it is not altogether clear what I mean by saying that we have a pretty good understanding of a certain *object* ('object' as opposed to 'concept'), *this* is what I mean: this ability to go on saying true things about the intrinsic features of the object till we drop. And if I say we do not have a very good understanding of the number 4, I mean simply that, if we try to describe its intrinsic features, we soon trail off in puzzlement. We may trail off in puzzlement at some point in our disquisition about the pen: when we try to specify the conditions under which it endures through time or the counterfactual situations in which it would have existed, for example. (If Sartre is right, certain speculations about the pen can lead not only to puzzlement but to nausea.) But we can go on about the pen for an awfully long time before we come to such a point. If this difference in our abilities to describe the pen and the number cannot be ascribed to "a better understanding" of the pen than of the number, what can it be ascribed to? After all, it can hardly be that the number has fewer properties than the pen. If the number and the pen both exist—if the phrases 'the number 4' and 'this pen' both really denote something—then these two objects both have the following feature: each is an object x such that, for every property, x has either that property or its complement. It must therefore be that we know a lot less about the properties of the number than we do about the properties of the pen. And that seems to me to imply that, when we talk about the pen, we have a pretty good idea of the nature of the thing we are talking about, and when we talk about the number, we have at best a radically incomplete idea of the nature of the thing we are talking about.

Platonists, therefore, must say that reality, what there is, is divided into two parts: one part *we* belong to, and everything in this part is more like us than is anything in the other part. The inhabitants of the other part are radically unlike us, much more unlike us than is anything in "our" part, and we can't really say much about what the things in the

other part are like. It seems to me to be evident that it would be better not to believe in the other part of reality, the other category of things, if we could manage it. But we can't manage it. In the next section I shall try to explain why we can't get along without *one* kind of abstract object: properties.

2. WE CAN'T GET AWAY WITH IT

What reasons are there for believing in the existence of properties (qualities, attributes, characteristics, features, . . .)? I think it is fair to say that there are apparently such things as properties. There is, for example, apparently such a thing as humanity. The members of the class of human beings, as the idiom has it, "have something in common". This appears to be an existential proposition. If it is (the platonist will ask rhetorically), what could this "something" be but the property "humanity"? It could certainly not be anything physical, for—Siamese twins excepted—no two human beings have any physical thing in common. And, of course, what goes for the class of human beings goes for the class of birds, the class of white things, and the class of intermediate vector bosons: the members of each of these classes have something in common with one another—or so it appears—and what the members of a class have in common is a property—or so it appears. But, as often happens in philosophy, many philosophers deny that what is apparently the case is really the case. These philosophers—"nominalists"—contend that the apparent existence of properties is mere appearance, and that, in reality, there are no properties.

How can the dispute between those who affirm and those who deny the existence of properties (platonists and nominalists) be resolved? The ontological method invented, or at least first made explicit, by Quine and Goodman (and illustrated with wonderful ingenuity in David and Stephanie Lewis's "Holes") suggests a way to approach this question.[4]

[4] W. V. Quine, "On What There Is", in *From a Logical Point of View* (Harvard University Press, 1961), pp. 1–19 (originally published in the *Review of Metaphysics*, 1948.); W. V. Quine, *Word and Object* (Cambridge, MA: MIT Press, 1960), ch. VII, "Ontic Decision", pp. 233–76; Nelson Goodman and W. V. Quine, "Steps toward a Constructive Nominalism", *Journal of Symbolic Logic*, 12 (1947), pp. 105–22; David and Stephanie Lewis, "Holes", in David Lewis, *Philosophical Papers, vol. I* (Oxford University Press, 1983), pp. 3–9 (originally published in the *Australasian Journal of Philosophy*, 1970).

Nominalists and platonists have different beliefs about what there is. Let us therefore ask this: how should one decide what to believe about what there is? According to Quine, the problem of deciding what to believe about what there is is a very straightforward special case of the problem of deciding what to believe. (The problem of deciding what to believe is, to be sure, no trivial problem, but it is a problem everyone is going to have somehow to come to terms with.) If we want to decide whether to believe that there are properties, Quine tells us, we should examine the beliefs we already have, the theses we have already, for whatever reason, decided to believe, and see whether they "commit us" (as Quine says) to the existence of properties. But what does this mean? Let us consider an example. Suppose we find the following proposition among our beliefs:

> Spiders share some of the anatomical features of insects.

A plausible case can be made for the thesis that this belief commits us to the existence of properties. We may observe, first, that it is very hard to see what an "anatomical feature" (such as "having an exoskeleton") could be if it were not a property: 'property', 'quality', 'characteristic', 'attribute', and 'feature' are all more or less synonyms. The following question is therefore of interest: does our belief that spiders share some of the anatomical features of insects therefore commit us to the existence of "anatomical features"? If we examine the meaning of the sentence 'Spiders share some of the anatomical features of insects', we find that what it says is this:

> There are anatomical features that insects have and spiders also have.

Or, in the "canonical language of quantification",

> It is true of at least one thing that it is such that it is an anatomical feature and insects have it and spiders also have it.

(The canonical language of quantification does not essentially involve the symbols '∀' and '∃'. Natural-language phrases like 'it is true of everything that it is such that' and 'it is true of at least one thing that it is such that' will do as well, for the symbols are merely shorthand ways of writing such phrases. And the canonical language of quantification does not essentially involve variables—'x', 'y' and so on. For variables are nothing more than pronouns: "variables" are simply a

stock of typographically distinct third-person-singular pronouns; having such a stock at one's disposal is no more than a device for facilitating cross-reference when one makes complicated statements. In the case of the present simple statement, 'it' works as well as '*x*': there is *no* difference in meaning between 'It is true of at least one thing that it is such that it is an anatomical feature and insects have it and spiders also have it' and '$\exists x$ *x* is an anatomical feature and insects have *x* and spiders also have *x*'.)

It is a straightforward logical consequence of this proposition that there are anatomical features: if there are anatomical features that insects have and spiders also have, then there are anatomical features that insects have; if there are anatomical features that insects have, then there are anatomical features—full stop.

Does this little argument show that anyone who believes that spiders share some of the anatomical features of insects is committed to platonism, and, more specifically, to a belief in the existence of properties? How might a nominalist respond to this little argument? Suppose we present the argument to Norma, a convinced nominalist (who believes, as most people do, that spiders share some of the anatomical features of insects). Assuming that Norma is unwilling simply to have inconsistent beliefs, there would seem to be four possible ways for her to respond to it:

(1) She might become a platonist.
(2) She might abandon her allegiance to the thesis that spiders share some of the anatomical features of insects.
(3) She might attempt to show that, despite appearances, it does not follow from this thesis that there are anatomical features.
(4) She might admit that her beliefs (her nominalism and her belief that spiders share some of the anatomical features of insects) are apparently inconsistent, affirm her nominalistic faith that this inconsistency is apparent, not real, and confess that, although she is confident that there is some fault in our alleged demonstration that her belief about spiders and insects commits her to the existence of anatomical features, she is at present unable to discover it.

