The bearable lightness of being

> Whatever may be an object of thought, or may occur in any true or false proposition, or can be counted as *one*, I call a *term*. This, then, is the widest word in the philosophical vocabulary.[1]

1 *Questions*

As a great ontologist once observed[2], one can state the ontological problem very briefly, in just three words—'What is there?'—and answer it even more briefly, in one—'Everything'. Breviloquence is indeed a virtue, but more—as Quine recognised—needs to be said. For one thing, the question is to be understood as asking after what *kinds* of things there are, as opposed to an inventory of the individual things belonging to them. And even then, it is really only, save perhaps in some special cases, with very general kinds that philosophers are concerned. Aardvarks and ammonites are each perfectly good general kinds of thing, but their existence is of no special interest to the philosopher, as distinct from the zoologist or geologist. We are, by contrast, much interested in whether there are numbers, or sets, or material objects, or arbitrary mereological sums, for example. A plausible explanation why the latter, but not the former, are foci of philosophical concern is that the former are, if not themselves categories, the most important and representative general kinds lying within a category.

These are, I think, relatively uncontentious points. But there is more to be said that is bound to be much more controversial. I shall try to say some of it, focusing mainly on two issues—the relations between ontology and logical grammar and those between ontology and modality. Both, of course, are issues on which much has been said and on which there is no general agreement. In regard to the first, some have seen ontology as—in one way or another, and for one reason or another—inseparable from the logical analysis of language, while others have vehemently opposed any such linkage and viewed it as a fundamental philosophical error to suppose that questions about the analysis of language can have any bearing on questions about the nature of non-linguistic reality[3]. Here I shall explain and defend a broadly Fregean version of

---

[1] Russell 1903, p.43

[2] W.V.Quine, in the opening paragraph Quine 1948. Quine thought the short answer correct, and I agree, but it isn't uncontroversial—at least, it is not uncontroversial if one takes the question to be about what exists. See, for example, Graham Priest 2005, ch.5, following Routley 1980, ch.3 and 1982. It is beyond the scope of this paper to explain why I disagree with them.

[3] Proponents of a more or less tight connection between language, or conceptual scheme, and ontology include philosophers of otherwise markedly divergent persuasions, such as Frege, Quine, Carnap, and

the view that questions about what kinds of things there are are inseparable from, and in one way posterior to, questions about the logical analysis of language. In regard to the second issue, philosophers have sometimes viewed recourse to modality as a means of *avoiding* ontological commitment, i.e. as offering a way to avoid asserting the existence problematic (usually abstract) entities of some kind or other[4]. Of course, this approach will seem to promise a clean philosophical gain only to the extent that one regards modal notions as in good standing. Many philosophers have taken a less sanguine view of modality, and have held that talk of possibilities and necessities—if not to be rejected altogether as unintelligible or at least too unclear for serious philosophical use, or otherwise mortally sinful—must somehow be reduced, or explained away, in other terms. To those with troubled consciences, recourse to modality may be seen as at best achieving ontological economy at an unacceptable cost in 'ideology'—we merely swap uncomfortable ontological commitments for acceptance of irremediably obscure notions of necessity and possibility. As against sceptics about modality, I hold that modal notions are not irrecoverably unclear, that their use is indispensable to an adequate account of the logic and methodology of systematic thought about the world, and that modal facts are both objective and irreducible[5]. As against those who see modality as a way of *avoiding* ontological commitment, I shall suggest that a better perspective on ontological issues enables us to see that facts about what kinds of things there *are* are *already* essentially modal, and that when we appreciate the way in which they are so, we should no longer feel under pressure to seek ways of *eliminating* ontological commitments by modalizing them (i.e. burying them under modal operators).

The central question of ontology, then, is: *what kinds of things are there*?

Putnam—for an illuminating discussion of Frege's views, see Dummett 1973, ch.4 (especially p.56ff); for the others, see especially Quine 1969, Carnap 1950, and Putnam 1981, ch.3. Prominent among the opponents has been Michael Devitt—see especially Devitt 1984, passim, and especially chs.1,4, and 14

[4] An early presentation—and perhaps the origin—of this idea can be found in Hilary Putnam's paper 'Mathematics without foundations' (Putnam 1967. A well-known development of Putnam's idea is the modal version of eliminative structuralism presented by Geoffrey Hellman (in Hellman 1989), according to which elementary arithmetic, for example, is *not* a theory about an infinite sequence of particular abstract objects (the natural numbers 0,1,2, …), but merely tells us what *would* be true of the elements of any infinite sequence of a certain kind, if there *were* one—there is, on this account, no commitment to the *actual* existence of any such sequence, only to *possible* existence.

[5] It lies beyond the scope of this paper to argue for these very substantial claims. I attempt a partial defence of the second in Hale 1999. I hope soon to publish a fuller defence of all three claims, but for now they must remain largely undefended assumptions.

I am using 'thing' here as Russell says he is going to use 'term' in the quotation at the head of this paper—as the widest word in the philosophical vocabulary, with no implication of membership in any particular ontological category. Accordingly, one way of taking our general question is as asking what basic or fundamental categories or types of entity we should recognize—where candidates include *objects*, *individuals*, *particulars*, *substances*, *properties*, *relations*, *universals*, *events*, *processes*, *states of affairs*, *facts*, etc. Clearly we may also—presupposing some such categorization—ask more specific, but still highly general questions, e.g. What *kinds* of *objects* (or *properties*, *events*,…) *are there*? Are there abstract as well as concrete objects? Are there mental properties (or events) as well as physical ones? etc. Once we spell out our central question along these lines, it becomes evident that we face a number of prior methodological questions. Prominent among them[6] are:
How are the various ontological categories to be understood?
How may questions about what kinds of things there are be best approached and resolved?

In what follows, I shall focus largely on the first of these methodological questions. How, in particular, should we explain the notions of *object* and *property* (or *particular* and *universal*)? In what terms should the distinction between them be drawn? And how, in particular, are distinctions among ontological categories or types related to distinctions at the level of language, between different logical categories or types of expression?

As anticipated, I shall recommend a broadly Fregean answer—that is, an answer according to which ontological categorization (save in special cases, categorization of non-linguistic entities) is dependent upon and derivative from prior logical categorization of expressions[7]. I shall assume that central among the categories to which things belong are those of *object*, *property* and *relation*. Properties and relations, I assume, belong to different types or levels, according as they are properties of, or relations among, objects, or properties of, or relations

[6] Obviously there are also questions about how distinctions invoked in the more specific questions—e.g. between the abstract and the concrete, or between the mental and the physical—should be drawn.
[7] For important earlier discussion, see Dummett 1973, pp.54-7 and Wright 1983, pp.10-15. See also Hale 1987, ch.1 and Hale & Wright 2001, pp.7-11

among, properties of objects, and so on. I intend my use of the term 'object' to cover what have perhaps more commonly, in traditional discussions, been called 'particulars' or 'individuals'. Similarly, I intend no significant distinction between properties and relations and what, in traditional discussions, are perhaps most commonly called 'universals'. In focusing on these categories, I am not, of course, suggesting that they are the only categories we should recognize, or that other categories may somehow be reduced to them. On the contrary, it seems clear that one should recognize at least *events* and *processes*, and *substances* (in the sense, roughly, of (kinds of) stuff) as separate and independent categories. Perhaps one should also recognize a category of *facts* or *states of affairs*. It is not my aim here to adjudicate these questions. I omit discussion of them principally because I think that everything I want to say can be said by focusing on objects, properties and relations. Of course, it would be a serious weakness in the approach I shall be commending if it cannot be applied to other ontological categories, but I can see no reason to think it cannot be extended to them.

The plan for the remainder of this essay is as follows. I shall begin (sections 2-4) with a rough and preliminary statement of the conception of objects, properties, etc., which I think we should adopt for the purposes of a general philosophical enquiry into what kinds of things there are. This rough statement will be good enough to enable me (section 5) to confront a general line of objection to it which views the linkage it forges between ontology and the logical analysis of language as deeply misguided, on the ground that it confuses questions about the nature of non-linguistic reality with quite separate questions about the structure of our thought and talk. Although I believe this line of objection is itself fundamentally misdirected, I agree that a satisfactory response to it must include a more careful and qualified statement of the approach I favour (sections 6-7). I shall then turn (section 8) to some further difficulties confronting that approach, and try to explain how it may be refined to deal with them. I shall conclude (section 9) with some general observations on the resulting conception of ontology and ontological commitment.

