

Necessary Beings

*An Essay on Ontology, Modality, and
the Relations Between Them*

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1

Ontological Preliminaries

I.1 Questions

As a great ontologist once observed,¹ 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 recognized—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, save perhaps in some special cases, it is really only 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 focus 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.² Here I shall explain and defend a broadly Fregean version of the view that questions about

¹ W.V. Quine 1948, in the opening paragraph. 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. For a sharply opposed view, see Priest 2005, Ch. 5, following Routley 1980, Ch. 3, and 1982.

² 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 Putnam—for an illuminating discussion of Frege’s views, see Dummett 1973, Ch. 4 (especially p. 56ff); for the others, see especially Carnap 1950, Quine 1969, 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. See also Heil 2003 and Dyke 2007.

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 of problematic (usually abstract) entities of some kind or other.³ 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 either outright 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.⁴ 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?*

I am using ‘thing’ here as Russell once used ‘term’—as the widest word in the philosophical vocabulary, with no implication of membership in any particular ontological category.⁵ 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

³ An early presentation—and perhaps the origin—of this idea can be found in Hilary Putnam’s paper ‘Mathematics without foundations’ (1967). A well-known development of Putnam’s idea is the modal version of eliminative structuralism presented by Geoffrey 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.

⁴ I attempt a defence of these very substantial claims in the sequel—see especially Chs 2 and 3.

⁵ Cf. Russell 1903, p. 43 ‘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’.

along these lines, it becomes evident that we face a number of prior methodological questions. Prominent among them⁶ are:

How are the various ontological categories to be understood?

How are questions about what kinds of things there are best tackled?

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 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’.⁸

The plan for the remainder of this chapter is as follows. I shall begin (1.2, 1.3) 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 (1.4) 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 (1.5, 1.6). I shall then turn (1.7) to some further difficulties confronting that approach, and try to explain (1.8–11) how it may be refined to deal

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 seminal 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

⁸ 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.

with them. I shall conclude (1.12) with some general observations on the resulting conception of ontology and ontological commitment.

1.2 Objects, properties, and relations

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 more neutral, broadly Fregean terms: objects are the (typically) non-linguistic correlates of the devices of *singular* reference—i.e. simple and complex singular terms. The proposal is 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 an individual variable. This divergence from Frege’s view is in one way⁹ 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.

This conception of objects, as we shall soon see, will not quite do as it stands. But before we consider what refinements may be needed to deal with various difficulties and objections, let us first review the application of our broadly Fregean approach to properties and relations.

A much deeper divergence between Quine’s approach to ontology and the broadly Fregean approach I am recommending appears 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

⁹ Quine’s doctrine of ontological relativity is another matter—*q.v.* section 1.6.

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 approach¹⁰ 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.¹¹ 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.¹²

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 Frege’s *Begriffsschrift*, our explanation

¹⁰ 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.

¹¹ 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.

My claim that Quine assumes that predicates do not stand for anything might be disputed, because he says in *Word & Object* that a predicate can be thought of as denoting the things of which it is true. But this does not really affect the point at issue, since a predicate’s denoting some things, in this sense, is clearly not a condition of its functioning effectively as a predicate—empty predicates, which are true of nothing, are perfectly good predicates.

¹² 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’. I return to this contention in Ch. 8.

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 $\forall x \dots x \dots$, $\exists x \dots x \dots$, $\forall y \dots y \dots$, etc.—which may be combined with first-level predicates to form sentences.¹³ 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 ‘ $\exists F(F(\text{Sally}) \wedge F(\text{Mary}))$ ’, 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’.¹⁴ 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.

1.3 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 directly by observation or empirical investigation.¹⁵ 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*

¹³ 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 $\forall x(_x \supset \dots x)$ —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 $\exists x(_x \wedge x \neq b \wedge _b)$, and which asserts that the property *F* is instantiated by the object *b* and at least one other object. Similarly for other levels.

¹⁴ 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*, thatow *b*’—an improbable, but nevertheless surely quite intelligible, extension of English as she is. The general bias against non-nominal quantification was illuminatingly challenged by Arthur Prior in his posthumously published manuscript *Objects of Thought* (Prior 1971)—see especially pp. 33–9.

¹⁵ This is not to deny that observation and experiment might have an indirect bearing—see the closing paragraph of this section.

kinds of things there are? If entities belonging to a certain ontological category just are what expressions of the corresponding 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 from that category. 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.¹⁶ 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.¹⁷ 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.¹⁸

¹⁶ This is what, in Hale 1987, I called the Fregean argument (see pp. 10–14).

¹⁷ More stringent than is needed, because many non-atomic contexts are existence-entailing with respect to their ingredient singular terms—obvious examples are conjunctions of the form $Fa \wedge p$, where Fa is atomic, and existential generalizations of relational sentences embedding singular terms, such as $\exists x Rxb$, where R is logically unstructured. The notions of atomicity and absence of logical structure should be understood in a semantic sense. Clearly a sentence formed with a *syntactically* simple predicate or relational expression may abbreviate one having semantically significant structure, and this may be such as to ensure that an embedded occurrence of singular term is not existence-entailing. In particular, I am assuming that while ‘ a exists’ is syntactically atomic, it makes a semantically complex claim (and so is equivalent to $\exists x x = a$, or some such). See also I.6.

¹⁸ This much is accepted by orthodox nominalists, and equally by the highly unorthodox Hartry Field. The former, unwilling to declare all elementary arithmetical statements false, deny that they should be taken at face value, and attempt to provide deflationary paraphrases or otherwise nominalistically acceptable reinterpretations. Field, to the contrary, insists on a face-value construal, and so has no option but to deny that they are ever (non-vacuously) true—see, for example, Field 1980, pp. 1–2, or 1989, pp. 52–3.