Possibility (2) is not really very attractive. It is unattractive for at least two reasons. First, it seems to be a simple fact of biology that spiders share some of the anatomical features of insects. Secondly, there are

many, many "simple facts" that could have been used as the premise of an essentially identical argument for the conclusion that there are properties. (For example, elements in the same column in the Periodic Table tend to have many of the same chemical properties; some of the most important characteristics of the nineteenth-century novel are rarely present in the twentieth-century novel.) Possibility (4) is always an option, but no philosopher is likely to embrace it except as a last resort. What Norma is likely to do is to try to avail herself of possibility (3). She is likely to try to show that her belief about spiders and insects does not in fact commit her to platonism. If she does, she will attempt to find a *paraphrase* of 'Spiders share some of the anatomical features of insects', a sentence that (i) she could use in place of this sentence, and (ii) does not even *seem* to have 'There are anatomical features' as one of its logical consequences. If she can do this, she will be in a position to contend that the commitment to the existence of anatomical features that is apparently "carried by" her belief about spiders and insects is only apparent. And she will be in a position to contend—no doubt further argument would be required to establish this—that the apparent existence of anatomical features is *mere* appearance (an appearance that is due to certain forms of words we use but needn't use).

Is it possible to find such a paraphrase? (And to find paraphrases of all the other apparently true statements that seem to commit those who make them to the reality of properties?) Well, yes and no. 'Yes' because it is certainly possible to find paraphrases of the spider-insect sentence that involve quantification over some other sort of abstract object than anatomical features—that is, other than properties. One might, for example, eliminate (as the jargon has it) the quantification over properties on display in the spider-insect sentence in favor of quantification over, say, concepts. No doubt any work that could be done by the property "having an exoskeleton" could be done by the concept "thing with an exoskeleton". Neither of the two statements 'At least one thing is such that it is an anatomical feature and insects have it and spiders also have it' and 'At least one thing is such that it is an anatomical concept and insects fall under it and spiders also fall under it' would seem to enjoy any real advantage over the other as a vehicle for expressing what we know about the mutual relations of the members of the phylum *Arthropoda*; or, if one of them does, it will be some relatively minor, technical advantage. It is certain that a nominalist will be no more receptive to an ontology that contains concepts

(understood in a platonic or Fregean sense, and not in some psychological sense) than to an ontology that contains properties. When I say it is not possible to get along without asserting the existence of properties, therefore, what I mean is that it is not possible to get along without asserting the existence of properties—*or* something that a nominalist is not going to like any better than properties.

Now the distinction between a "relatively minor, technical advantage" and a really important advantage, an advantage that can be appealed to as relevant in disputes about fundamental ontology, is not as clear as it might be. Here is an example that illustrates this point. Some philosophers, most notably Quine, would agree that we cannot eliminate quantification over abstract objects, but deny that examples like the above, or any other consideration, should convince us that there are *properties*. Quine would insist that the most that any such argument can establish is that we must allow the existence of *sets*. Quine concedes that in affirming the existence of sets he is affirming the existence of abstract objects. The set of all spiders, after all, is not a spider or a sum of spiders or any other sort of concrete object. It is true that if the only use we made of the language of set-theory was exemplified by phrases like 'the set of all spiders' and 'the set of all intermediate vector bosons', we could regard our use of such phrases as being merely a device for referring collectively to all spiders, to all intermediate vector bosons, and so on. But that is not the only use we make of such language; for, if we are going to say the things we want to say, and if we affirm the existence of no abstract objects but sets, we must quantify over sets and we must refer to (and quantify over) sets that have sets as members. (If we wish to express the facts of evolutionary biology, we must say things like 'Any spider and any insect have a common ancestor', and those who believe in no abstract objects but sets cannot say that without quantifying over sets—at least, not unless they are willing to take 'ancestor of' as undefined; if their only undefined term is 'parent of', they must affirm generalizations about individually unspecified sets to express the idea "ancestor of". Or we may wish to make use of the idea of *linear order*—we may, for example, wish to calculate the probability of drawing a face card, an ace, and a heart *in that order*; and those of us who believe in no abstract objects but sets must refer to sets that have sets as members to explain the idea of things-arranged-in-some-linear-order.) Sets, then, are abstract objects; but, Quine says, sets are not properties. And this statement points to a far more important fact than the statement that

concepts are not properties. Sets, Quine tells us, are well-behaved in a way in which concepts and properties are not. Or, availing himself of the method of "semantic ascent", he might wish rather to say this: those who contend that general terms like 'concept' and 'property' have non-empty extensions face intractable problems of individuation, problems that do not face those who, in admitting abstract objects into their ontology, content themselves with admitting sets. I mention this position of Quine's (that an ontology that contains sets and no other abstract objects is superior, all other things being equal, to an ontology that contains properties or Fregean concepts) because it is important, but I decline to discuss it because it raises some very difficult questions, questions I cannot attempt to answer within the confines of this paper.[5]

Let us return to the topic of paraphrase. Is it possible to provide sentences like 'Spiders share some of the anatomical features of insects' with *nominalistically acceptable* paraphrases? My position is that it is not. I cannot hope to present an adequate defense of this position, for an

[5] I will, however, make one remark, or one connected series of remarks, about Quine's thesis. I doubt whether having an extensional principle of individuation has the fundamental ontological significance that Quine ascribes to it. To begin with, I'm not entirely sure that the idea of a certain sort of entity's having an extensional principle of individuation makes sense. I certainly don't see how to write out a Chisholm-style *definiens* for 'the so-and-sos have an extensional principle of individuation'. And I am far from confident that, if I did understand the concept "sort of thing that has an extensional principle of individuation", I should regard falling under this concept as a mark of ontological good behavior. I don't see why the concept "abstract object of a sort that has an extensional principle of individuation" should be identified with the concept "abstract object of a sort that is well-behaved". In any case, whatever may be the case as regards the individuation of properties, they seem to be perfectly well-behaved (Russell's paradox aside; but sets enjoy no advantage over properties in respect of Russell's paradox). It might be objected—Quine no doubt would object—that properties lack not only an extensional principle of individuation (whatever that is), but lack a principle of individuation of any sort. Properties must therefore (the objection continues) to be ruled *entia non grata* by anyone who accepts the principle "No entity without identity". I reply, first, that it is certainly possible to supply principles of individuation for properties, although any such principle will be controversial. (For example: x is the same property as y just in the case that x and y are coextensive in all possible worlds; x is the same property as y just in the case that x and y are coextensive in all possible worlds *and*, necessarily, whoever considers x considers y and whoever considers y considers x.) Second, the principle "No entity without identity" is ambiguous. It might mean "One should not quantify over entities of a given sort unless one is able explicitly to supply a principle of individuation for those entities." Or it might mean "For every x and for every y, x is identical with y or it is not the case that x is identical with y." I see no reason to accept the first of these principles. The second is certainly unobjectionable (it is a theorem of quantifier logic with identity), but there is no reason to suppose that someone who quantifies over entities of a sort for which he has not endorsed an explicit principle of individuation is committed to its denial.

adequate defense of this position would have to take the form of an examination of all possible candidates for nominalistically acceptable paraphrases of such sentences, and I cannot hope to do that. The question of nominalistically acceptable paraphrase will be answered, if at all, only as the outcome of an extended dialectical process, a process involving many philosophers and many years and many gallons of ink. I can do no more than look at one strand of reasoning in this complicated dialectical tapestry. My statement "We can't get away with it" must be regarded as a promissory note. But here is the ten-dollar co-payment on the debt I have incurred by issuing this note.