2. *Objects*

If we are to avoid prejudging the outcome of an enquiry into what general *kinds* of objects there are, we require a neutral and completely general conception of what an object is. Evidently it is no good saying that an object is whatever occupies a

specific continuous region of space throughout a period of time, or of space-time. Setting aside any further difficulties this might be thought to raise—for example, about the ontological status and individuation of regions of space-time—this would simply beg the question against views according to which there are abstract objects, or objects that are the mereological sums of the contents of discontinuous regions of space-time. The need to avoid foreclosing, in one way or another, on the question what kinds of objects there are provides a strong, if not decisive, reason for explaining the general notion of an object in this way: an object is anything that is, or can be, an object of singular or identifying thought or reference. The appearance of circularity in this explanation is to some extent merely apparent. In so far as it results from the use of the term 'object' in the *explanans*, it *is* merely apparent. An object of thought or reference is just whatever is thought about, or referred to. Things other than objects, in the intended sense, can be objects of thought and reference. When I think that Socrates was wise, I am—as F.P.Ramsey insisted—thinking about wisdom just as much as about Socrates[8]. But I doubt that circularity is entirely avoidable. What does the real work in the proposed explanation is the notion of *singular* or *identifying* thought or reference, and I doubt that this can be explained without appealing to some notion—such as that of numerical as opposed to qualitative identity—which cannot itself be properly explained without reference to the target notion of a particular object. As Quine says, 'the whole apparatus'—i.e. the apparatus of individuation or 'objective reference': 'our articles and pronouns, our singular and plural, our copula, our identity predicate'—'is interdependent'[9]. If he is right, circularity is unavoidable. But circularity is not necessarily vicious, and is not so—or so I would claim—in this case[10].

Objects, then, according to the present proposal, are the (typically) non-linguistic correlates of the devices of singular reference. The proposal is broadly

[8] For Ramsey, of course, this was a prelude to his sceptical rejection of the particular/universal distinction as resting upon a 'great muddle'—see Ramsey 1925, p.134. Ramsey's scepticism is discussed in Strawson 1959, ch.5 and Dummett 1973, pp.61-9. See also Hale 2006

[9] Quine 1960, p53. I am not forgetting that Quine continues '… and the very notion of a term is as provincial to our culture as are those associated devices'. I shall explain later why we do not need to follow Quine into the jungle of relativism.

[10] In part, the point here is just the one often made in similar contexts, that at a basic level, explanation in terms of more fundamental ideas may be impossible, so that we can do no more than exhibit interconnections between concepts. But the circularity can be mitigated also by providing operationally independent tests for singular terms—see below, section 4.

Fregean in two principal respects. First, it follows Frege in taking the division of non-linguistic entities into different types or categories to be dependent upon a prior categorization of the types of expressions by means of which we refer to them. Second, and more specifically, it takes proper names in Frege's inclusive sense—singular terms—as the primary means by which we refer to objects. In this second respect, the proposal ostensibly diverges quite sharply from Quine's well-known view on ontological commitment, encapsulated in his slogan 'to be is to be the value of a variable'. Since for Quine, the only admissible variables are those of first-order quantification, his slogan identifies being an *object* with being a value of a variable. This divergence from Frege's view is in one way[11] merely superficial. At a deeper level, there is agreement—Quine, like Frege, effectively identifies being an object with being an object of singular reference. It is merely that, because he holds constant singular terms to be always eliminable by means of an extension of Russell's theory of definite descriptions, he takes the bound variables of first-order quantification to be the sole means by which we refer to objects.

3. *Properties and relations*

A much deeper divergence between Quine's approach to ontology and the broadly Fregean approach I am recommending is apparent as soon as we turn to the question of the nature and existence of properties. For Quine, the sole bearers of ontological commitment are the only vehicles of singular reference that he recognizes—in a regimented language, the bound variables of first-order quantification. Had Quine not persuaded himself of the eliminability of constant singular terms, he would presumably have allowed that ontological commitment might equally well be carried by the use of such terms—so that we would be committed to the existence of something wise as much by our asserting 'Socrates is wise' as by 'Someone is wise', or 'Something uniquely socratizes and is wise'. But the devices of singular reference—definite reference by means of constant singular terms, or indefinite reference by means of quantifiers—would remain the *sole* vehicles of ontological commitment. It is—to put the same point in a way that brings out its massive ontological significance—simply an *assumption* of Quine's whole

[11] Quine's doctrine of ontological relativity is another matter—*q.v. infra* section 7.

approach[12] that expressions of other types, such as predicates like 'is wise' or 'weighs more than', etc., do not refer or stand for entities of any kind, so that our use of them carries no existential commitment[13]. Thus for Quine, the issue whether there are—or whether to acknowledge the existence of—properties (or, as he usually prefers to say, attributes) has to be understood as the question whether we should take seriously the use of abstract nouns such as 'wisdom', 'weight', etc., as devices of (singular) reference[14].

The contrast with a broadly Fregean approach could not be greater. Running parallel to our Fregean explanation of what objects are, there is a seemingly simple and straightforward explanation of what properties and relations are—just as *objects* are what *singular terms* stand for, so *properties* and *relations* are what (one- or more-place) *predicates* stand for. More precisely *first-level* properties, or properties of objects, are what first-level predicates stand for—a first-level predicate being any expression which, applied to a suitable number of singular terms, yields a sentence. Thus assuming 'Socrates' and 'Theaetetus' to be singular terms, some examples of first-level predicates are 'is wise' and 'loves'—the former applying to 'Socrates' to give 'Socrates is wise', and the latter to 'Socrates' and 'Theaetetus' to give 'Socrates loves Theaetetus'. 'is wise' stands for the (ostensibly non-relational) property of being wise, 'loves' for the relation, or relational property, of loving. With respect to a formal language such as that of Frege's *Begriffsschrift*, our explanation of first-level properties extends straightforwardly upwards to properties of higher-level. Second-level properties are simply the referents of second-level predicates, these being expressions, other than singular terms—including the first-order quantifiers which we write '$\forall x$ …x…' and '$\exists x$…x…'—which may be combined with first-level predicates

[12] I am not suggesting the assumption is peculiar to Quine. On the contrary, it was taken for granted—and not only by those with nominalist sympathies—in virtually all ontological discussion, at least in the analytic tradition, during the middle and later decades of the last century.

[13] Hence Quine's view that higher-order quantification, if not simply unintelligible, is objectionable because it introduces new and unwanted existential commitments. The doubtful coherence of this view appears as soon as one sets aside the smokescreen of the doctrine of the eliminability of singular terms—it would be obviously and grossly implausible to claim that 'Something is wise', for example, introduces as commitment to the existence of objects of which 'Socrates is wise' is wholly innocent. On the contrary, it seems plain that quantification into a position in sentences, assuming it carries an existential commitment, merely generalises a commitment already borne by the constant expressions—whether names or predicates—which can occupy those positions and which its bound variables replace. For extended discussion, see Rayo & Yablo 2001 and Wright 2007.

[14] Quine contends that we should not, on the grounds that there is no satisfactory account to be had of when two such terms stand for the same property or attribute—'no entity without identity'.

to form sentences[15]. Third- and higher-level properties may be similarly explained. With respect to natural languages, the extension of our explanation to cover higher-level properties and relations is greatly complicated by the fact that generality is normally, if not invariably, expressed by means of (indefinite) pronouns or noun-phrases—and so by expressions of the same surface grammatical category as singular terms—regardless of the level of generality involved. Thus the obvious existential generalization of 'Sally and Mary are both flautists', expressed in the language of second-order logic, would be '$\exists$F(F(Sally) $\wedge$ F(Mary))', but to express it in tolerably natural English, we must say something like 'There is something which Sally and Mary both are' or 'There is some property that Sally and Mary have in common'[16]. Corresponding to this bias against non-nominal quantification, genuine second- and higher-level predicates—i.e. *incomplete* expressions which combine with predicates of lower-level to form sentences—are rarely, if ever, to be found in natural languages. Thus we cannot achieve a fully general explanation of higher-level properties by identifying them as the referents of higher-level predicates. I shall reserve this, and some related, difficulties for the Fregean approach for discussion later. First, I want to complete my preliminary statement of the approach, and confront a much more fundamental and philosophical line of objection to it.