Two further points call for discussion. First, it is evidently essential, if the Fregean approach to settling ontological questions is to be viable, that one should be able to recognize expressions 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.¹⁹

In a Fregean analysis of language, the fundamental categories of expression, in terms of which all other categories are defined, are complete sentences and singular terms (Frege's *Eigennamen*). Thus a first-level predicate is any expression which may be combined with one or more singular terms to form a sentence, a second-level predicate any expression other than a singular term which may be combined with one or more first-level predicates to form a sentence, a sentential operator any expression which combines with one or more sentences to form a sentence, and so on. There is therefore no difficulty over the recognition of expressions as belonging to one or other of these derived categories.²⁰ First-level predicates can be recognized as those expressions obtainable from complete sentences by omitting a suitable number of occurrences of singular terms; similarly for functional expressions generally, including the logical connectives and quantifiers. But for the recognition of expressions as belonging to one or other of Frege's basic categories, we can rely on no such explanation—in particular, we need separate criteria for recognizing singular terms, based on features of their use discernible without reliance upon knowledge of what, if anything, they stand for. As Dummett argues,²¹ effective criteria can only be given relative to some fixed language, and in framing them we may, and indeed must, presuppose some knowledge of the language to which they apply. We may assume, for example, a capacity to recognize sentences as well- or ill-formed. It is easy to see that we cannot satisfactorily circumscribe the class of singular terms purely by reference to surface grammar, say as comprising just singular nouns or noun-phrases. For many expressions which we should rightly refuse

¹⁹ It is important to grasp that the threatened circularity is *epistemological*, not *definitional*, and that what is required to avoid it is a way of *recognizing* expressions as functioning as singular terms which does not involve discerning that there are objects for which they stand. It is *not* necessary that the notion of a singular term be *explicable* or *definable* without invoking that of an object. On the contrary, the semantic function of a singular term is precisely that of identifying an object as what we are talking about—that is just what it is to be a singular term.

²⁰ Provided, of course, that we are able to identify expressions as belonging to the fundamental categories.

²¹ Dummett 1973, pp. 57ff. For an explanation why the unavoidable relativity to language of criteria for singular termhood need not induce an unacceptable linguistic relativity of objects themselves, see Hale 1984b, as well as 1.6.

to count as singular terms—including, importantly, words serving to express generality such as ‘everything’, ‘nothing’, ‘something’, along with restricted quantifier phrases, such as ‘every philosopher’, ‘no policeman’, ‘some city’, etc.—may occupy, without violence to grammar or sense, positions in sentences in which simple proper names, or other paradigm examples of singular terms, may stand.

Dummett argues, convincingly, that suitable tests should relate to the correctness or otherwise of certain simple patterns of inference, a capacity for recognition of which may be assumed. His thought is that there are simple patterns of inference characteristic of singular terms, in the sense that when relevant positions in their premises or conclusion are occupied by singular terms, the resulting inferences are valid, whereas when those positions are occupied by expressions of other types, invalid inferences result. For example, it is plausible that if an expression t is to be recognized as functioning as a singular term in a sentence ‘ $A(t)$ ’, one should be able to recognize as valid the inference from ‘ $A(t)$ ’ to ‘Something is such that $A(it)$ ’.²² This clearly suffices to exclude some of the grammatically singular expressions we should wish to exclude, such as ‘nothing’, ‘no philosopher’ and the like—there is plainly no valid inference from ‘Nothing travels faster than light’ to ‘Something is such that it travels faster than light’. But it is equally clear that this test by itself is insufficient—it does not, for example, exclude ‘everything’, ‘something’, or noun-phrases of the forms ‘every F ’, ‘some F ’. Further, more exacting tests are needed. I think that such tests can be provided, along more or less the lines Dummett proposes, but their exact formulation is complicated and raises a number of difficulties best left for discussion in an appendix to this chapter.

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 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

²² The intuitive idea behind this test is, of course, that when a position in a sentence is occupied by a genuine singular term, it should be open to (first-level) existential generalization. But it would obviously be circular to frame the test in such a way as to presuppose an ability to *recognize* existential quantifiers (or their natural language analogues) *as such*. There is, however, no vicious circularity involved in presupposing competence in the use of expressions such as ‘something’ which will, with hindsight, be classified as quantifiers. This is the point of framing the tests relative to a language with respect to which a degree of competence may be assumed.

enterprise as any others. My own sympathies lie with the first of these opposed views, that at least some questions about what kind of things there are admit of resolution a priori. My present point is only that what I am calling the Fregean approach to ontological questions—basically, the priority of the analysis of language over the categorization of types of entity—involves, as such, no endorsement of that further, controversial, claim, which clearly stands in need of further argument of a quite different kind.

1.4 An objection considered

I do not, of course, mean to suggest that the Fregean approach to ontology is itself uncontroversial. Some philosophers see recourse to any sort of considerations about language, in tacking questions of ontology, as entirely misguided. As philosophers, they argue, we are, or should be, concerned with what kinds of things there are in the world independently of our thought and language, and 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.²³ With obvious and minor exceptions (such as washing machines, television sets, buildings, and other artefacts), 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 other kind of insanity.

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 the objection that is misdirected. In brief, I shall argue first (in 1.5) that there is no serious alternative to relying upon the analysis of language

²³ 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 (2009).

in *explaining* ontological categories, and so in framing ontological questions, and second (in 1.6) 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.

1.5 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...²⁴

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 without some accompanying account of what is required for something to be of the same nature as what is given in sensation, the explanation is useless. Elsewhere²⁵ 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’.²⁶ There is, however, no obvious way to explain what an atomic fact is without recourse to the very notions we are trying to explain.²⁷ 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

²⁴ Russell 1912, p. 93.

²⁵ Russell 1911, p. 106.

²⁶ Russell 1918, p. 199.

²⁷ Russell informally characterizes them (1918, 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.

particulars as *instances* of universals (or combinations of universals) is obviously no good unless one can independently explain what universals are. Universals are sometimes characterized as things which are or can be wholly present in different places at the same time, but this suffers from at least two major problems—first, 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; second, 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 neutral and general characterizations of objects, properties, and relations save in terms of the kinds of expressions that stand for them.

1.6 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 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 stand for anything at all, stand for 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.²⁸

²⁸ Of course, if the view for which Frege himself argued in *Grundlagen* (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.

This point is enough to dispose of the charge that the Fregean approach improperly *reduces* ontological questions to questions about language, but it is 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, 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 what a *possible* (first-level) predicate stands for, and similarly for other cases.²⁹ 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.

²⁹ 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.

1.7 Frege's problem: the concept *horse*

As we noted at the close of 1.2, the fact that in English and other natural languages, there is no clear syntactic differentiation between the expression of first-level generality and generality of higher-level impedes any straightforward application of Frege's explanation of ontological categories to properties and relations 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—it can be simply a matter of stipulation that $\exists xFx$ expresses the first-level existential generalization of Fa , but $\exists FFa$ 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'. 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.³⁰ 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 'are rare' completely unmarked syntactically. We can still say, with Frege, 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.³¹

The real difficulty, however, lies elsewhere, and is much more serious and far-reaching. 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 (e.g. 'an

³⁰ An additional complication is that the English readings suggested for $\exists FFa$ are clearly incorrect unless 'is' is understood as the 'is' of predication. If it is understood as the 'is' of identity, they come down to $\exists x a = x$.