Suppose a nominalist were to say this: "It's easy to find a nominalistically acceptable paraphrase of 'Spiders share some of the anatomical features of insects'. For example: 'Spiders are like insects in some anatomically relevant ways' or 'Spiders and insects are in some respects anatomically similar'." A platonist is likely to respond as follows (at least, this is what *I'd* say):

> But these proposed paraphrases seem to be quantifications over "ways a thing can be like a thing" or "respects in which things can be similar". If we translate them into the canonical language of quantification, we have sentences something like these:
>
> > It is true of at least one thing that it is such that it is a way in which a thing can be like a thing and it is anatomical and spiders are like insects in it.
> >
> > It is true of at least one thing that it is a respect in which things can be similar and it is anatomical and spiders and insects are similar in it.
>
> These paraphrases, therefore, can hardly be called nominalistically acceptable. If there are such objects as ways in which a thing can be like a thing or respects in which things can be similar, they must certainly be *abstract* objects.

What might the nominalist say in reply? The most plausible reply open to the nominalist seems to me to be along the following lines.

> My platonist critic is certainly a very literal-minded fellow. I didn't mean the 'some' in the open sentence '*x* is like y in some anatomically relevant ways' to be taken as a *quantifier*: I didn't mean this sentence to be read '$\exists z$ (*z* is a way in which a thing can be like a thing and *z* is anatomical and *x* is like *y* in *z*)'. That's absurd. One might as well read

> 'There's more than one way to skin a cat' as '$\exists x\ \exists y$ (x is a way of skinning a cat and y is a way of skinning a cat and $x \neq y$)'. I meant this open sentence to have no internal logical structure, or none beyond that implied by the statement that two variables are free in it. It's just a form of words we learn to use by comparing various pairs of objects in the ordinary business of life.

And here is the rejoinder to this reply:

> If you take that line you confront problems it would be better not to have to confront. Consider the sentence 'x is like y in some *physiologically* relevant ways'. Surely there is some logical or structural or syntactical relation between this sentence and 'x is like y in some anatomically relevant ways'? One way to explain the relation between these two sentences is to read the former as '$\exists z$ (z is a way in which a thing can be like a thing and z is physiological and x is like y in z)' and the latter as '$\exists z$ (z is a way in which a thing can be like a thing and z is anatomical and x is like y in z)'. How would *you* explain it? Or how would you explain the relation between the sentences 'x is like y in *some* anatomically relevant ways' (which you say has no logical structure) and 'x is like y in *all* anatomically relevant ways'? If neither of these sentences has a logical structure, how do you account for the obvious validity of the following argument?
>
> > Either of two female spiders of the same species is like the other in all anatomically relevant ways.
> >
> > *Hence*, an insect that is like a given female spider in some anatomically relevant ways is like any female spider of the same species in some anatomically relevant ways.
>
> If the premise and conclusion of this argument are read as having the logical structure that their syntax suggests, the validity of this argument is easily demonstrable in textbook quantifier logic. If one insists that they have no logical structure, one will find it difficult to account for the validity of this argument. That is one of those problems I alluded to, one of those problems it would be better not to have to confront (one of thousands of such problems).

I suggest that we can learn a lesson from this little exchange between an imaginary nominalist and an imaginary platonist: that one should accept the following condition of adequacy on philosophical paraphrases:

> Paraphrases must not be such as to leave us without an account of the logical relations between predicates that are obviously logically related. Essentially the same constraint on paraphrase can be put in these words: a paraphrase must not leave us without an account of the validity of any obviously valid argument.

Accepting this constraint has, I believe, a significant consequence. This consequence requires a rather lengthy statement:

> Apparent quantification over properties pervades our discourse. In the end, one can avoid quantifying over properties only by quantifying over other sorts of abstract object—"ways in which a thing can be like a thing", for example. But most philosophers, if forced to choose between quantifying over properties and quantifying over these other objects, would probably prefer to quantify over properties. The reason for this may be illustrated by the case of "ways in which a thing can be like a thing". If there really are such objects as ways in which a thing can be like a thing, they seem to be at once intimately connected with properties and, so to speak, more *specialized* than properties. What, after all, would a particular "way in which a thing can be like a thing" be but the sharing of a certain property? (To say this is consistent with saying that not just any property is such that sharing it is a way in which a thing can be like a thing; sharing "being green" can plausibly be described as a way in which a thing can be like a thing, but it is much less plausible to describe sharing "being either green or not round"—if there is such a property—as a way in which a thing can be like a thing.) And if this is so, surely, the best course is to accept the existence of properties and to "analyze away" all apparent quantifications over "ways in which a thing can be like a thing" in terms of quantifications over properties.

It is the content of this lengthy statement that I have abbreviated as "We can't get away with it."

This argument I have given above has some obvious points of contact with the so-called Quine–Putnam indispensability argument for mathematical realism.[6] But there are important differences between the two

[6] See Hilary Putnam, *Philosophy of Logic* (New York: Harper & Row, 1971). *Philosophy of Logic* is reprinted in its entirety in Stephen Laurence and Cynthia Macdonald (eds.), *Contemporary Readings in the Foundations of Metaphysics* (Oxford: Blackwell, 1998), pp. 404–34.

arguments—I mean besides the obvious fact that my argument is an argument for the existence of properties and not an argument for the existence of specifically mathematical objects. It should be noted that my argument is not that we should believe that properties exist because their existence is an indispensable postulate of science. Nor have I contended that the scientific indispensability of properties is *evidence* for the existence of properties. I have not maintained that, because of the scientific indispensability of properties, any adequate account of the success of science must affirm the existence of properties. For one thing, my argument has nothing in particular to do with science. Science does indeed provide us with plenty of examples of sentences that must in some sense, on some analysis, express truths and also, on the face of it, imply the existence of properties—for example, 'Many of the important properties of water are due to hydrogen bonding.' But our everyday, pre-scientific discourse contains a vast number of such sentences, and these will serve my purposes as well as any sentences provided by the sciences. If our spider-insect sentence is insufficiently non-scientific to support this thesis, there are lots of others. ('The royal armorer has succeeded in producing a kind of steel that has some of but not all the desirable characteristics of Damascus steel'.) My argument could have been presented in, say, the thirteenth century, and the advent of modern science has done nothing to make it more cogent.