4. *Determining what there is*

It seems clear that philosophically contested questions about what kinds of things there are—such as whether there exist abstract as well as concrete objects (numbers and sets, say, as well as plants and animals, particles and forces, etc.), or whether there are general properties, and if so, what kinds of there are—are not to be settled by any sort of observation or empirical investigation. The adoption of a broadly Fregean approach to our *first* question—*how are ontological categories to be explained?*—encourages, even if it does not actually enforce, an obvious approach to our second—*how should we determine what kinds of things there are?* If entities

[15] A fuller account would need to provide for *pure* second-level relations—i.e. relations whose terms are just first-level properties, as illustrated by sentences of the form $\forall x(Fx \supset Gx)$, in which the pure second level predicate is $\forall x(\_\_x \supset \ldots x)$—and *mixed* second-level relations—i.e. relations whose terms include at least one first-level property and at least one object, as illustrated by $\exists x(Fx \wedge x \neq b \wedge Fb)$, in which the mixed second-level predicate is $\exists x(\_\_x \wedge x \neq \ldots \wedge \_\_...)$, and which asserts that the property *F* is instantiated by the object *b* and at least one other object. Similarly for other levels.

[16] Constructions more closely corresponding to $\exists$F(Fa $\wedge$ Fb) and $\forall$F(Fa $\supset$ Fb) than 'There is something a and b both are' and 'b is everything a is' would be 'Somehow a and b' and 'Everyhow a, thathow b'—an improbable, but nevertheless surely quite intelligible, extension of English as she is.

belonging to a certain ontological category just are what expressions of a certain logical category stand for, then we can argue for the existence of entities of that kind by arguing that there are true statements involving expressions of the relevant kind. If, for example, there are true statements incorporating expressions functioning as singular terms, then there are objects of some corresponding kind. If the singular terms are such that, if they have reference at all, they refer to numbers, there are numbers[17]. If there are true statements involving expressions functioning as predicates, then there are properties of some corresponding kind. If the predicates are such that, if they stand for anything at all, they stand for mental properties, then there are mental properties; and likewise in other cases. Under the Fregean approach, questions about the existence of entities of this or that kind are transformed into questions about *truth* and *logical form*—are there true statements incorporating expressions of the appropriate logical type?

This is, of course, only a rough and preliminary statement. Taken as it stands it open to obvious objections. On the one hand, it may appear utterly trivial—since it is trivially true, for example, that the number 17 exists if '17 exists' or 'There is such an object as the number 17' is true. On the other, it may appear clearly false—since it is clearly insufficient for the existence of Zeus that 'The ancient Greeks believed that Zeus lived on Mount Olympus' be true. A more qualified statement would require that expressions of the appropriate logical type occur in true statements in which they are not embedded in non-factive contexts. Formally, one could block the triviality objection by requiring that the relevant true statements be atomic—although this is probably a more stringent restriction than is needed. More importantly, the triviality objection misses the point of the Fregean approach—it is, of course, trivially true that 17 exists if '17 exists' is true; but the Fregean point is that the truth of perfectly ordinary arithmetical statements, such as '17 < 19' and '17 is prime' suffices for the existence of the number 17 (provided that '17' functions as a singular term in them). That is, it is not open to us to accept such ordinary arithmetic statements as true, when taken at face value, but deny the existence of numbers.

Two further points should be mentioned, neither of which can be properly addressed here. The first is that it is evidently essential, if the Fregean approach to settling ontological questions is to be viable, that one be able to recognize expressions

[17] This is what, in Hale 1987, I called the Fregean argument (see pp.10-14)

as belonging to a given logical category independently of determining whether or not there exist entities of the appropriate ontological type to which those expressions refer. It must, for example, be possible to recognize an expression as functioning, in a given sentential context, as a singular term, without first determining that there is an object for which it stands. Otherwise, we should be involved in an obvious, and obviously vicious, form of epistemological circularity—to know that there is an object for which a certain expression stands, we would need to know that that expression functions as a singular term in a certain true statement, but to know that it does so function, we would need to know that there is an object for which, as used in that statement, that expression stands. In a Fregean analysis of language, the fundamental categories of expression are complete sentences and singular terms (Frege's Eigennamen). First-level predicates raise no special problem, since they are simply recognizable as those expressions obtainable from complete sentences by omitting a suitable number of occurrences of singular terms. Similarly, logical connectives and first-order quantifiers, being further derived categories of expression, raise no special problem—a sentential operator is simply any expression resulting from a complete sentence by omission of one or more sentences, and a first-order quantifier any expression resulting from the omission of a first-level predicate. But for the recognition of singular terms, we can rely on no such explanation—we need separate criteria, based on features of their use discernible without reliance upon knowledge of what, if anything, they stand for. I believe that suitable such criteria can be based, as Dummett once proposed, upon patterns of inference distinctive of singular terms. Their exact formulation raises a number of difficulties which I cannot go into here[18].

The second point calling for further discussion is that the Fregean recipe for settling ontological questions is entirely neutral on the further question of how we are to determine whether there are indeed true statements involving the use of expressions of the relevant logical type. One might hold, as Frege himself did, that the truths of arithmetic can be known—and hence that at least some existence questions can be answered—*a priori*. But it would, so far as I can see, be entirely consistent with the Fregean approach as so far articulated to hold—with Quine, or at least in a Quinean

[18] For Dummett's original proposal, see Dummett 1973, pp.57-69. For further discussion see Hale 1987, ch.2, Hale 1994 and 1996, Wetzel 1990, Rumfitt 2003, Hale & Wright 2003. Regrettably unpublished work by my former student, Paul McCallion, discloses further difficulties, distinct from, but closely related to some raised by Ian Rumfitt (op.cit.). I hope to discuss these elsewhere.

spirit—that whether or not there are, say, true statements essentially involving singular terms for numbers, or sets, should be settled by consideration of what makes for the best overall theory that accommodates the data of sensory experience (or as much of it as possible), where what counts as the best theory is determined by the application broadly pragmatic maxims of simplicity, explanatory power, minimization of clashes with experience, and the like. On a view of this kind, questions about what kinds of things there are, while not directly answerable by empirical investigation, are as much part of the natural scientific enterprise as any others. While my sympathies lie with the first of these opposed views, there is, fortunately, no need to attempt to resolve the issue between them here.

5. *An objection considered*

Some philosophers see recourse to any sort of considerations about language, in tacking questions of ontology, as entirely misguided. As philosophers we are, or should be, concerned with what kinds of things there are in the world, that has nothing essentially to do with how we talk, or the words we use, save in the special case in which we are concerned with the existence of linguistic entities themselves[19]. With obvious and minor exceptions (such as washing machines, television sets, buildings, and other artifacts), the things we believe there are are things whose existence we believe to be entirely independent of ours and our activities—things which would have existed even if intelligent, language-using creatures had never evolved, or had never developed the means for talking or thinking about them. To think otherwise is either to embrace a radically implausible form of idealism, or to fall victim to some kind of insanity.

[19] Here are two quite recent examples. John Heil attacks what he terms the 'Picture Theory', to which he takes philosophers who approach ontology via the study of language to be committed: "The core idea is that the character of reality can be 'read off' linguistic representations of reality. A corollary of the Picture Theory is the idea that to every meaningful predicate there corresponds a property. If, like me, you think that properties (if they exist) must be mind independent, if, that is, you are ontologically serious about properties, you will find unappealing the idea that we can discover the properties by scrutinizing features of our language." (Heil 2003, p. 6) Heather Dyke, following Heil's lead, inveighs against what she terms the 'the representational fallacy': "Much recent and contemporary work in metaphysics takes itself to be investigating the fundamental nature and structure of reality. One of the most widely used methodologies in pursuing that aim involves taking language about the world, either ordinary language, or some modified version of it, as our starting point and asking what we can learn about the world by examining that language....I call that methodology into question, arguing that it is a fallacy to argue from facts about language to conclusions about the fundamental nature of reality, one that is widely committed. I call it "the representational fallacy". (Dyke 2007, p. 1). Heil's and Dyke's attacks on the 'linguistic' approach are critically assessed by Matti Eklund in a recent paper (Eklund 2009)

Since so much seems little more than the plainest common sense, no view that denies it can expect to gain many converts. In particular, if the Fregean approach really does entail that answers to questions about what kinds of things there are are objectionably language- and so mind-dependent, it should be rejected. I would accept that my preliminary statement of the approach lends some colour to this objection, but I think closer scrutiny reveals that it is misdirected. In brief, I shall argue (in section 6) that there is no serious alternative to relying upon the analysis of language in explaining ontological categories, and so in framing ontological questions, and (in section 7) that reliance on the analysis of language in framing ontological questions need not involve any objectionable reliance on contingent facts about language in answering them.