³¹ 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'.

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 did Frege, that *object* and *property* must be wholly disjoint categories.³² For according to Frege's theory:

- (a) objects are what actual or possible non-empty singular terms stand for
- (b) no property is an object
- (c) if an expression of the form 'the property of being *F*' stands for anything, it stands for a property

yet it appears to be the case that

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

and these four propositions plainly cannot all be true together. Something must give. Before I consider which of (a)–(d) should be denied, I want to draw attention to an important principle—what I shall call the Reference Principle—which seems to underpin Frege's commitment to (b).

It was, of course, precisely in defending this doctrine—that object and concept are disjoint categories—against the criticisms of it made by Benno Kerry, that Frege was forced to acknowledge the problem we have uncovered. Frege's response involves two claims: first, that we must recognize a distinction 'between what can occur only as an object, and everything else';³³ and second, that nothing can be both a concept and an object. The first claim is relatively uncontroversial, being roughly equivalent to the traditional doctrine that particulars (in contrast with universals) may figure only as subjects of predication, never as predicated of other things, and Frege does not expect Kerry to dispute it.³⁴ But while Frege's claim itself may, for that reason, seem relatively unproblematic, his defence of it is less so.

Frege argues as follows: 'The concept (as I understand the word) is predicative. On the other hand, a name of an object, a proper name, is quite incapable of being used as a grammatical predicate'.³⁵ In defence of this last assertion, Frege argues that while it is true enough that one can assert of a thing that it is Alexander the Great, or is the planet Venus, for example, this should not be taken as showing that one can after all use a proper name as a predicate—for these examples involve the 'is' of identity, rather than the copula ('is' functioning 'as a mere verbal sign of predication'), so that 'what

³² See especially Frege 1892b; '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, or Noonan 2006.

³³ Frege 1892a, p. 44.

³⁴ Of course, Frege *is* in disagreement with the part of the traditional doctrine of universals that is implicit in the parenthesis—i.e. that universals can occur both as predicated of other things, and as themselves subjects of predication. We return to this point below.

³⁵ Frege 1892a, p. 43.

is predicated is not *Venus* but *no other than Venus*.... We have here a word ‘Venus’ that can never be a proper predicate, although it can form part of a predicate. The reference of this word is thus something that can never occur as a concept, but only as an object...But this would mean admitting a distinction...between what can occur as an object, and everything else’.³⁶

In drawing his conclusion, Frege passes from a premise about *language*—for example, that ‘Venus’ can never be used as a predicate—to a conclusion about *non-linguistic entities*—that the word’s *referent*, Venus, ‘can never occur as a concept, but only as an object’. We can take his conclusion to be equivalent, near enough, to the claim that no statement can incorporate a predicate (concept–word) having Venus as its referent; rather, if Venus is to be the referent of any expression in a statement, that expression must be a proper name. The inference is more puzzling than the speed and ease with which Frege makes it might lead one to suspect. For it is surely consistent with his observation that ‘Venus’ cannot, by itself, serve as a predicate, that what it refers to should also be capable of being referred to by means of some other expression which could so function. Since his conclusion, as we understand it, denies that Venus could be the referent of a predicate, it seems clear that it cannot follow from Frege’s stated premise alone. What, we may ask, is the additional, suppressed premise, on which Frege is here relying, but which he saw no need to make explicit? For the moment, I shall simply mark the need for an answer to this question—we shall return to it soon enough. First, let us consider Frege’s defence of his main claim, that no concept can be an object.

Kerry had suggested that one may exhibit an example of a concept that is at the same time an object by noting that we can significantly assert ‘the concept “horse” is a concept easily attained’. Frege’s response is breathtakingly direct:

Quite so; the three words ‘the concept “horse”’ do designate an object, but *on that very account* they do not designate a concept, as I am using the word.³⁷

In other words, Kerry’s (or any other) attempt to produce an example of a concept-object is simply bound to fail, because any successful candidate for objecthood must be such that it *can only* be referred to by means of a proper name, while any successful candidate for concepthood must be such that it *cannot* be so referred to—clearly, nothing can satisfy both conditions.

Here again Frege’s response involves an inference, signalled by his words I have italicized. Once again, the ease with which he makes it suggests that he does not see it as calling for much justification. The suggestion carried by his explanatory addition ‘as I am using the word [‘concept’] is, perhaps, that it is built into the very use of the terms, as Frege understands them, that any expression that designates an object cannot also designate a concept’.³⁸ But that is not obviously so. It is true, as we have emphasized,

³⁶ Frege 1892a, p. 44.

³⁷ Frege 1892a, p. 45, italics mine.

³⁸ Frege repeatedly emphasizes that Kerry’s objections rest upon misunderstanding his use of ‘concept’—cf. Frege 1892a, pp. 42, 46.

that Frege's ontological classifications are to be understood in terms of a prior division of types of expression—so that by an object Frege means anything that can be referred to by means of a proper name, and that by a concept he means anything that can be referred to by a predicate. But that is insufficient, together with the further premise that no proper name is a predicate, rule out the possibility of entities which are referred to *both* by proper names *and* by predicates, and so are objects which are also concepts. The minimum supplementary assumption Frege needs to deliver his conclusion—or so it would seem—is that objects can *only* be referred to by means of proper names, or at least, that they cannot be referred to by means of predicates. And this is indeed Frege's view. As he puts it in summarizing his position a little later in the article:

We may say in brief, taking 'subject' and 'predicate' in the linguistic sense: A concept is the reference of a predicate; an object is something that can never be the whole reference of a predicate, but can be the reference of a subject.³⁹

Granted the additional premise suggested, we can reconstruct Frege's inference as follows. He assumes the following principles:

- Objects 1:* Something is an object iff⁴⁰ it can be referred to by a proper name
Concepts 1: Something is a concept iff it can be referred to by a predicate
Objects 2: If something is an object it can only be referred to by a proper name
Exclusion: No proper name is a predicate

His desired conclusion may then be straightforwardly inferred:

- | | |
|---|----------------------|
| 1. α is both an object and a concept | assumption |
| 2. α can only be referred to by means of a proper name | 1, <i>Objects 2</i> |
| 3. α can be referred to by means of a predicate | 1, <i>Concepts 1</i> |
| 4. α cannot be referred to by means of a predicate | 2, <i>Exclusion</i> |
| 5. α is not both an object and a concept | 1–4 <i>reductio</i> |

Turning now to Frege's earlier inference, from: 'Venus' cannot serve as a predicate, to: The referent of 'Venus', i.e. the object, Venus, cannot be the reference of a predicate, we can see that the additional premise he needs is an analogue for concepts of *Objects 2*, viz.