More importantly, I have not supposed that the fact (supposing it to be a fact) that quantification over properties is an indispensable component of our discourse is any sort of *evidence* for the existence of properties. That's as may be; I neither affirm that thesis nor deny it. It is simply not a premise of my argument, which is not an epistemological argument. Nor is my argument any sort of "transcendental" argument or any sort of inference to the best explanation; I have not contended that the success of science cannot be accounted for on nominalistic premises. Again, that's as may be. If I have appealed to any general methodological principle, it is only this: if one doesn't believe that things of a certain sort exist, one shouldn't say anything that demonstrably implies that things of that sort do exist. (Or, at any rate, one may say such things only if one is in a position to contend, and plausibly, that saying these things is a mere manner of speaking—that, however convenient it may be, it could, in principle, be dispensed with.) This methodological rule does not, I think, deserve to be controversial. We would all agree, I assume, that, if p demonstrably implies the existence

of God, then atheists who propose to remain atheists shouldn't affirm *p*—or not, at any rate, unless they can show us how they could in principle dispense with affirming p in favor of affirming only propositions without theological implications.[7]

I suppose I ought to add—the point needs to be made somewhere—that, if one *could* show how to eliminate quantification over properties in a nominalistically acceptable way, that achievement, by itself, would have no ontological implications. After all, Quine has shown how to eliminate quantification over everything but pure sets (at least, it can be argued that he's shown how to do this), and Church has shown how to eliminate quantification over women.[8] The devices of Quine and Church would be of ontological interest if "containing only pure sets" or "not containing women" were desirable features for an ontology to have. But they're not. If what I said in the first section of this paper is right, however, "containing no abstract objects" is an advantage in an ontology.

I will close this section with a point about philosophical logic—as opposed to metaphysics. My argument fails if there is such a thing as substitutional quantification; and it fails if there is such a thing as

[7] For an important objection to this style of reasoning, see Joseph Melia, "On What There's Not", *Analysis*, 55 (1995), pp. 223–9. I intend to discuss Melia's paper elsewhere; to discuss it here would take us too far afield. I wish to thank David Manley for impressing upon me the importance of Melia's paper (and for correspondence about the issues it raises).

[8] In 1958, Alonzo Church delivered a lecture at Harvard, the final seven paragraphs of which have lately been making the e-mail rounds under the title (not Church's), "Ontological Misogyny". In these paragraphs, Church wickedly compares Goodman's attitude toward abstract objects to a misogynist's attitude toward women. ("Now a misogynist is a man who finds women difficult to understand, and who in fact considers them objectionable incongruities in an otherwise matter-of-fact and hard-headed world. Suppose then that in analogy with nominalism the misogynist is led by his dislike and distrust of women to omit them from his ontology.") Church then shows the misogynist how to eliminate women from his ontology. (In case you are curious: We avail ourselves of the fact that every woman has a unique father. Let us say that men who have female offspring have two modes of presence in the world, primary and secondary. Primary presence is what is usually called presence. In cases in which we should normally say that a woman was present at a certain place, the misogynist who avails himself of Church's proposal will say that a certain man—the man who would ordinarily be described as the woman's father—exhibits secondary presence at that place. . . .) "Ontological Misogyny" came to me by the following route: Tyler Burge, Michael Zeleny (Department of Mathematics, UCLA), James Cargile.

Quine's reduction of everything to pure sets (well, of physics to pure sets, but physics is everything for Quine) can be found in his essay "Whither Physical Objects?" which is included in R. S. Cohen, P. K. Feyerabend, and M. W. Wartofsky (eds.), *Essays in Memory of Imre Lakatos* (Dordrecht: D. Reidel, 1976), pp. 497–504. I thank Michael Rea for the reference.

quantification into predicate positions. (Or so I'm willing to concede. If either substitutional quantification or quantification into predicate positions is to be found in the philosopher's tool kit, then defending my thesis—"We can't get away with it"—becomes, at the very least, a much more difficult project.) I say this: substitutional quantification and quantification into non-nominal positions (including predicate positions) are both meaningless. More exactly:

(1) Substitutional quantification is meaningless unless it is a kind of shorthand for objectual quantification over linguistic objects, taken together with some semantic predicates like '*x* is true' or 'something satisfies *x*'. But substitutional quantification, so understood, is of no use to the nominalist; for, so understood, every existential substitutional quantification implies the existence of linguistic items (words and sentences), and those are abstract objects.

(2) Quantification into non-nominal positions is meaningless unless (*a*) the non-nominal quantifiers are understood substitutionally; this case reduces to the case already dismissed; or (*b*) it is understood as a kind of shorthand for nominal quantification over properties, taken together with a two-place predicate (corresponding to the 'ε' of set-theory) along the lines of '*x* has *y*' or '*x* exemplifies *y*'. (In saying this, I'm saying something very similar to what Quine says when he says that second-order logic is set theory in sheep's clothing—for the salient feature of the language of second-order logic is quantification into predicate positions. But, since I do not share Quine's conviction that one should admit no abstract objects but sets into one's ontology, I am free to say "Second-order logic is property theory in sheep's clothing".)

I have defended (1) elsewhere.[9] My arguments for (2) would be no more than a reproduction of Quine's animadversions on quantification into non-nominal positions.[10]

[9] Peter van Inwagen, "Why I Don't Understand Substitutional Quantification", *Philosophical Studies*, 39 (1981), pp. 281–5. The arguments presented in this paper are similar to the more general arguments of William G. Lycan's fine paper, "Semantic Competence and Funny Functors", *Monist*, 64 (1979). "Why I Don't Understand Substitutional Quantification" is reprinted in my *Ontology, Identity and Modality Ontology, Identity, and Modality: Essays in Metaphysics* (Cambridge University Press, 2001).

[10] See the section of W. V. Quine's *Philosophy of Logic* (Englewood Cliffs, NJ: Prentice-Hall, 1970) entitled "Set Theory in Sheep's Clothing" (pp. 66–8).

3. IF WE AFFIRM THE EXISTENCE OF PROPERTIES, WE OUGHT TO HAVE A THEORY OF PROPERTIES

By a "theory of properties", I mean some sort of specification of, well, the *properties* of properties. If one succeeds in showing that we cannot dispense with quantification over properties, one's achievement does not tell us much about the intrinsic features of these things. When I was presenting what I took to be the prima facie case for nominalism, I said that we didn't know much about the properties of properties. I am now making the point that the sort of argument for the existence of properties I have offered does not tell us much about the nature of properties. The whole of our discourse about things, on the face of it, defines what may be called "the property role", and our argument can be looked on as an attempt to show that something must play this role. (The property role could, in principle, be specified by the Ramsey-style methods that Lewis sets out in "How to Define Theoretical Terms."[11]) But it tells us nothing about the intrinsic properties of the things that play this role that enable them to play this role. In "Holes", Bargle argues that there must be holes, and his argument is in many ways like our argument for the existence of properties; that is, he uses some ordinary discourse about cheese and crackers to define the "hole role", and he attempts to show that one can't avoid the conclusion that something plays this role. Argle, after an initial attempt to evade Bargle's argument, accepts it. He goes on, however, to show how things acceptable to the materialist can play the hole role. In doing this, he spells out the intrinsic properties of the things he calls holes (when they are holes in a piece of cheese, they are connected, singly-perforate bits of cheese that stand in the right sort of contrast to their non-cheesy surroundings), and he, in effect, shows that things with the intrinsic properties he assigns to holes are capable of playing the role that Bargle's argument shows is played by something-we-know-not-what.