6. *A response begun*

How, if not by reference to the kinds of expression by means of which we refer to them, are we to explain suitably general concepts of *object* (or *particular*, or *individual*) and *property* and *relation* (or *universals*)? Can one explain these notions in a language-independent way? Evidently it is no good pointing to sample concrete objects and saying 'Objects are things like those'. Prescinding from obvious difficulties about what constitutes relevant similarity to the samples, it is quite unclear how, from such an explanation, one could come by a concept of *object* which allows for objects which could not be objects of ostension—because too large, or too small, or not spatially located at all. But a concept of *object* which did *not* allow for such instances would already involve a potentially question-begging restriction. Bertrand Russell explains the notions of particular and universal as follows:

> We speak of whatever is given in sensation, or is of the same nature as things given in sensation, as a *particular*; by opposition to this, a *universal* will be anything which may be shared by many particulars…[20]

Without the qualification '…or is of the same nature …', this explanation of *particular* would be objectionable for essentially the same reason as an explanation of *object* as what occupies a definite region of space-time—i.e. it would be question-beggingly restrictive. But we are given no clue what is required for something to be of

[20] Russell 1912, p.93

the same nature as what is given in sensation, so the explanation is useless. Elsewhere[21] Russell suggests that a particular may be defined as what exists at a time, but this is open to the same objection. In a later work, he proposes a very different definition: 'particulars = terms of relations in atomic facts'[22]. There is, however, no obvious way to explain what an atomic fact is without recourse to the very notions we are trying to explain[23]. In any case, Russell's definition plainly presupposes the notion of a relation (which Russell understands as including properties as monadic relations). In a similar way, defining particulars as *instances* of universals (or combinations of universals) is no good unless one can independently explain what universals are. Saying that universals are things which are wholly present in different places at the same time suffers from at least two major problems—(1) it assumes that the only properties/universals are instantiated by *spatio-temporal* particulars/*concrete* objects, and so improperly forecloses on the question whether there are *abstract* objects/particulars; (2) it assumes that all properties/universals are instantiated by *particulars*—i.e. it provides only for *first-level* properties/universals, and fails to provide for *higher-level* properties/universals. Considerations of this kind cannot, of course, constitute a proof—but they strongly suggest that we are unlikely to be able to frame suitably general characterizations of objects, properties, and relations save in terms of the kinds of expressions that stand for them.

7. *The response completed*

Does the fact—assuming it to be one—that we cannot adequately explain what objects, properties, etc., are without reliance upon a prior division of expressions into logical categories mean that answers to questions about what kinds of things there are must be objectionably language- and so mind-dependent?

There are two points to be made here. The first is that it would be a gross misrepresentation of the Fregean approach to claim that it makes the answers to questions about what kinds of things there are *wholly* a matter of the analysis of

[21] Russell 1911, p.106
[22] Russell 1918, p.199
[23] Russell informally characterises them (op.cit., p.198) as facts consisting 'in the possession of a quality by some particular thing', or in the obtaining of a relation between two or more particulars. Of course, one might explain what atomic facts are in terms of the kind of sentences by means of which such facts can be stated—sentences devoid of logical operators. But, since logical operators include quantifiers, one can hardly expect to be able to explain what they are, or how they may be recognized as such, without first explaining what singular terms are, and how they are to be recognized.

language. To think it does so is to overlook the crucial point that, on the Fregean approach, whether or not there exist, say, objects of some specified kind—for example, numbers—turns upon whether there are *true statements* of an appropriate sort, viz. true statements featuring expressions functioning as singular terms which, if they have reference at all, refer to objects of that kind (e.g. to numbers). As noted, not just any true statements qualify as being of an appropriate sort—roughly, what is required is that they be statements of a sort which could not be true unless the relevant singular terms refer (which can in turn be seen as a matter of their occurring in positions open to existential generalization). But the important point, for present purposes, is that while the status of the relevant ingredient expressions as singular terms is a matter for the logical analysis of those statements, their *truth-values* will *not*, save in special cases, be so, and can be an entirely language- and mind-independent matter. For example, whether the numerals in '3 + 5 = 8' function as singular terms is a matter of the correct logical analysis of that statement, but nothing in the Fregean approach to ontology requires that its truth-value should be so[24].

This point is enough to dispose of the charge that the Fregean approach improperly *reduces* ontological questions to questions about language, but not enough to answer the equally grave complaint that it renders the answers to such questions objectionably language- and so mind-dependent. The complaint, if taken as directed against our rough and preliminary statement of the Fregean approach, is perfectly fair. For although we have been careful to avoid claiming that the existence of true statements involving expressions of the appropriate type is a *necessary*—as distinct from merely *sufficient*—condition for the existence of entities of a given category, we have not been careful enough elsewhere. In particular, in explaining the ontological categories of *object* and *property*, we have said that objects are what singular terms stand for, and that properties are what predicates stand for. It should be clear that these explanations are no more than first, rough approximations. Taken as any more than that, they are obviously objectionable, since they would then make the existence of objects and properties depend upon the *actual* existence of suitable singular terms and predicates. What objects and properties there are would then be relative to language—not (or not necessarily) in the sense that relative to different languages,

[24] Of course, if the view for which Frege himself argued in *Grundlagen* (Frege 1884) can be upheld, elementary arithmetic truths will be analytic—but whether that is so is clearly a further issue, on which the Fregean approach to ontology is itself neutral.

there would be different objects and properties, but in the equally objectionable sense that there would be no objects and properties other than those which are the referents of some suitable expressions in some actual language or other. And since languages depend for their existence on language users, what objects and properties there are would be a mind-dependent matter.

This difficulty calls, not for rejection of the Fregean approach—indeed, if the argument of the preceding section is sound, there is no satisfactory alternative to it—but for a more careful statement. The required adjustment is simple and obvious enough, but involves a momentous step. To say that objects are what singular terms stand for, taken strictly, implies that all objects have names, and so fails to allow for nameless objects. Surely there are—and clearly there could be—objects which are not, as a matter of contingent fact, the referents of any actual singular terms. To allow for such objects, we must say that objects are—not what singular terms *stand for*, but—what singular terms *could* stand for. To be an object is to be the referent of a *possible* singular term, to be a (first-level) property is to be the referent of a *possible* (first-level) predicate, and similarly for other cases[25]. In short, we can avoid an objectionable relativity of ontology to the contingencies of actual languages by means of an essentially *modal* explanation of what objects, properties, etc., are—an explanation which transcends the contingent limitations of actual languages by drawing upon their possible extensions.

8. *Further complications and refinements*

It is time to return to the difficulty, briefly aired at the close of section 3, caused by the fact that in English and other natural languages, there is no syntactic differentiation between the expression of first-level generality and generality of higher-level. In a formal language employing the quantifier-variable notation, the difference is easily marked by the use of different styles of variable—thus we write $\exists xFx$ to express the first-level existential generalization of Fa, but $\exists FFa$ to express its second-level existential generalization. In English, however, generality is nearly always expressed, regardless of level, by means of indefinite pronouns such as ‘something’ or ‘everything’, or noun-phrases like ‘some cat(s)’ or ‘every number’.

[25] Talk of possible singular terms and possible predicates is a convenient shorthand. I am not assuming that there are merely possible singular terms as well as actual ones. In longhand, the thesis is that to be an object is to be something for which there is or could be a singular term.

Thus the most natural ways to read $\exists xFx$ and $\exists FFa$ back into English are probably 'Something is *F*' and '*a* is something' or 'There is something *a* is'—using the same nominal quantifier word, regardless of level. Corresponding to this bias in favour of nominal quantification, there is a lack of syntactic differentiation between predicates of different levels. We say, for example, both that tigers are fierce and that tigers are rare—leaving the difference between the first-level predicate 'are fierce' and the second-level predicate 'are rare' completely unmarked syntactically. As we observed, this lack of differentiation between predicates of different levels complicates the extension of the Fregean explanation of ontological categories to properties and relations of higher-level. We can still say, for example, that second-level properties are what (actual or possible) second-level predicates stand for, but, since we cannot tell second-level predicates apart from first-level predicates on the basis of their form, this explanation does not enable us to recognize candidate second-level properties unless supplemented with a further explanation of how second-level predicates are to be recognized as such[26].