- Concepts 2:* If something is a concept it can only be referred to by a predicate

We may then reconstruct his inference as follows:

- | | |
|---|----------------------|
| 1. 'Venus' cannot serve as a predicate | assumption |
| 2. The referent of 'Venus' can be the referent of a predicate | assumption |
| 3. The referent of 'Venus' is a concept | 2, <i>Concepts 1</i> |
| 4. The referent of 'Venus' can be referred to by 'Venus' | obvious |

³⁹ Frege 1892a, p. 47–8.

⁴⁰ Here, and henceforth, I use 'iff' as short for 'if and only if'.

- | | |
|--|---------------------|
| 5. ‘Venus’ is/can serve as a predicate | 4, Concepts 2 |
| 6. The referent of ‘Venus’ cannot be the referent of a predicate | 2–5 <i>reductio</i> |

If this is right, Frege’s conception of objects and concepts can be more fully articulated as follows:

- Objects:* An object is anything which can, and can only, be referred to by a proper name
- Concepts:* A concept is anything which can, and can only, be referred to by a predicate

These suggest a general principle that underpins Frege’s approach to ontology:

An entity of a certain type is anything which *can, and can only*, be referred to by an expression of a certain type.

From this it plainly follows that expressions can stand for the same thing only if they are of the same syntactic type, which will be the case only if they can be interchanged in all contexts preserving well-formedness, or *salva congruitate*. This is what I am calling the Reference Principle.⁴¹

1.8 Frege’s response

Frege’s initial reaction was to plead that the difficulty is unavoidable:

[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.⁴²

but to appeal to ‘a reader who would be ready to meet [him] halfway—who does not begrudge a pinch of salt’. But he rightly did not long remain satisfied. If we assume, as Frege came to believe, that it is not after all an option to deny (c), i.e. to maintain that expressions like ‘the concept *horse*’ or ‘the property of being a horse’ do indeed stand for something, but that they stand for objects, and so, given (b), cannot for concepts or properties, there are just three courses open to us. We must either deny, or at least qualify, (a); or deny (b), and agree with Kerry against Frege that some objects are concepts (properties); or, finally, deny that there are any genuine and non-empty singular terms of the form ‘the property of being *F*’, or some equivalent.

⁴¹ In Wright 1998a, the term ‘Reference Principle’ refers to a stronger principle which Wright formulates as: ‘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’ (p. 76). Since expressions cannot be interchangeable *salva veritate* in any contexts unless interchangeable *salva congruitate* in all, Wright’s principle can obviously be simplified. In Hale & Wright 2012, which was written after the present chapter, the term is used as here. What I am calling the Reference Principle is clearly a consequence of Wright’s principle. It is certainly arguable that Frege is committed to the stronger reference principle Wright states, and some writers do not hesitate to attribute that principle to him (cf. Noonan 2006, p. 163); but it is the weaker principle that most matters for our purposes.

⁴² Frege 1892b, p. 54.

Frege's considered response, which has been elaborated by Michael Dummett, and in a somewhat different way, by Peter Geach & Harold Noonan, was the last—denying (d). The more radical course of rejecting (b) has been defended by Crispin Wright. I shall argue that each of these responses has significant disadvantages, and that the problem can be more satisfactorily resolved by modifying (a), and along with it, our initial explanation of what properties and relations are.

According to Dummett,⁴³ Frege argued that we should dispense altogether with the terms 'concept',⁴⁴ '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 relation' and 'ξ is a function' should be rejected as mere pseudo-predicates.⁴⁵ 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), these 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 true of every first-level concept. Having rejected as spurious the general term 'concept' and the predicate 'ξ is a concept', we should likewise reject as equally spurious such apparent singular terms as 'the concept horse' and 'the concept for which "ξ is a horse" stands'.

If Frege's way out is to be viable, it must be possible—as Dummett acknowledges—to say everything we need to say about the referents of predicates and relational expressions, avoiding 'the logically erroneous vocabulary of "concept", "relation" and "function"'.⁴⁶ Dummett's constructive proposal starts from the observation that an expression such as 'what "ξ is wise" stands for' can function as what he calls a 'predicative expression', in which it stands for, and can be used to ascribe, a property—in contrast with, say 'what Eve gave Adam' in its most likely use, in which it is a singular term, meaning the object Eve gave Adam. Thus 'Solomon was what "ξ is wise" stands for' can be understood as equivalent to 'Solomon was wise'. What is required, of the needed second-level predicate, is that it should be true of all (and only) first-level concepts. Dummett proposes '...is something which everything either is or is not', where 'something' is to be

⁴³ See Dummett 1973, pp. 211–22. In his plan for a critique of Schoenflies's *Die logischen Paradoxien der Mengenlehre*, dated 1906, and published in his *Nachlass*, Frege identifies the source of the trouble as being the use of such expressions as 'the concept horse' and the word 'concept' itself, which he now regards as defective (see Frege 1979, pp. 177–8). 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*.

⁴⁴ We may assume Frege would have rejected the use of the term 'property' for the same reason. See note 27.

⁴⁵ Dummett 1973, p. 213.

⁴⁶ The quoted phrase is Dummett's—see 1973, p. 217.

understood as expressing second-level generality, and ‘everything’ first-level. Thus we can, he suggests, employ:

What ‘ ξ is wise’ stands for is something which everything either is or is not to state cleanly what we mean, but cannot properly express, by saying that the concept *wise* is a first-level concept.

One difficulty with this proposal as it stands is that Dummett’s way of re-expressing that something is a first-level concept builds in endorsement of the generalized law of excluded middle. While Frege would hardly have objected, given his insistence that concepts must have sharp boundaries, it would be a cause for concern for anyone who thinks, to the contrary, that we should not exclude the possibility of vague concepts, or other failures of bivalence. But this is a minor irritant—the difficulty could be avoided by an alternative choice of second-level predicate, such as ‘...is something which nothing is or something could be’.⁴⁷ A more serious problem is that Dummett’s claim that predicative expressions share their referents with corresponding predicates—so that ‘what “ ξ is wise” stands for’ stands for the same thing as ‘ ξ is wise’—clashes directly with the Reference Principle. For the result of substituting the former for the latter in ‘Socrates is wise’, for example, is ‘Socrates what “ ξ is wise” stands for’, and this is simply ill-formed.⁴⁸

Dummett concedes that ‘the terminology that would be required for speaking, in a logically correct manner, about the referents of predicates and relational expressions is...cumbersome and verbose’.⁴⁹ But, even supposing the foregoing objection can be surmounted,⁵⁰ there are other and more difficult examples which strongly suggest obstacles in principle to carrying through the requisite linguistic reforms. New problems are posed even by such simple seeming statements as:

First-level predicates stand for concepts

To deal with this, we need to quantify over expressions. In itself, this is no problem—since expressions are a kind of object, there is no reason why we should not use ordinary

⁴⁷ This difficulty was first noted, and this remedy proposed, in Wright 1998a, see pp. 78–9.