We are not in a position to do, with respect to properties, anything like what Argle has done with respect to holes, for, as I have observed, we cannot say anything much about the intrinsic properties of properties. It is of course unlikely that, if we could say anything more than the little we can about the intrinsic properties of properties, we should find

[11] David Lewis, "How to Define Theoretical Terms", *Philosophical Papers*, vol. I, Oxford University Press, 1983 pp. 78–95 (originally published in the *Journal of Philosophy*, 1970).

that the things whose properties we had specified were acceptable to the nominalist. It would seem in fact that even the little we can say about the properties of properties is sufficient to make them unacceptable to nominalists. (If this were not so, the whole nominalist–platonist debate would have to be re-thought.) However this may be, the plain fact is: we platonists *can't* describe those somethings-we-know-not-what which we say play the property role in anything like the depth in which Argle describes the things that (*he* says) play the hole role. Argle can describe the things he calls 'holes' as well as he can describe anything; we platonists can describe any concrete object in incomparably greater depth than we can any property.

I wish it weren't so, but it is. Or so *I* say. Some will dissent from my thesis that properties are mysterious. David Lewis is a salient example. If Lewis is right about properties, the property role is played by certain *sets*, and one can describe at least some of these sets as well as one can describe any set.[12] In my view, however, Lewis is not right about properties. In the next section I will explain why I think this. (A qualification: I have said that, according to Lewis, certain sets are suitable to play the property role. In Lewis's view, however, it may be that our discourse defines at least two distinct roles that could equally well be described as "property-roles". It should be said of those sets—the sets that Lewis has pressed into service—that, although they can play *one* of the property roles, they are unsuited for the other—if there are indeed two property roles.[13])

4. Lewis's Theory of Properties as Sets (with Some Remarks on Meinongian Theories of Properties as Sets)

According to Lewis, the property "being a pig" is the set of all pigs, including those pigs that are inhabitants of other possible worlds than ours. But, in saying this, I involve myself in Lewis's notorious modal

[12] See David Lewis, *On the Plurality of Worlds* (Oxford: Blackwell, 1986), sect. 1.5, "Modal Realism at Work: Properties", pp. 50–69.

[13] See David Lewis, "New Work for a Theory of Universals", in *Papers on Metaphysics and Epistemology* (Cambridge University Press, 1999), pp. 8–55 (originally published in the *Australasian Journal of Philosophy*, 1983). See especially the section entitled "Universals and Properties", pp. 10–24 in *Papers on Metaphysics and Epistemology*.

ontology. Let us, for the moment, avoid the questions raised by Lewis's modal ontology and say that Lewis's theory is one member of a species of theory according to all of which the property "being a pig" is the set of all possible pigs. Members of this species differ in their accounts of what a possible pig is. (That is to say, they differ in their accounts of what a *possibile* or *possible object* is, for we are interested not only in the property "being a pig" but in properties generally. According to all theories of this kind, every property is a set of *possibilia* and every set of *possibilia* is a property.) Lewis's theory will be just the member of this species according to which possible objects are what Lewis says possible objects are, and will be like the other members of the species on all points not touching on the nature of possible objects. The other members of the species are Meinongian theories, or at least all of them I can think of are.

What is a possible object? Examination of our use of the adjective "possible" shows that it has no fixed meaning. Its meaning rather depends on the word or phrase it modifies: a possible X is an X that is possibly F, where what F is depends on what X is. A possible proposition is a proposition that is possibly true. A possible state of affairs is a state of affairs that possibly obtains. A possible property is a property that is possibly instantiated. What, then, is a possible pig? A pig can't be true or false, can't obtain or not obtain, isn't instantiated or uninstantiated. A pig just *is*. So—a possible pig is a pig that is possibly *what*? It may be that we sometimes use "possible pig" to mean not something of the form 'pig that is possibly F', but rather 'thing that is possibly a pig'; if so, this is no clue to what 'possible pig', and more generally 'possible object', mean in theories according to which the property "being a pig" is the set of all possible pigs and every set of possible objects is a property. If any such theory is correct, every possible pig must be, without qualification, a pig—and not a merely counterfactual pig or a merely potential pig. And no one, in any context, would ever want to define 'possible object' as 'something that is possibly an object', for, although it is possible not to be a pig (in fact, I've seen it done), it is not possible not to be an object. 'Possible object' must therefore, at least in statements of theories of properties like those we are considering, have a logical structure like that of 'possible proposition' or 'possible property'. A definition of 'possible object' must have the form 'thing that is an object and is also possibly F'. And of course, if the definition is to be of any interest, F must represent a characteristic that does not belong to

objects as a necessary and automatic consequence of their being objects. What characteristic could satisfy this condition?

A Meinongian, or, rather, a neo-Meinongian like Terence Parsons or Richard Sylvan, has a simple answer to this question.[14] Just as a possible proposition is a proposition that is possibly *true*, and a possible property is a property that is possibly *instantiated*, a possible object is an object that is possibly *existent*. (We must avoid confusion on the following point. Assuming that there is such a thing as the proposition that $2 + 2 = 5$, it is a possible object and is not a possible proposition. Since all propositions are objects, it might be thought to follow that it was at once a possible object and not a possible object. But to infer that conclusion would be to commit the fallacy of ambiguity. All that follows from its being a possible object and its not being a possible proposition is that it is an object that is possibly *existent* and an object that is not possibly *true*—which is not even an apparent contradiction.) And, the neo-Meinongians maintain, objects are not necessarily and automatically existent. Although any object must *be*, there are objects that could fail to *exist*. In fact, most of the objects that are *do* fail to exist, and many objects that do exist might have been without existing. (Paleo-Meinongians—Meinong, for example—would not agree that any object must be: they contend that many objects, so to speak, don't be.)

What is to be said about neo-Meinongianism? What Lewis says seems to me to be exactly right: the neo-Meinongians have never explained what they mean by 'exist'.[15] We anti-Meinongians and they mean the same thing by 'be'. We anti-Meinongians say that 'exists' and 'be' mean the same thing; the neo-Meinongians say that this is wrong and 'exists' means something else, something other than 'be'. (And, they say, the meanings of the two verbs are so related that—for example—the powers that exist must form a subset of the powers that be.) Unfortunately, they have never said what this "something else" is. I would add the following remark to Lewis's trenchant critique of neo-Meinongianism. The only attempt at an explanation of the meaning of 'exists' that neo-Meinongians have offered proceeds by laying out

[14] See Terence Parsons, *Non-Existent Objects* (Yale University Press, 1980); Richard Routley [=Richard Sylvan], *Exploring Meinong's Jungle and Beyond: An Investigation of Noneism and the Theory of Items* (Canberra: Departmental Monograph No. 3, Philosophy Department, Research School of Social Sciences, Australian National University, 1980).