The difficulties caused by the lack of any straightforward syntactic differentiation, in natural languages, between levels of generality and predicates of different level are, however, more serious and far-reaching than we have so far acknowledged. For a natural corollary of the use of *indefinite* pronouns such as 'something', 'everything', etc., to express higher- as well as first-level generality is that we may specify *instances* of second- or higher-level generalizations by means of *definite* noun-phrases. Thus once we have expressed the second-order existential generalization of 'Sally and Mary are both flautists' by 'There is something (some property) which Mary and Sally have in common', we can hardly avoid answering the query 'What?' or 'Which property?' by 'The property of being a flautist'. More generally, in English—in contrast with the *Begriffsschrift* and other higher-order languages employing the quantifier-variable notation—we may refer to properties and relations by means of definite noun-phrases of the type 'the property of being …', or 'the relation of …', where '…' is filled by an adjective (e.g. 'wise') or a noun-phrase

[26] Such a further explanation might draw on inferential tests. For example, the inference from '*F*s are *G*s' and '*a* is an *F*' to '*a* is *G*' is valid when *F* and *G* are both first-level, but fails when *G* is second-level—we cannot infer from 'English Baroque churches are rare' and 'St.Mary Woolnoth is an English Baroque church' to 'St.Mary Woolnoth is rare'. A related non-inferential mark is that the explicitly quantified forms 'All *F*s are *G*' and 'Some *F*s are *G*' are inadmissible, when *G* is second-level—we can say 'English Baroque churches are rare', but not 'All English Baroque churches are rare'.

(e.g. 'an aardvark') or a gerund (e.g. 'loving'). But this—as a moment's reflection discloses—leads straight to trouble for our Fregean explanation of *objects* as the referents of (actual or possible) singular terms. At least, it does so if one holds, as Frege seems to have done, that *object* and *property* must be wholly disjoint categories[27]. That is:

(a) objects are what actual or possible non-empty singular terms stand for

(b) no property is an object

(c) some expressions of the form 'the property of being *F*' are non-empty singular terms

(d) if an expression of the form 'the property of being *F*' stands for anything, it stands for a property

form an inconsistent quartet—so we cannot endorse all four.

Our problem is, of course, a re-run of the so-called 'paradox' of the concept *horse*—that the concept *horse* is an object, and so not a concept—discussed by Frege in 'On Concept and Object'. As Frege there expresses the difficulty, it is that '[b]y a kind of necessity of language, my expressions, taken literally, sometimes miss my thought; I mention an object, when what I intend is a concept'.[28] If we assume, as I think we should, that it is not an option to deny (d), we can retain (a) as it stands only by denying one of (b) and (c). Frege himself appears to be firmly committed to (a) and (b), and to have proposed to solve the problem by denying (c). According to Michael Dummett[29], Frege argued that we should dispense altogether with the terms 'concept'[30], 'relation' and 'function' as being 'quite unsuitable for the work they were supposed to do', and that the corresponding predicates 'ξ is a concept', 'ξ is a

[27] 'property' is not, of course, Frege's word—he calls the referents of predicates 'concepts', but I prefer 'property' as less misleading, in view of the prevalent philosophical use of 'concept' for something more like Fregean *sense*. Frege's view that objects and properties are disjoint is a special case of his view that complete and incomplete (unsaturated) expressions must refer, respectively, to complete and incomplete entities. See Dummett 1973, chs.3-8

[28] Frege 1892, p.193

[29] See Dummett 1973, pp.211-22. According to Dummett, soon after publishing 'Über Begriff und Gegenstand', Frege submitted to the same journal another article resolving the paradox, but it was rejected, and the article appears to have been lost. I am relying on Dummett's reconstruction of Frege's solution, based upon his apparent memory of having read the unpublished essay in Frege's Nachlass.

[30] We may assume Frege would have rejected the use of the term 'property' for the same reason. See footnote 19.

relation' and 'ξ is a function' should be rejected as mere pseudo-predicates [31]. In contrast with the genuine predicate 'ξ is an object', which cannot yield a false sentence when its argument place is filled by an expression of the appropriate type (i.e. a singular term), the pseudo-predicates have the opposite property—since their argument places can only be filled by singular terms (which must stand, if for anything, for objects), they cannot be completed to form true sentences. The problem is that if the pseudo-predicates were genuine predicates at all, they could only be *first*-level predicates. But a predicate that did the work 'ξ is a concept' is supposed to do, if it is to be strictly analogous 'ξ is an object', would have to be such that its argument place requires to be filled by a first-level predicate, and when so filled, never yields a false sentence. That is, it would have to be a *second*-level predicate. Having rejected 'concept' and 'ξ is a concept', we should likewise reject apparent singular terms of the form 'the concept horse' or 'the concept for which "ξ is a horse" stands' as equally spurious.

This is not the occasion for a full-scale discussion of this subtle proposal[32]. Here I shall simply observe that the Frege-Dummett proposal takes it for granted that only objects can be the referents of singular terms—i.e. that if a a singular term refers to anything, it refers to an object. Without this assumption, there is no warrant for the claims that 'ξ is an object' can never be completed so as to yield a falsehood, and that 'ξ is a concept' can never be completed so as to yield a truth. Of course, the assumption follows from (a). My point is that the Frege-Dummett rejection of 'ξ is a concept', etc., as pseudo-predicates depends on acceptance of the strong Fregean doctrine that no entity can be referred to by expressions of different logical types. I do not see any compelling reason why we should, in the present context, treat that assumption as sacrosanct.

Crispin Wright, who rejects the Frege-Dummett proposal for somewhat different reasons[33], argues—in effect—that we should deny (b). Wright contends that

---

[31] Dummett 1973, p.213

[32] What I have summarised is, of course, only the negative part of the Frege-Dummett proposal. The positive part claims that we can say, non-paradoxically, what 'the concept *horse* is a concept' tries to say, by using what Dummett calls predicative expressions. These are expressions like 'what "ξ is a horse" stands for' as it is used in 'Shergar is what "ξ is a horse" stands for'—equivalent to 'Shergar is a horse'—in contrast with 'what Smith has in his hand' (as used in 'what Smith has in his hand is a grenade'). The requisite second-level predicate—to be used in place if the spurious 'ξ is a concept'—is then something like '… is something which everything either is or is not'.

[33] See Wright 1998, pp.77-85.

a satisfactory dissolution of the paradox should respect several constraints, including these two:

> (iii) The account should respect the Reference Principle: sameness of reference should ensure sameness of semantic role, so that co-referential expressions should be cross-substitutable *salva veritate* in extensional contexts, and *salva congruitate* in general.
> …
> (v) The account should avoid the need to treat any range of expressions as Frege's proposal treats 'the concept horse', that is, as referring, if to anything, then to something other than their sense intuitively dictates reference.[34]

Wright's principal complaint against the Frege-Dummett proposal is that it violates the Reference Principle. For according to the proposal 'ξ is a horse' and 'what "ξ is a horse" stands for' co-refer—yet they are plainly not interchangeable *salva congruitate* in any contexts, since, for example, the result of substituting the latter for the former in 'Shergar is a horse'—viz. 'Shergar what "ξ is a horse" stands for'—is ill-formed[35]. His own view is that we *can*, *pace* Frege and Dummett, refer to Fregean concepts (i.e. properties) by means of expressions such as 'the concept horse', but that we cannot—on pain of violating the Reference Principle—take them to be the referents of first-level predicates, such as 'is a horse'. We need, he proposes, a distinction between reference and *ascription*—while 'Shergar' refers to, or stands for, Shergar, 'is a horse' *ascribes* (but does not refer to) being a horse or the property of being a horse. Since that property is the referent of a singular term (e.g. 'the property of being a horse'), it is an object. Since properties, on this view, are a kind of object, there is no call to infer, from the fact that the property of being a horse is an object, that it is not a property. So the paradox is dissolved[36].