⁴⁸ This objection is pressed in Wright 1998a, see p. 80.

⁴⁹ Dummett 1973, p. 217.

⁵⁰ Dummett effectively anticipates Wright’s objection when he writes:

‘What “ ξ is a horse” stands for’ ought, indeed, to be completely interchangeable with ‘ ξ is a horse’; or rather, with the expression ‘a horse’ used predicatively. (For Frege, the copula is a mere grammatical device, with no content, which serves the purpose of converting a phrase into a verbal phrase when grammar demands a verb....) (Dummett 1973, p. 214)

But as Wright (1998a, p. 81a) counters, to take this line is to completely undercut Frege’s explanation of the incompleteness of predicates and other functional expressions, which consists in their capacity to yield complete sentences when their gaps are filled with proper names. For their possession of that capacity precisely depends upon the presence of the copula, or other similarly functioning devices, such as finite verb endings. Further, it is not simply the copula that Dummett’s Frege must dismiss as a merely grammatical device. He needs to maintain that ‘what “ ξ loves ζ ” stands for’ is completely interchangeable with ‘ ξ loves ζ ’, and that ‘what “ ξ is between ζ and υ ” stands for’ interchangeable with ‘ ξ is between ζ and υ ’. But the results of interchanging these expressions in ‘George loves Mary’ and ‘Birmingham is between London and Liverpool’—viz ‘George what “ ξ loves ζ ” stands for Mary’ and ‘Birmingham “what ξ is between ζ and υ ” stands for London and Liverpool’—are simply grotesque. To make even passable sense of them, we need to gloss them along some such lines as ‘George bears the relation “ ξ loves ζ ” stands for to Mary’ and ‘Birmingham bears the relation “ ξ is between ζ and υ ” stands for to London and Liverpool’. There is no plausibility in the suggestion that the words I have italicised are a mere grammatical device. Doing without the forbidden vocabulary of concepts, relations and functions is much more difficult than Dummett allows.

first-order quantification restricted by means of a predicate ‘is a first-level predicate’. Thus a partial rendering of our target statement is:

$$\forall x(x \text{ is a first-level predicate} \supset x \text{ stands for a concept}).$$

But how are we to deal with the consequent? It is naturally taken to have the structure

$$\exists y(x \text{ stands for } y \wedge y \text{ is a concept}).$$

This cannot be reckoned satisfactory as it stands, however, because it deploys the proscribed pseudo-predicate ‘is a concept’. But if we try to eliminate this by Dummett’s method, we are stymied—the result is:

$$\exists y(x \text{ stands for } y \wedge y \text{ is something everything either is or is not})$$

and the trouble with this is all too obvious: the argument to Dummett’s proposed second-level replacement for ‘is a concept’ needs to be a predicative expression, or a variable of appropriate type. But the bound variable y is an individual- or object-variable, as it must be if it is to be a suitable to occupy the second argument place in the predicate ‘ ξ stands for ζ ’. Thus our attempted paraphrase is once again simply ill-formed.

There are, then, grounds to doubt that we can say everything we need to say, while avoiding the forbidden vocabulary of concepts, relations, and functions. I think it is clear that these grounds can be strengthened—perhaps to the point where they are decisive—by closer inspection of the range of statements required for the proper articulation of Frege’s theory of language, including its semantics. As our last example illustrates, it is not just that we need to eliminate apparent singular terms for concepts, relations, and functions—in simple cases, at least, that is relatively easily accomplished. We have also to eliminate all uses of the apparent general sortal terms, ‘concept’, ‘relation’, and ‘function’, together with associated pronominal cross-reference in general statements ostensibly involving first-order quantification over concepts, etc., such as ‘First-level functions take only objects as their arguments’, ‘The level of any function is always greater by one than that of its highest-level argument’, ‘Second-level predicates stand for functions from functions for objects to truth-values to truth-values’, and the like. It is difficult to see any real ground for optimism that eliminative paraphrases of the kind Dummett’s Frege requires can be provided.⁵¹

⁵¹ Noonan 2006, following Geach 1976, contends that the proper resolution of Frege’s paradox is to acknowledge a distinction, as advocated by Wittgenstein in his *Tractatus*, between what can be *said* and what can only be *shown*. Their thought seems to be that there is, just as Frege thought, a fundamental difference between objects on the one hand and concepts, relations and, more generally, functions, on the other; but that any attempt to state this must result in nonsense. We cannot meaningfully assert, for example, ‘There is a fundamental difference between what the name ‘Brutus’ stands for and what the predicate “...killed Caesar” stands for’—for any phrase of the structure: “what ’ stands for” must be replaceable syntactically by simple use of the English expression standing between the quotes (cf. Geach 1976, p. 58), so that our attempt to state the existence of a difference reduces to the nonsensical ‘There is a difference between Brutus and killed Caesar’. Such strictly nonsensical sentences are didactically useful, however, for they can be used to teach someone to speak a logically correct language, such as *Begriffsschrift*. Although I cannot undertake a detailed discussion of this suggestion here, I feel bound to say that it seems to me hopeless. If the proposal is not to reduce to the incredible claim that virtually the whole of Frege’s attempt to give a theoretical account of the semantics of his *Begriffsschrift* must be viewed as strictly nonsensical, serving at best as a means of teaching his formal language to novices, it will need to be backed by a general method of re-expressing the theory in a logically correct way. But as we have seen in discussing Dummett’s version of Frege’s response, the prospects for any such reconstruction are scarcely encouraging. A slightly fuller discussion of the Geach–Noonan proposal may be found in Hale & Wright 2012.

1.9 Kerry *redux*?

Having rejected, as I have done, the orthodox Frege–Dummett solution, Crispin Wright argues⁵² that we should deny (b), and agree, in effect, with Kerry that concepts are a kind of object.

Wright contends that 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.⁵³

Wright’s principal complaint against the Frege–Dummett proposal is that it violates the Reference Principle.⁵⁴ For according to the proposal ‘ξ is a horse’ and ‘what “ξ is a horse” stands for’ co-refer—but 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.⁵⁵

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.⁵⁶

⁵² See Wright 1998a, pp. 77–85. As will soon become apparent, Wright’s reasons for rejecting the Frege–Dummett proposal diverge somewhat from mine.