[15] See David Lewis, "Noneism and Allism", in *Papers in Metaphysics and Epistemology* (Cambridge University Press, 1999), pp. 152–63 (originally published in *Mind*, 1990).

supposed examples of things that are but do not exist. But, in my view, the right response to every such example that has ever been offered is either "That does too exist" or "There is no such thing as that." And, of course, if there is no distinction in meaning between 'be' and 'exist', then neo-Meinongianism cannot be stated without contradiction. If 'be' and 'exist' mean the same thing, then the open sentence 'x exists' is equivalent to '$\exists y\ x = y$'. And, if that is so, 'There are objects that do not exist' is logically equivalent to 'Something is not identical with itself'. Since neo-Meinongians obviously do not mean to embrace a contradiction, their theory depends on the premise that 'exist' means something other than 'be'. But, so far as I can see, there is nothing for 'exists' *to* mean but 'be'. In the absence of further explanation, I am therefore inclined to reject their theory as meaningless. It does not, I concede, follow that 'possible object', if it means 'object that possibly exists', is meaningless. If it means that, that's what it means, and that which means something is not meaningless. It does, however, follow, that 'possible object' means the same as 'object'; at least this must be true in the sense in which, say, 'object that does not violate Leibniz's Law' or 'object that is possibly self-identical' or 'object whose being would not entail a contradiction' mean the same as 'object'. And in that case the theory that a property is a set of possible objects cannot be distinguished from the theory that a property is a set of objects *tout court*.

Let us turn to Lewis's version of the properties-as-sets-of-possible-objects theory. According to Lewis, a possible object is indeed simply an object. But some possible objects are, as he says, *actual* and some are *merely* possible. Merely possible objects are not objects that do not exist; that is, they are not objects of which we can correctly say that they do not exist "in the philosophy room". Outside the philosophy room, in the ordinary business of life, we can say, and say truly, that flying pigs do not exist, despite the fact that we say truly in the philosophy room that some possible objects are flying pigs. When we say that there are no flying pigs, our use of the quantifier is like that of someone who looks in the fridge and says sadly, "There's no beer." When I say, in the philosophy room, "There are flying pigs, but they're one and all merely possible objects", I'm saying this: "There are [an absolutely unrestricted quantifier; the philosophy room is just that place in which all contextual restrictions on quantification are abrogated] flying pigs, and they're spatio-temporally unrelated to me."

The problem with Lewis's theory, as I see it, is that there is no reason to think that there is anything spatio-temporal that is spatio-temporally unrelated to me, and, if there *is* anything in this category, I don't see what it has to do with modality.[16] Suppose there *is* a pig that is spatio-temporally unrelated to me—or, less parochially, to us. Why should one call it a "merely possible pig"—or a "non-actual pig"? Why are those good things to call it? This is not the end of the matter, however. Even if a pig spatio-temporally unrelated to us *can't* properly be called a merely possible pig, it doesn't follow immediately that Lewis's theory of properties is wrong. If what Lewis calls the principle of plenitude is true—if, as Lewis maintains, there exists (unrestricted quantifier) a pig having, intuitively speaking, every set of properties consistent with its being a pig—then there might be something to be said for identifying the set of all pigs (including those spatio-temporally unrelated to us) with the property "being a pig". (If there exist pigs having every possible combination of features, there must be pigs that are spatially or temporally unrelated to us: if every pig were spatially and temporally related to us, there wouldn't be room for all the pigs that Lewis says there are.) There might be something to be said for this identification, that is, even if the set of all pigs couldn't properly be called 'the set of all pigs, both actual and merely possible'. But even if there are pigs spatio-temporally unrelated to us, there is, so far as I can see, no good reason to accept the principle of plenitude—even as it applies to pigs, much less in its full generality.

On the face of it, the set of pigs seems to represent far too sparse a selection of the possible combinations of characteristics a pig might have for one to be able plausibly to maintain that this set could play the role "the property of being a pig". According to both the neo-Meinongians and Lewis, the set of pigs has a membership much more diverse than most of us would have expected, a membership whose diversity is restricted only by the requirements of logical consistency (for Lewis) or is not restricted at all (for the neo-Meinongians). If I am right, both Lewis and the Meinongians have failed to provide us with any reason to accept this prima facie very uncompelling thesis.

[16] I have gone into this matter in a great deal of detail in "Two Concepts of Possible Worlds", *Midwest Studies in Philosophy*, 11 (1986) pp. 185–213 (reprinted in *Ontology, Identity and Modality*, cited above).

5. A THEORY OF PROPERTIES

There is only one real objection to Lewis's theory of properties: it isn't true. It is a model of what a good theory should be, insofar as theoretical virtue can be divorced from truth. In this section I present a theory of properties that, or so *I* say, does have the virtue of truth. Alas, even if it has that virtue, it has few others. Its principal vice is that it is very nearly vacuous. It can be compared to the theory that taking opium is followed by sleep because opium possesses a dormitive virtue. That theory about the connection of opium and sleep, as Lewis points out somewhere, is not *entirely* vacuous: it is inconsistent with various theses, such as the thesis that taking opium is followed by sleep because a demon casts anyone who takes opium into sleep. The theory of properties I shall present, although it is pretty close to being vacuous, is inconsistent with various theses about properties, and some of these theses have been endorsed by well-known philosophers. (A proper presentation of this theory would treat properties as a special kind of relation.[17] But I will not attempt to discuss relations within the confines of this paper.)

The theory I shall present could be looked on as a way of specifying the property role, a way independent of and a little more informative than specifying this role via the apparent quantifications over properties that are to be found in our discourse. This theory identifies the property role with the role "thing that can be said of something". This role is a special case of the role "thing that can be said". Some things that can be said are things that can be said *period*, things that can be said *full stop*. For example: that Chicago has a population of over two million is something that can be said; another thing that can be said is that no orchid has ever filed an income-tax return. But these things—'propositions' is the usual name for them—are not things that can be said *of* anything, not even of Chicago and orchids. One can, however, say *of* Chicago that it has a population of over two million, and one can also say this very same thing of New York. And, of course, one can say it of Sydney and of South Bend. (It can be said only falsely of South Bend, of course, but lies and honest mistakes are possible.) I will assume that anything that can be said of anything can be said of anything else. Thus,

[17] And it would treat propositions as a special kind of relation: it would treat properties as monadic relations and propositions as 0-adic relations.

if there are such things as topological spaces, one can say of any of them that it is a city with a population of over two million, or that it has never filed an income-tax return. I don't know why anyone would, but one could.