This is, as far as I can see, an effective way out of Frege's paradox. But it comes at some cost. It is true enough, as Wright says[37], that we can still distinguish between objects and properties—all objects whatever are, as such, possible objects of *reference*, but properties, in contrast with other objects, may be *both* referred to *and*

[34] Wright 1998, pp.76-7. There are three other constraints, but they need not concern us here.
[35] This is a simplified—but I hope not over-simplified—statement of Wright's objection. As Wright notes, the likely Dummettian response is that ill-formedness in this case is merely superficial, resulting as it does from the absence of the copula, which is, on Frege's view, 'a merely grammatical device, with no content' (cf Dummett 1981, p.216). But as Wright argues, the thesis that the copula is syntactically irrelevant is ad hoc and hard to square with Frege's thesis that predicates and relational expressions are essentially incomplete. See Wright, op.cit.,pp.80-1

[36] This is the briefest summary of Wright's solution—for details, see Wright 1998, pp.84-8
[37] Wright 1998, p.90

ascribed. But precisely because properties are, on this account, a subclass of objects, they no longer constitute a separate category—at least, not if distinct categories must be disjoint. That is one cost. A related concern is that if Wright's proposal is to be implemented in a fully general fashion, it must be applied to incomplete expressions across the board—not just to predicates (of each level), but also to relational expressions (again, at every level), and to other kinds of functional expression, including term-forming functors and sentential operators. Thus we should agree that we can refer to a certain function by means of 'the function which takes each number to its square', and to another by means of 'the function of propositions which takes the value truth if and only both its arguments are true', and that these functions, along with all other functions, are objects. But we should deny that 'the square of ξ' and 'ξ and ζ' refer to these functions. But what *do* they do to them? 'the square of 17' does not *ascribe* being a square to anything, and 'grass is green and the sky is blue' does not ascribe being a conjunction to anything. It seems that we must find, or postulate, further relations between functional expressions and functions, analogous to but other than that of ascription. A second cost—at least from a Fregean perspective—is that we cannot think, as Frege thought he could, of there being a single semantic relation between expressions and what, for want of a better term, we may call their non-linguistic correlates. Since every entity can be an object of reference by means of a singular term, no expression outside the category of singular terms can *refer* to any entity—else we should have a violation of the Reference Principle. So *reference* cannot be such a relation. But if the Reference Principle is well-motivated, it seems that any candidate to be such a universal semantic relation—i.e. a relation that each expression bears to its non-linguistic correlate, if it has one—should satisfy an analogue of the Reference Principle. For example, if we say that each expression has its non-linguistic correlate as its semantic value, we should expect that if two expressions have the same semantic value, they should be interchangeable *salva veritate* in extensional contexts and *salva congruitate* in all. But the semantic value of a singular term just is its referent, and any entity is the semantic value of some singular term. Thus if an entity were the semantic value of an expression other than a singular term, there would be a violation of the analogue of the Reference Principle. Hence 'ξ has ζ as semantic value' cannot express the universal semantic relation.

I do not wish to claim that these points are decisive reasons against Wright's proposal. But they are, I think, enough to make it worth exploring the remaining option—rejecting (a).

Of course, *simply* rejecting (a) is tantamount to scrapping the Fregean approach altogether. But, at least if we accept—*pace* Dummett-Frege and Wright—that entities may be referred to by expressions belonging to different logical types, there is a simple and plausible modification of (a) which avoids our problem whilst preserving the essential ideas of the Fregean approach. Where there are expressions of different logical types having reference to entities of a given kind, we distinguish between *primary* and *secondary*, or derivative, modes of reference to them. For example, while we *can* refer to properties by means of (complex) singular terms (such as terms of the form: the property of being something that ϕs), the *basic* mode of reference is by means of the incomplete predicate 'ϕ(…)'; we *can* refer to the truth-function of conjunction, say, in just that way, using a name for it, but the basic mode of reference to it is by means of the incomplete expression: '… and ___'; and similarly for other cases. We then replace (a) by

(a′) objects are what are primarily referred to by actual or possible non-empty singular terms

making similar adjustments in the counterparts of (a) for entities of other kinds. Thus in particular, we have

(properties^n) n^{th} level properties are what are primarily referred to by actual or possible predicates of level n

Our revised explanations allow that entities of a given category may be referred to by expressions other than those of the type in terms of which the category is defined. Thus a first-level property such as that of being a horse may be referred to by singular term (such as the one just used), but because that it not the primary mode of reference to properties, it does not make objects of them, and so precipitates no conflict with (b) (or, of course, (c) or (d)).

Since this modified Fregean approach involves accepting that expressions of different logical types (e.g. singular terms and predicates) may refer to the same entity (e.g. the same property), in spite of the fact that those expressions are not

interchangeable *salva congruitate* (let alone *salva veritate*), it requires rejection of Wright's Reference Principle. As Wright observes, a restricted form of the principle is indisputable: no one should deny that expressions of the *same syntactic category* which coincide in their reference must be interchangeable *salva veritate* in extensional contexts—for as he says, extensional contexts are by definition those in which truth-value is determined by the reference of component expressions. And I think one could add that expressions *of the same syntactic category* must be interchangeable *salva congruitate* in all contexts—for being thus interchangeable is determinative of sameness of syntactic category. But why should we insist upon the unrestricted principle, proscribing sameness of reference for expressions belonging to different syntactic categories? Wright himself entertains the possibility that the unrestricted principle might be rejected, and makes no claim that rejecting must result in disaster: 'I think the truth is not that disaster attends this proposal, but that it is unlikely in the end to point to any purpose in its distinction from the alternative I have been sketching'[38]. As against this, it seems to me that there are significant differences between my modified Fregean approach and Wright's alternative proposal. To claim it as an advantage of my approach over Wright's that it allows for the ascription of reference to expressions of different syntactic categories—to predicates and functional expressions as well as singular terms—would perhaps be somewhat question-begging in this context. But the other costs of Wright's alternative, noted a couple of paragraphs ago, are avoided by my modification.

9. *Existence—the bearable lightness of being*

I should like to conclude with some observations on the conception of ontology and ontological commitment that results from adopting the broadly Fregean approach I have been advocating here.

Semantically speaking, a singular term is one that serves, if all goes well, to refer to a particular thing[39]. But all may not go well. Singular terms, at least on fairly standard views of the matter, may fail to refer. It follows that the mere existence of a range of singular terms cannot suffice for the existence of corresponding entities. This is why, on the broadly Fregean approach I am defending, we have taken, as a

[38] Wright 1998, p.89

[39] 'thing' not 'object'—in earlier work (e.g. Hale 1987, pp.12 and 15) I have tended to characterize singular terms as ones whose function is to refer to *objects*. As explained in the last few paragraphs, I now think that singular terms may be used to refer to entities belonging to other categories

sufficient condition for the existence of objects of some specified kind, that there be *true statements* essentially involving expressions functioning as singular terms which, if they refer at all, refer to objects of that kind. The underlying idea, of course, is that the relevant statements could not be true unless their ingredient singular terms successfully discharged their semantic function, and so had reference. As we have seen, a more precise statement of this sufficient condition would require that the relevant true statements be logically simple (or *atomic*), and also that they should be *extensional* contexts of the relevant singular terms[40]. And in view of the possibility of singular terms referring to entities of other types—such as properties and relations—it would also be necessary to stipulate that the relevant singular terms should be the *primary* vehicles of reference to the entities for which they stand. I shall leave these qualifications to be understood in what follows[41].

As we saw, we cannot take this sufficient condition to be *necessary*, if we are to leave room—as we surely must—for nameless objects. To be an object is to be something to which we could primarily refer by means of a singular term, actual or possible. The formulation, within this approach, of a condition necessary as well as sufficient for the existence of objects is a matter of some delicacy. We cannot say that there are objects of a specified kind if and only if there could be true atomic statements configuring singular terms of an appropriate sort. For this condition would be met if there actually are singular terms of an appropriate sort, but *as a matter of contingent fac*t, no atomic statements involving them are true. Intuitively, however, this would be a situation in which there *are no* objects of the kind in question, although there *could* have been. I think the condition we need should run somewhat as follows: there exist objects of a specified kind if and only if (i) there are or could be singular terms which would, if non-empty, refer to objects of that kind and (ii) if there were such terms, there would be true atomic statements containing them. The idea behind this admittedly somewhat awkward formulation is that objects of the kind in

[40] On most views, the truth of 'O'Reilly believes that Vulcan causes the perihelion of Mercury' does not demand the existence of the supposed intra-Mercurial planet Vulcan. One might hold that such examples are already excluded by the requirement that the containing true statement be atomic, taking the fact 'Vulcan causes the perihelion of Mercury' is embedded in a larger statement to ensure that the latter is non-atomic. But the restriction to extensional contexts is still needed to exclude cases such as 'Alcibiades worshipped Zeus'

[41] If we agree with Frege that reference-failure is contagious, and in particular, that a singular term's failure to refer deprives any sentence that contains it of truth-value, we could drop the requirement that the relevant sentential contexts be true and atomic, in favour of the weaker requirement that they be true or false. But Frege's view is somewhat controversial, and I shall not rely on it here.

question exist provided only that all that stands in the way of there being true statements configuring terms for them is that as a matter of contingent fact, our language lacks suitable singular terms.