⁵³ Wright 1998a, pp. 76–7. There are three other constraints, but they need not concern us here.

⁵⁴ As we have already observed, in effect, in note 42. As indicated previously, Wright’s Reference Principle is strictly stronger than mine, but the ambiguity does not matter here, as Wright’s objection does not depend upon the additional strength of his principle.

⁵⁵ 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 1998a, pp. 80–1.

⁵⁶ This is the briefest summary of Wright’s solution—for details, see Wright 1998a, pp. 84–8.

This is, as far as I can see, an effective way out of Frege's paradox.⁵⁷ But it comes at some cost. It is true enough, as Wright says,⁵⁸ 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 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?—i.e. what *is* the semantic relation between these expressions and the relevant functions? '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 claim that these points are decisive reasons against Wright's proposal.⁵⁹ But they are, I think, enough to make it worth exploring the remaining option.

⁵⁷ Noonan 2006 disagrees, but his objection begs the question, for reasons explained in Hale & Wright 2012, section VII.

⁵⁸ Wright 1998a, p. 90.

⁵⁹ For further discussion, including moves which might be made in response to these and some related difficulties, see Hale & Wright 2012, section VII.

1.10 Frege revised

Of course, *simply* rejecting (a) is tantamount to scrapping the Fregean approach altogether. But a quite simple adjustment is enough to avoid the disastrous conclusion that the concept horse must be an object, while preserving the essential ideas of the Fregean approach.

Both the Frege–Dummett proposal and Wright’s rival to it take it for granted that if a singular term refers to anything, it refers to an object—i.e. that *only* objects can be the referents of singular terms.⁶⁰ 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.⁶¹ And without this assumption (i.e. if we allow that singular terms may refer to properties, relations, etc., as well as objects), we can no longer follow Frege in defining objects as what (actual or possible) singular terms refer to—unless we are prepared to follow Wright in allowing the category of objects to swallow up all other categories, so that everything is an object. But there is an obvious and quite simple way to modify the Fregean explanation, allowing for singular terms to have reference to things other than objects. For whilst properties, relations and functions generally can be referred to, or be the semantic values of, singular terms, entities of these other kinds can also be referred to by expressions of other logical types—by predicates, relational and functional expressions. Indeed, it seems clear that although we can refer to, say, the property of being wise by means of a singular term (as I just did), the basic way of referring to that property is by means of the predicate ‘...is wise’. Singular terms for the property, such as ‘(the property of) being wise’ and ‘wisdom’ are more or less obvious nominalizations of the predicate, and have to be understood in terms of it—the property of being wise/wisdom is just the property a thing has if and only if it is wise. But while an object may be in the extension of a predicate, or the value of a function for a suitable argument, no object is *referred to by* (or is the *semantic* value of) any expression other than a singular term. Thus objects can be defined as those things which can *only* be referred to by singular terms, properties as those things which can be referred to by predicates, relations those which can be referred to by relational expressions, and so on.

There is an alternative way to put this simple revision of the Fregean approach. Properties, we observed, can be referred to—or can be viewed as the semantic values of—both predicates and singular terms. But these alternative modes of reference to properties are not on a level—predicates are logically prior to singular terms for properties. We may say that a predicate is the basic way of referring to a property. And clearly the same goes for relations and functions in general—anything, of any kind, can be referred to by means of a suitable singular term, but except in the case of objects, there

⁶⁰ It is true enough that on Wright’s view, the object referred to may be a property, or a relation, or a function, but that is irrelevant to the present point.

⁶¹ Of course, the latter claim *fails* on Wright’s proposal, because concepts are for him a kind of object.

will always be another, more basic, way of referring to it. Thus we could express our revised Fregean explanations for object, property, etc., in this way:

objects are what are or could be *primary* semantic values of singular terms
properties are what are or could be *primary* semantic values of predicates and so on.

This simple adjustment avoids the paradox that signals the fatal instability of Frege's theory, whilst avoiding the undesirable consequences of Wright's more drastic remedy. It involves, of course, rejecting an assumption on which both Frege–Dummett and Wright rely, viz. the strong Fregean doctrine that no entity can be referred to by expressions of different logical types. Since expressions belong to the same logical type if and only if they are interchangeable *salva congruitate*, this is equivalent to the Reference Principle as formulated at the close of 1.7. I do not regard the need to reject the Reference Principle as a *cost* of my proposal, because I think that although there is good reason to think that Frege implicitly relies upon this principle, it is precisely his assumption of the Reference Principle that is the source of the fatal instability in his theory. If I am right, Frege had good reason to reject the principle, and had he done so, he would have been in a position to avoid the disastrously all-encompassing conception of object, as whatever can be the referent of a singular term, which precludes consistent statement of his theory. The remainder of this section is devoted to explaining and defending this claim. Those prepared to take it for granted may skip without loss to the next section.

The Reference Principle entails that expressions of different logical types cannot refer to the same thing, or have the same thing as their semantic value. So we must reject the Reference Principle if we are to accept that, contrary to the orthodox Frege–Dummett view, we can perfectly properly refer to properties, relations and functions by means of singular terms, whilst agreeing with Frege that properties, relations, and functions are what various types of incomplete expression—predicates, relational, and functional expressions—stand for, or have as their semantic values. But there is a deeper and more important point. For, as Wright argues,⁶² it follows from the Reference Principle that whatever the semantic relation is that holds between a predicate and a property (or more generally, between a functional expression and a function), it cannot be the relation of reference which holds between a singular term and an object.

This can be seen as follows. Any statement which says what a particular predicate ' $\phi(\xi)$ ' refers to must be of the form: $\alpha R\beta$, where α is a singular term having that predicate as its referent, and β stands for the referent of that predicate itself.

According to Fregean theory, the referent of ' $\phi(\xi)$ ' is a certain concept, to which reference can only be made by means of an incomplete expression, such as ' $\phi(\xi)$ ' itself, or some other incomplete expression ' $\psi(\xi)$ ' which co-refers with ' $\phi(\xi)$ '—i.e. such that $\forall x(\phi x \leftrightarrow \psi x)$. Consequently, R must be a second-level relational expression whose first argument place has to be filled by a singular term, but whose second argument place requires a first-level predicate. R therefore cannot be 'refers to', because this requires singular terms to occupy both its argument places.

⁶² See Wright 1998a, pp. 84–5. The next paragraph gives a somewhat pedestrian restatement of Wright's argument.