Let us call such things, propositions and things that can be said of things, *assertibles*. The assertibles that are not propositions, the things that can be said *of* things, we may call *unsaturated* assertibles. I will assume that the usual logical operations apply to assertibles, so that, for example, if there are such assertibles as "that it has a population of over two million" and "that it once filed an income-tax return", there is also, automatically as it were, the assertible "that it either has a population of over two million or else has never filed an income tax return". (In a moment, I shall qualify this thesis.) It follows that the phrase I used to specify the role I wish to consider—"things that can be said of things"—cannot be taken too literally. For if there are any unsaturated assertibles, and if there are arbitrary conjunctions and disjunctions and negations of such unsaturated assertibles as there are, it will be impossible for a finite being to say most of them of anything. "Things that can be said of things" must therefore be understood in the sense "things that can in principle be said of things", or perhaps "things of a type such that some of the simpler things of that type can be said of things" or "things that can be said of things by a being without limitations". All these ways of qualifying 'said of' could do with some clarification, but I cannot discuss the problems they raise here. (One possible solution to the problem raised by human limitations for our role-specification would be to substitute something like 'can be true of' or 'is true or false of' for 'can be said of' in our specification of the unsaturated-assertible role. This is, in my view, a promising suggestion, but I do think that 'can be said of' has certain advantages in an initial, intuitive presentation of the theory of properties I shall present.)

It seems to me that there are such things as unsaturated assertibles: there are things that can be said of things. It seems to me that there is an x such that x can be said of y and can also be said of z, where z is not identical with y. One of the things you can say about the Taj Mahal is that it is white, and you can say that about the Lincoln Memorial, too. (I take it that 'about' in this sentence is a mere stylistic variant on 'of'.) If, during the last presidential campaign, you had heard someone say, "All the negative things you've said about Gore are perfectly true, but don't you see that they're equally applicable to Bush?" you wouldn't

have regarded this sentence as in any way problematical—not logically or syntactically or lexically problematical, anyway. (And if the speaker had said 'perfectly true *of him*' instead of 'perfectly true' your only objection could have been that this phrasing was wordy or pedantic.) I say it seems to me that there are such things. I certainly see almost no reason to *deny* that there are such things, other than the reasons we have (and which I have tried to lay out) for denying that there are abstract objects of any sort. (For assertibles, if they exist, are certainly abstract objects.) I say 'almost no reason' because there are, I concede, powerful "Russellian" objections to admitting assertibles into our ontology. If there are things that can be said, there are things that can be said of things that can be said. We can say of a proposition that it is false or unsupported by the evidence. We can say of "that it is white" that it can be said truly of more than one thing. Now *one* of the things we can say of "that it is white" would seem to be that it isn't white. That's a thing that can be said *truly* about "that it is white"—a thing that can be said of something is obviously not a visible thing, and only a visible thing can have a color—so, *a fortiori*, it's a thing that can be said about "that it is white". It would seem, therefore, that one of the things we can say about "that it is white" is that it can't be said truly of itself. And it would seem that we can say this very same thing about, for example, "that it has a population of over two million". It seems evident therefore that, if there are things that can be said of things, one of them is "that it can't be said truly of itself". What could be more evident than that this is one of the things that can be said (whether truly or falsely) about something? But, of course, for reasons well known to us all, whatever things that can be said of things there may be, it can't be that one of them is "that it can't be said truly of itself". At any rate, there can't be such a thing if—as we are supposing—anything that can be said of something can be said of anything. If, therefore, we accept the conditional 'If there are things that can be said of things, one of them must be "that it can't be said truly of itself" ', we can only conclude that there are no things that can be said of things. Well, I choose to deny the conditional. It's true that it seems self-evident. But, then, so does 'If there are sets, there is a set containing just those sets that are not members of themselves.' Everyone who accepts the existence of sets or properties is going to have to think hard about how to deal with Russell's Paradox. There are many workable ways of dealing with the paradox. (Workable in that, first, they generate a universe of abstract

objects sufficient to the needs of the working mathematician, and, secondly, none of them is known to lead to a contradiction—and there's no particular reason to think that any of them does.) None of these "workable" ways of dealing with the paradox is, perhaps, entirely satisfying. In the case of first-order set- or property-theories, the workable ways of dealing with the paradox are workable ways of saying that certain open sentences must correspond to sets or properties—and leaving it an open question which, if any, of the others do. The friends of things that can be said of things can easily adapt any of the standard, workable ways of dealing with the paradox to the task of saying which open sentences must correspond to things that can be said about things. These adaptations will, I think, be neither more nor less intellectually satisfying than the "originals".

I propose, therefore, that properties be identified with unsaturated assertibles, with things that can be said of things. It seems unproblematical that unsaturated assertibles can successfully play the property role. And I would ask this: what is the property whiteness but something we, in speaking of things, occasionally predicate of some of them? And what is predicating something of something but *saying* the former *of* the latter? Well, perhaps someone will say that it sounds wrong or queer to say that whiteness is one of the things we can say of the Taj Mahal. I don't think that arguments that proceed from that sort of premise have much force, but I won't press the point. Anyone who thinks that unsaturated assertibles—from now on, I'll say simply 'assertibles'—cannot play the property role but is otherwise friendly to my arguments may draw this conclusion from them: there are, strictly speaking, no properties, but assertibles may be pressed into service to do the work that would fall to properties if it were not for the inconvenient fact that there are no properties to do it. If we suppose that there are assertibles, and if we're unwilling to say that assertibles are properties, what advantage should we gain by supposing that there are, in addition, things that we *are* willing to call properties?

Now if properties are assertibles, a wide range of things philosophers have said using the word 'property' make no sense. For one thing, a property, if it is an assertible, cannot be a part or a constituent of any concrete object. If this pen exists, there are no doubt lots of things that are in some sense its parts or constituents: atoms, small manufactured items . . . perhaps, indeed, every sub-region of the region of space exactly

occupied by the pen at *t* is at *t* exactly occupied by a part of the pen. But "that it is a writing instrument", although it can be said truly of the pen—and is thus, in my view, one of the properties of the pen—is not one of the parts of the pen. That it is not is as evident as, say, that the pen is not a cube root of any number. Nor is "that it is a writing instrument" in any sense present in any region of space. It makes no sense, therefore, to say that "that it is a writing instrument" is "wholly present" in the space occupied by the pen. In my view, there is just nothing *there* but the pen and its parts (parts in the "strict and mereological sense"). There are indeed lots of things true of the pen, lots of things that could be said truly about the pen, but those things do not occupy space and cannot be said to be wholly (or partly) present anywhere.

If properties are assertibles, it makes no sense to say, as some philosophers have said, that properties are somehow more basic ontologically than the objects whose properties they are. A chair cannot, for example, be a collection or aggregate of the properties ordinary folk say are the properties of a thing that is not a property, for a chair is not a collection or aggregate of all those things one could truly say of it. Nor could the apparent presence of a chair in a region of space "really" be the co-presence in that region of the members of a set of properties—if only because there is no way in which a property can be present in a region of space. (I hope no one is going to say that if I take this position I must believe in "bare particulars". A bare particular would be a thing of which nothing could be said truly, an obviously incoherent notion.)