If we turn now to what is necessary and sufficient for the existence of properties, an answer strictly analogous to the condition we've just proposed for the existence of objects would have it that there are properties of a specified kind if and only if (i) there are or could be predicates which would, if they have reference at all, refer to properties of that kind and (ii) if there were such predicates, there would be true atomic statements containing them. Once again, the underlying idea would be that all that stands in the way of our making the relevant true statements is a contingent lack of suitable predicates to refer to the relevant properties. The proposed condition therefore rules out uninstantiated properties—it embodies what we might term an *Aristotelian* conception of properties (universals *in rebus*, as opposed to universals *ante res*). But there is, in my view, no compelling reason to proscribe empty, or even necessarily empty, properties. So I think we should, and can, adopt a significantly weaker condition.

One way to relax our overly demanding condition would be to replace the requirement for *true* atomic statements by *true or false* atomic statements. Relaxing the requirement in this way would make good sense if one took Frege's view that reference-failure is upwardly contagious (i.e. infects any complex expression having the empty term as a part). But there is a simpler and more sweeping remedy. We should take the existence of a significant predicate *simpliciter* as a sufficient condition for the existence of a corresponding property, and the possibility of such a predicate as necessary and sufficient. In fact one can argue that the two conditions are equivalent. For a predicate is significant if and only if there is associated with it a condition for its application (i.e. a satisfaction condition—in the case of a first-level predicate, a condition necessary and sufficient for it to be true of an object). Let ϕ be any of the predicates in question, and let t be any non-empty term suitable to fill ϕ's argument place. Suppose ϕt is true or false. Then ϕ must be significant. Conversely, suppose ϕ is significant. Then either the object t denotes meets the satisfaction condition associated with ϕ or not. If so, ϕt is true, and if not ϕt is false, so either way, ϕt is true or false.

If we adopt this sufficient condition[42] for the existence of properties, and construct a necessary and sufficient condition in the obvious way, there is a striking asymmetry between objects and properties—while the bare existence of meaningful singular terms is *insufficient* for the existence of objects, the bare existence of meaningful predicates *is* sufficient for the existence of properties. I think there is a simple way to explain and justify this asymmetry. A singular term's being meaningful—having a sense—consists in there being an associated condition for an object or other entity to be its referent. It is obviously entirely consistent with this that that condition should go unfulfilled. A first-level predicate's being meaningful likewise consists in its being associated with a condition—this time, a condition for an arbitrary object to satisfy the predicate. And, of course, this condition will in general be one that can go unfulfilled. But one perfectly defensible notion of a property simply *identifies* properties with the satisfaction conditions associated with (actual or possible) predicates. For there to be a certain property is just for there to be a condition that things have to meet if they are to have the property, and since every meaningful predicate is *eo ipso* associated with such a condition, there is a property corresponding to every meaningful predicate. This *abundant* conception contrasts with the *sparse* view(s) favoured by some metaphysicians[43]. On the abundant view, very little is required for the existence of a property. Take any meaningful sentence, say:

> Uncle Bill is fast asleep in a deckchair on Brighton beach while His Holiness the Pope is addressing the faithful from his balcony in St. Peter's Basilica

[42] As it stands, the condition is not strictly sufficient. For one may construct perfectly meaningful first-level predicates embedding empty singular terms—e.g. 'is John's favourite colour' (as is might be used in 'Your shirt is John's favourite colour') which may fail to stand for any property because there is no such person as John, or because there is no one colour which is his favourite. Thus a more qualified formulation is needed. I shall pass over this complication here.

[43] The terminology is borrowed from Lewis (1983 and 1986). The distinction is in Armstrong (1979), Bealer (1982) and Swoyer (1996). There is a useful overview in Mellor and Oliver (1997). Crispin Wright and I adopt it in Hale & Wright 2009a, where the distinction is briefly discussed at pp.197-8. Lewis contrasts *properties* as abundant with sparse *universals*, but he is not endorsing the abundant conception of property advocated here. Lewis simply identifies properties with sets or classes of things—the property of being a donkey, for Lewis, is the class of actual and merely possible donkeys (or as he would prefer to put it, this-wordly and other-worldly donkeys). From the present standpoint, Lewis is probably best understood as advocating that we do without properties in favour of classes. Neither the difference, nor the issue, is merely terminological. Lewisian 'properties' diverge from properties in our sense, for Lewis is compelled to identify properties which necessarily have the same instances—e.g. the intuitively quite different properties of being a prime larger than any other prime and of being a common divisor of 15 and 16 are just one and the same property for Lewis, as are those of being triangular and being trilateral.

and remove from it one or more occurrences of singular terms, and you get an expression standing for a property, such as the property of *being-fast-asleep-in-a-deckchair-on-Brighton-beach-while-His Holiness-the-Pope-is-addressing-the-faithful-from-his-balcony-in-St.Peter's-Basilica*. Friends of sparse properties may balk at this way of understanding properties as too generous. No genuine property of uncle Bill, they will say, is something he could lose merely as a result of something's happening hundreds of miles away—say His Holiness the Pope's leaving his balcony. The genuine properties are, perhaps, those which somehow match up with the 'joints in nature'—those which underlie the surface appearances that lead us to classify some thing as gold, or water, such the being the element with 79 protons in its nucleus or being H_2O—or those which have a serious rôle to play in formulating its laws, or some such. If all sparse theorists really want to claim is that there is some narrower notion of property which they find more interesting, or think is more useful for certain purposes, we should have no quarrel with them. There may well be perfectly good, more restrictive notions of property. If they mean the undemanding, abundant notion is either illegitimate or too generous to be of any philosophical interest, I disagree. I think it is clear enough, and that it need not be seen as in competition with sparser notions—indeed, the sparser notions of property are best explained in terms of it, by restriction. Further, I think it does have philosophically useful work to do—to give just one central example which I cannot develop here, in providing an interpretation of second- and higher-order logics under which their existential commitments are very much less problematic than they are often taken to be[44].

What I am calling the abundant conception of properties might just as appropriately be described as *deflationary*, or *metaphysically lightweight*—hence my title. It takes as sufficient for the existence of a property what one might reasonably see as the bare minimum required to distinguish properties from entities of other

[44] A particularly clear expression of this concern can be found in Charles Parsons's classic paper on Frege's theory of number. He writes: 'The justification for not assimilating higher-order logic to set theory would have to be an ontological theory like Frege's theory of concepts as fundamentally different from objects, because "unsaturated". But even then there are distinctions among higher-order logics which are comparable to the differences in strength of set theories. Higher-order logics have existential commitments. Consider the full second-order predicate calculus, in which we can define concepts by quantification over *all* concepts. If a formula is interpreted so that the first-order variables range over a class *D* of objects, then in interpreting the second-order variables we must assume a well-defined domain of concepts applying to objects in *D* which, if it is not literally the domain of *all* concepts over *D*, is comprehensive enough to be closed under quantification. Both formally and epistemologically, this presupposition is comparable to the assumption which gives rise to both the power and the difficulty of set theory, that the class of all subclasses of a given class exists' Parsons 1965, pp.166-7

categories—a condition which things of the appropriate sort, depending on the level of the property, may or may not meet, contingently or as a matter of necessity. Briefly, properties are *ways for things to be*—ways things *could be* or, on the most abundant conception, ways things *could not be*[45].

Modulo the small but important extra demand that (actual or possible) singular terms figure in some true atomic contexts, the conception of objects I am defending is equally deflationary or metaphysically lightweight. In parallel with the abundant conception of properties, it takes as sufficient for the existence of an object what one might reasonably see as the bare minimum required to distinguish objects from entities of other categories—the possibility of being an object of identifying or individuating thought or reference. Just as with the abundant conception of properties, there need be no competition between this conception and more restrictive ones—obvious restrictions being to objects occupying regions of space-time, or figuring in energy exchanges or causal interactions of some other sort—provided that they are acknowledged to be such, i.e. restrictions of the more general and deflationary conception. As with properties, philosophers enamoured of sparser conceptions of objects may feel that the deflationary conception makes being an object too easy for it to be of any philosophical interest or importance. I think they would be wrong—that like the abundant conception of properties, it can do useful philosophical work. In particular, it can form the basis of a modest and sober platonism which allows us to take arithmetic and analysis, and a significant part of set theory, as true when taken at face value[46],[47].