The argument thus far does not make any explicit appeal to the Reference Principle. But we have not yet reached the conclusion—i.e. that whatever the semantic relation is between a predicate and a concept, it cannot be the relation of reference which holds between a singular term and an object—and to infer this we do need to use the principle. For all the argument establishes thus far is that *R* cannot be the specific binary relational expression ‘refers to’. It is consistent with this that *R* should be some other binary relational expression standing for the same relation as ‘refers to’. It is to rule this out that we need the Reference Principle: if *R* stood for the same relation as ‘refers to’ we should be able to substitute *R* for ‘refers to’ *salva congruitate*—but plainly we cannot do so, since any well-formed sentence ‘*x* refers to *y*’ will become ill-formed if *R* is put for ‘refers to’, since *R* requires a predicate in its second argument place, but *y* must be a singular term.

In fact, it is an illusion that there is no appeal to the Reference Principle in the first stage of the argument. For a crucial premise in the argument is that in any statement of the reference of a predicate, the predicate’s referent must be given by means of an incomplete expression—either that very predicate itself, or some co-extensive one. What enforces this premise? It is not a consequence of the Fregean doctrine that predicates refer to concepts (properties) by itself. What obliges us to accept it is that doctrine together with the Reference Principle, which entails that if predicates refer to properties, no other type of expression can do so.

It is obvious that the argument generalizes. Given the Reference Principle, it will follow that no relation that one object bears to another can be the same relation as any that holds between objects and properties, or indeed, between any things of any other kind. It is not just the specific relation of reference that holds between expressions and objects that is debarred from holding between expressions and entities of any other type—there can be no semantic relation of any kind whose domain comprises expressions (a kind of object) and whose range comprises entities of different types. We cannot say, for example, that whereas singular terms have objects as their semantic values, predicates have properties—for there is no relation expressed by ‘... has ___ as its semantic value’ which holds both between some expressions and objects and between other expressions and properties. Since Frege’s semantic theory says—or attempts to say—that expressions of different logical types all have both sense and reference, it is—by the lights of the Reference Principle—simply incoherent!

It does not follow from these considerations that we must reject the Reference Principle. We might, instead, retain the principle and conclude, as Wright does, that ‘...Frege was never at liberty to introduce *Bedeutung* into the semantics of predication, at least not if that is to involve having *the very same relation* link predicates and concepts as ties a singular term to its bearer’.⁶³ If we do so, we must accept that there is no single semantic relation that holds between expressions, regardless of type, and their

⁶³ Wright 1998a, p. 84. Of course, and as Wright points out, a restricted form of the Reference Principle is indisputable, viz. If two expressions belong to the same logical type (syntactic category), then they co-refer only if they are interchangeable *salva congruitate*. But crucially, this restricted principle does not preclude expressions of different type having the same reference.

non-linguistic correlates—worldly entities of one kind or another.⁶⁴ There will, instead, have to be as many (potentially infinitely many) different semantic relations as there are different types of expression (where the criterion of type-identity is interchangeability *salva congruitate*). We may well feel that these different relations are somehow analogous to one another—that while, for instance, the relation of reference between singular terms and objects and the relation between first-level one-place predicates and properties of objects⁶⁵ are distinct, they have something in common. But however strong the temptation, we must resist thinking of these relations as species of some generic relation between expressions and non-linguistic entities—for there can be no such generic relation. I am not claiming that this course is unstable. But neither am I confident that it is not. And since we can avoid it, and—at least on the face of it—salvage more of Frege’s overall theory, by rejecting the Reference Principle, I think we should do so.

1.11 Frege further revised

There are, of course, independent reasons to doubt the correctness of Frege’s ascription of reference to predicates and other kinds of incomplete expression. Before we go any further, we should take account of one of them which, while perfectly consistent with retention of Frege’s general approach to ontology, necessitates further revision of his semantical account of language. Having argued, in the case of proper names, that an adequate explanation of the possibility of informative uses of identity-statements requires that we recognize such expressions as having sense as well as reference, Frege has no hesitation in extending his account to expressions of all other logical types. Not only proper names, but equally predicates and functional expressions generally, and likewise complete sentences, are to be regarded as having both sense and reference. But Frege’s ascription of both sense and reference to predicates, and to functional expressions generally, is certainly questionable.⁶⁶

The sense of an expression, for Frege, is a mode of presentation, and its referent, if it has one, what is presented. In the case of proper names (in Frege’s inclusive sense) the referent is always an object, and the sense a mode of presentation of that object, or way of thinking of it. Even here, the sense+reference model is disputable, there being an especially strong case against its application to proper names in the ordinary sense, such as ‘O’Reilly’ or ‘Bolsover’;⁶⁷ but as regards complex singular terms, at least, it is plausible

⁶⁴ See 1.9, penultimate paragraph.

⁶⁵ I.e. what Wright calls ‘ascription’.

⁶⁶ Of course, in the presence of the Reference Principle, detailed objections to Frege’s extension of the sense+reference model from singular terms to expressions of other types would be a waste of time, since it follows immediately from the Reference Principle that any such extension must in any case equivocate over the reference relation. For there cannot be a single relation which singular terms bear to objects and which first-level predicates bear to properties of objects, etc. For a full explanation, see Hale & Wright 2012, section IV. But I am rejecting that principle.

⁶⁷ See especially Kripke 1972, Lecture 1. This work encouraged a vast secondary literature advocating directly referential theories of names.

that understanding such a term (e.g. ‘the first man to reach the South Pole’) consists in grasping a condition it expresses (its sense) which enables one to identify a certain object as the term’s referent. Applied to a first-level predicate, such as ‘...plays the violin’, the sense+reference model has it that understanding the predicate consists in grasping a condition it expresses which enables one to identify a certain property (concept, in Frege’s sense) as the predicate’s referent. As against this, it may be objected that the Fregean account introduces what is at best an unnecessary detour—understanding such a predicate is *not* a matter of knowing what condition some *property* must satisfy, if it is to be what the predicate stands for; rather, it consists, quite simply, in knowing what condition an *object* must satisfy, if the predicate is to be true of it. In fact, the detour is worse than merely needless—it leaves completely unexplained how someone’s understanding the predicate enables them to determine the truth-value of statements in which it is applied; for that, one needs to know, not just which property the predicate stands for, but what is required for an object to have that property, and about this the Fregean account says nothing.⁶⁸