Properties, if they are assertibles, are not (as some philosophers have said they are) objects of sensation. If colors are properties and properties are assertibles, then the color white is the thing that one says of something when one says of it that it is white. And this assertible is not something that can be seen—just as extracting a cube root is not something you can do with a forceps. We never see properties, although we see *that* certain things have certain properties. (Looking at the pen, one can see that what one says of a thing when one says it's cylindrical is a thing that can be said *truly* of the pen.) Consider sky-blue—the color of the sky. Let us suppose for the sake of the illustration that nothing—no exotic bird, no flower, no 1958 Cadillac—is sky-blue. (If I say that nothing is sky-blue, it's not to the point to tell me that the sky is sky-blue or that a reflection of the sky in a pool is sky-blue, for there is

no such thing as the sky and there are no such things as reflections. And don't tell me that when I look at the sky on a fine day I perceive a sky-blue quale or visual image or sense-datum, for there are no qualia or visual images or sense-data. I may be sensing sky-bluely when I look at the sky on a fine day, but that shows at most that something has the property "sensing sky-bluely"; it does not show that something has the property "being sky-blue".) Now some philosophers have contended that if, as I have asked you to suppose, nothing is sky-blue, it must be possible to *see* the property "being sky-blue". After all (they argue), this property is in some way involved in the visual experience I have when I look at the sky, and this fact can't be explained by saying that when I look at the sky I'm seeing something that has it, for (we are supposing) nothing has it. And what is there left to say but that when I look upwards on a fine day I see the uninstantiated property "being sky-blue"? I would answer as follows: since the property "being sky-blue" is just one of those things that can be said of a bird or a flower or a 1958 Cadillac (or, for that matter, of human blood or the Riemann curvature tensor), we obviously don't *see* it. It's involved in our sensations when we look upwards on a fine day only in this Pickwickian sense: when we do that, we sense in the way in which visitors to the airless moon would sense during the lunar day if the moon were surrounded by a shell of sky-blue glass. And why *shouldn't* we on various occasions sense in the way in which we should sense *if* an X were present when in fact there is no X there?

Some philosophers have said that existence is not a property. Are they right or wrong? They are wrong, I say, if there is such a thing to be said about something as that it exists. And it would seem that there is. Certainly there is this to be said of a thing: that it might not have existed. And it is hard to see how there could be such an assertible as "that it might not have existed" if there were no such assertible as "that it exists".

Some philosophers have said that there are no individual essences or haecceities, no "thisnesses" such as "being *that* object" or "being identical with Alvin Plantinga". Are they right or wrong? They are wrong, I say, if one of the things you can say about something is that it is identical with Alvin Plantinga. Is there? Well, it would seem that if Plantinga hadn't existed, it would still have been true that he might have existed. (It would seem so, but it has been denied.) And it is hard to see how there could be such a thing as the saturated assertible "that

Alvin Plantinga might have existed" if there were no such thing as the unsaturated assertible "that it is Alvin Plantinga".

Some philosophers have said that, although there are obviously such properties as redness and roundness, it is equally obvious that there is no such property as "being either red or not round". They have said, to use a phrase they favor, that the world, or the Platonic heaven, is "sparsely", not "abundantly", populated with properties. Are they right? If properties are assertibles, only one answer to this question seems possible: No. If one of the things you can say about something is that it is red and another thing you can say about something is that it is round, then, surely, one of the things you can say about something is that it is either red or not round. (Mars is either red or not round, and *that*, the very same thing, is also true of the Taj Mahal and the number four—given, of course, that all three objects exist.) It is, of course, our answer to the question 'Is the world sparsely or abundantly supplied with properties?'—"abundantly"—that eventually leads to our troubles with Russell's Paradox. But, again, the alternative doesn't seem possible.

Some philosophers have denied the existence of uninstantiated properties. Is this a plausible thesis? If properties are assertibles, it is a very implausible thesis indeed, for there are obviously things that can be said of things but can't be said *truly* of anything: that it's a—non-metaphorical—fountain of youth, for example. No doubt someone, Ponce de León or some confidence trickster, has said this very thing about some spring or pool. (If there are uninstantiated properties, are there *necessarily* uninstantiated properties? Yes indeed, for one of the things you can say about Griffin's *Elementary Theory of Numbers* is that it contains a correct proof of the existence of a greatest prime. You can say it about *Tess of the D'Urbervilles*, too. It would seem, moreover, that one of the things you can say of something, one of the things that is "there" to be said about a thing, is that it is both round and square.)

Some philosophers have said that properties exist only contingently. This would obviously be true if there could not be uninstantiated properties, but it would be possible to maintain that there are uninstantiated properties and that, nevertheless, some or all properties are contingently existing things. Could this be? Well, it would certainly seem not, at least if the accessibility relation is symmetrical. One of the things you can say about something is that it is white. Are there possible worlds in which there is no such thing to be said of anything? Suppose

there is such a world. In that world, unless I'm mistaken, it's not even possibly true that something is white. Imagine, if you don't mind using this intellectual crutch, that God exists in a world in which there's no such thing to be said of a thing—not "said *truly* of a thing": "said of a thing *simpliciter*"—as that it is white. Then God, who is aware of every possibility, is not aware of the possibility that there be something white. (If God could be aware of or consider the possibility that there be something white, he would have to be aware that one of the things that can be said of something is that it is white.) Therefore, there must be no such possibility in that world as the possibility that there be something white. Therefore, with respect to that possible world, the possible world that is in fact actual is not even possible; that is to say, in that world, the world that is in fact the actual world doesn't exist (or exists but is impossible). But then the accessibility relation is not symmetrical. And I should want to say about the proposition that the accessibility relation is symmetrical what Gödel said of the power-set axiom of set theory: it forces itself upon the mind as true. Admittedly, there are steps in this argument that can be questioned and have been questioned—or at least, the corresponding steps in certain very similar arguments have been questioned. (I give one example of an objection, not the most important objection, that could be made to this argument: the argument at best proves that 'that it is white' denotes *an* object in, or with respect to, every possible world; it doesn't follow from this that this phrase denotes the *same* object in every possible world.) But the argument seems convincing to me. At any rate, it is the argument that will have to be got round by anyone who wants to say that properties do not exist necessarily.

There are many other interesting and important theses about properties than those I have considered. But the theses I have considered are, or so it seems to me, all the interesting and important theses to which the theory of properties as assertibles is relevant. The fact that this theory is inconsistent with various interesting and important theses about properties shows that, although it may be very close to being vacuous, it does not manage to be entirely vacuous.[18]

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[18] A condensed version of this paper (with the appropriately condensed title "Properties") will appear in a *Festschrift* for Alvin Plantinga.