[45] This provides the basis of an agreeably deflationary account of possible world semantics—including extensions of it to encompass so-called impossible worlds. Whether such extensions are needed, or well-motivated, or have the philosophical significance that some of their proponents claim for them, are, of course, further questions.

[46] This is a central claim of the neo-Fregean programme in the philosophy of mathematics which Crispin Wright and I have defended over many years. See, for example, Hale & Wright 2001, and more recently, Hale & Wright 2008, 2009a, 2009b, and Hale (forthcoming)

[47] I thank John Benson, Eric Olson, and Crispin Wright for helpful critical reactions to an earlier draft of this paper, and Jared Warren for very valuable bibilographical assistance. This paper was prepared during my tenure of a Leverhulme Senior Research Fellowship—I am very grateful to the Trust for its generous support of my work.

References

Armstrong, David

1979 *A Theory of Universals*, Cambridge: Cambridge University Press

Bealer, George

1982 *Quality and Concept*, Oxford: Oxford University Press

Carnap, Rudolf

1950 'Empiricism, Semantics, and Ontology' *Revue Internationale de Philosophie* 4 pp.20-40, reprinted in Carnap's *Meaning and Necessity*, 2nd Ed. University of Chicago Press, 1956

Devitt, Michael

1984 *Realism and Truth* Princeton University Press

Dummett, Michael

1973 *Frege Philosophy of Language* London: Duckworth

Dyke, Heather

2007 *Metaphysics and the Representational Fallacy*, New York: Routledge

Eklund, Matti

2009 'On Some Recent Criticisms of the 'Linguistic' Approach to Ontology' (forthcoming in *Dialectica*, available electronically at http://courses.cit.cornell.edu/me72/papers.htm)

Frege, Gottlob

1884 *Die Grundlagen der Arithmetik*, Breslau, W.Koebner, reprinted with English translation by J.L.Austin as *The Foundations of Arithmetic* Oxford, Blackwell 1950

1892 'Über Begriff und Gegenstand' *Vierteljahrsschrift für wissenschaftliche Philosophie* 16, pp.192-205, translated as 'On Concept and Object' by Peter Geach. Page references are to the reprint of this translation in Gottlob Frege *Collected Papers on Mathematics, Logic, and Philosophy* Oxford: Blackwell 1984

Hale, Bob

1987 *Abstract Objects* Oxford: Basil Blackwell

1994 'Singular Terms (2)' in Brian McGuinness & Gianluigi Oliveri eds. *The Philosophy of Michael Dummett*, Dordrecht/Boston/London: Kluwer, pp.17-44, reprinted in Hale & Wright 2001, pp.48-71

1996 'Singular Terms (1)' in Matthias Schirn, ed. *Frege: Importance and Legacy* Berlin & New York: Walter de Gruyter, pp.438-57, reprinted in Hale & Wright 2001, pp. 31-47

1999 'On some arguments for the necessity of necessity' *Mind*, Vol.108 No.429, pp.23-52

2006 'Universals and Particulars—Ramsey's Scepticism' in Peter Strawson and Arindam Chakrabarty, eds. *Universals, Qualitites, Concepts: New Essays on Meaning of Predicates* Ashgate

forthcoming 'The Problem of Mathematical Objects' in Giovanni Sommaruga ed. *Foundational Theories of Classical and Constructive Mathematics*, Springer/Kluwer

Hale, Bob & Wright, Crispin

2001 *The Reason's Proper Study: Essays towards a Neo-Fregean Philosophy of Mathematics* Oxford: Clarendon Press

2003 'Responses to Commentators', *Philosophical Books* 44, pp. 245-263

2008 'Abstraction and Additional Nature' *Philosophia Mathematica* (III) 16, pp.182-208

2009a 'The Metaontology of Abstraction' in David Chalmers et al, eds *Metametaphysics—New Essays on the Foundations of Ontology* Oxford: Clarendon Press, pp.178-212

2009b 'Focus Restored—Comments on John MacFarlane's "Double-Vision …"' *Synthese* 170, pp.457-82

Heil, John

2003 *From an Ontological Point of View*, Oxford: Clarendon Press

Lewis, David

1983 'New work for a theory of universals' *Australiasian Journal of Philosophy* 61, pp.343-77, reprinted in Lewis's *Papers in Metaphysics and Epistemology* Cambridge University Press, pp.8-55 (Page references are to this reprint)

1986 *On the Plurality of Worlds*, Oxford: Basil Blackwell

Hellman, Geoffrey

1989 *Mathematics without Numbers* Oxford University Press

Mellor, D. H. & Oliver, Alex

1997 'Introduction', in *Properties*, Oxford: Oxford University Press, pp. 1–33

Parsons, Charles

1965 'Frege's Theory of Number', in Max Black, ed. *Philosophy in America* (Allen & Unwin 1965), reprinted in Parsons's *Mathematics in philosophy* (Cornell University Press 1983) (Page references are to this reprint)

Priest, Graham

2005 *Towards Non-Being: the logic and metaphysics of intentionality* Oxford: Clarendon Press

Putnam, Hilary

1967 'Mathematics without foundations' *The Journal of Philosophy* 64, reprinted in Putnam's *Philosophical Papers Volume 1* Cambridge University Press 1975

1981 *Reason, Truth and History* Cambridge University Press

Ramsey, F.P.

1925 'Universals' *Mind* Vol.34, pp.401-17, reprinted in Ramsey's *The Foundations of Mathematics and other logical essays*, R.B.Braithwaite, ed. London: Routledge & Kegan Paul 1931. (Page references are to this reprint)

Quine, W.V.

1948 'On what there is', *Review of Metaphysics* 2, pp.21-38, reprinted in Quine's *From a Logical Point of View* Harvard University Press 1953

1960 *Word and Object* MIT Press

1969 'Ontological relativity' in Quine's *Ontological Relativity and Other Essays* Columbia University Press

Rayo, Agustin & Yablo, Stephen

2001 'Nominalism Through De-nominalisation', *Nous* 35, pp.74-92

Routley, Richard

1980 *Exploring Meinong's Jungle and Beyond* Canberra:RSSS, Australian National University

1982 'On what there isn't' *Philosophy and Phenomenological Research* 43, pp.151-78

Rumfitt, Ian

2003 'Singular Terms and Arithmetical Logicism', *Philosophical Books* 44, pp. 193-219

Russell, Bertrand

1903 *The Principles of Mathematics* London: Allen & Unwin (page references to the 2nd Edition of 1937)

1911 'On the relations of universals and particulars' in Russell 1956, pp105-24

1912 *The Problems of Philosophy* London: Williams & Norgate (page references are to the 1962 reprint by Oxford University Press)

1918 'The Philosophy of Logical Atomism' in Russell 1956, pp175-281

1956 *Logic and Knowledge*: *Essays 1901-1950* ed. R.C.Marsh London: Allen & Unwin

Strawson, P.F.

1959 *Individuals: An Essay in Descriptive Metaphysics* London: Methuen

Swoyer, Chris

1996 'Theories of Properties: From Plenitude to Paucity', *Philosophical Perspectives* 10, pp. 243–264

Wetzel, Linda

1990 'Dummett's Criteria for Singular Terms' *Mind* Vol.99, pp.239-54

Wright, Crispin

1983 *Frege's Conception of Numbers as Objects*, Aberdeen: Aberdeen University Press

1998 'Why Frege does not deserve his grain of salt: a note on the paradox of 'The Concept Horse' and the ascription of *Bedeutungen* to predicates', *Grazer Philosophische Studien* 55, *New Essays on the Philosophy of Michael Dummett*, eds. J.Brandl & P.Sullivan, Rodopi, pp.239-63, reprinted (pages references are to the reprint in Hale & Wright 2001)

2007 'On quantifying into predicate positions: Steps towards a (new)tralist perspective' in Potter, M., Leng, M. & Paseau, A, eds. *Mathematical Knowledge* Oxford: Clarendon Press