This objection, as I understand it, does not show that there is *no* sense in which predicates may be said to stand for properties, or have properties as their semantic values. What it shows, if sound, is that predicates should not be regarded as having reference *as well as* sense—i.e. as something distinct from, additional to and determined by sense. For this reason, one might be tempted to take the objection as showing that in contrast with singular terms, predicates have *only* sense, not reference. But it seems to me that this cannot be the right way to understand the objection. Since the sense of an expression, for Frege, just is a way of thinking (or mode of presentation) of its referent (if it has one), it makes no sense to suppose that an expression might have a Fregean sense, but lack a referent *even in its normal, non-defective employment*. To possess a Fregean sense, one might say, is to be apt to possess a reference—so that if aptness to possess a reference goes, sense must go with it.⁶⁹ For this reason, it is perhaps best to avoid the terms ‘sense’ and ‘reference’ altogether, in discussing the semantics of predication. We may still say that a predicate stands for a certain property, or has that property as its semantic value—but this should not be thought of as some *additional* semantic fact, over and above the predicate’s being associated with a certain satisfaction condition: rather, knowing what property

⁶⁸ Of course, it could be retorted that knowing what property a predicate stands for *just is* knowing what is required for an object to have the property—but this is, in effect, to *identify* knowing the reference of the predicate is with knowing its satisfaction condition, and so to concede the central point of the objection (viz. that in the case of predicates, there is no gap between (knowledge of) sense and (knowledge of) reference). The kind of objection barely sketched here was suggested to me by Dummett’s extensive critique of Frege’s ascription of reference to incomplete expressions, for which, see Dummett 1973, Ch. 7.

⁶⁹ I am not of course denying that predicates may be said to have sense or meaning in an intuitive non-technical sense of these words—the words composing a predicate will be individually meaningful, and will normally be combined in a meaningful way. Having a meaning in this intuitive sense should not be confused with having a sense, as Frege uses that term. Frege’s controversial admission of the possibility of proper names which have sense but lack reference *may* be the result of such a confusion.

the predicate stands for will just consist in understanding the predicate, i.e. knowing what something must be like, if the predicate is to be true of it.

1.12 The bearable lightness of being

I conclude this chapter 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.⁷⁰ But all may not go well. Singular terms, at least on 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 it to be a 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.⁷¹ 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 *basic* vehicles of reference to the entities for which they stand. I shall leave these qualifications to be understood in what follows.⁷²

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 make basic reference 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

⁷⁰ ‘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 here, I now think that singular terms may be used to refer to entities belonging to other categories.

⁷¹ 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’.

⁷² 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 controversial, and I shall not rely on it here.

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 fact*, 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 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 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 condition⁷³ 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

⁷³ It may be claimed that the condition is not sufficient. For surely there are meaningful predicates which incorporate empty singular terms, such as 'is more massive than the intra-Mercurial planet' and 'is greater by 3 than the greatest prime number'. Yet predicates such as these can't have associated properties—since there is no intra-Mercurial planet, there is surely no such thing as being more massive than 'it'; likewise for the greatest prime.

The objection relies on something analogous to the Fregean principle that reference failure is contagious—so that if a logically proper part of a complex expression fails to refer, so must the whole expression: sentences embedding empty singular terms lack truth-value, and so, *mutatis mutandis*, for complex expressions of other types. The appropriate response depends upon one's semantics for singular terms, and perhaps also on what kind of singular term is involved.

On a broadly Fregean approach, the embedded singular term 'the intra-Mercurial planet' is meaningful but lacks a referent. Its having a meaning consists in its being associated with a condition for an object to be its referent—a condition which, as it happens, no object satisfies. The objector infers from this that there is no property for which the containing predicate stands. But one may hold, to the contrary, that precisely because there is a condition which an object must meet, if it is to be the referent of 'the intra-Mercurial planet', there is after all a condition which an object *x* must meet if it is to satisfy the predicate 'is more massive than the intra-Mercurial planet'—viz. that there should be something *y* such that (i) *y* and *y* alone is a planet having an orbit around the sun closer than Mercury's and (ii) *x* is more massive than *y*. It is thus false that the lack of reference on the part of the ingredient term means that the containing predicate, though meaningful, stands for no property.

On an alternative, broadly Millian, approach, it might be denied that proper names have anything like Fregean senses—understanding a proper name consists simply in knowing which object it stands for, and a proper name's being meaningful just consists in its standing for a particular object. Such a view obviously has greater plausibility as applied to proper names ordinarily so-called, than when it is applied to complex singular terms. But that issue can be set aside here. For if one holds a view on which empty proper names lack meaning, the objection simply collapses.

It may be claimed that these alternatives are not exhaustive, since the relevant singular term may be an empty but rigid definite description—as when a speaker uses the predicate 'is John's favourite colour', believing, quite correctly, that there is such a person as John, but incorrectly, that John has a favourite colour. The speaker's intention is to assert that some object is the colour which he believes to be John's actual favourite colour—he does not mean simply to assert that there is some one colour that John prefers and that the object is that colour, whatever it is. I agree that a speaker may intend a definite description he uses to be rigid, when it is in fact empty. But in the circumstances I've described, it seems to me that there is still a condition which an object must satisfy if 'is John's favourite colour' is to be true of it—it must be such that (i) there is some one colour which John prefers to all others and (ii) the object is that colour. In the case envisaged, the first part of this condition is unfulfilled, and in consequence the predicate is true of no object. Of course, if the speaker believes that magenta, say, is John's favourite colour, then in the case where he uses the definite description rigidly, there is a different condition which he has in mind—one which he may well mean to assert the object satisfies, and which it may actually satisfy.

certain property just is 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 of properties contrasts with the *sparse* view(s) favoured by some metaphysicians.⁷⁴ 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

and remove from it one or more occurrences of a singular term, and you get an expression standing for a property, such as the property of *being-fast-asleep-in-a-deck-chair-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 generous conception of properties. 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 H₂O—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 that 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—as I shall argue in a later chapter.

The abundant conception of properties might just as appropriately be described as *deflationary*, or *metaphysically lightweight*. 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 categories—a condition which things of the appropriate

⁷⁴ This terminology is used by Lewis (1983 and 1986). The distinction is in Armstrong (1979), Bealer (1982), and Swyer (1999). There is a useful overview in Mellor and Oliver (1997). Crispin Wright and I adopt Lewis's term 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 or deflationary conception of properties 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-worldly 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.

sort, depending on the level of the property, may or may not meet, either 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, *could not be*.

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.⁷⁵

Appendix: Inferential tests for singular terms

As intimated near the end of 1.3, the formulation of inferential tests along the lines originally suggested by Dummett has proved to be a matter of considerable difficulty. In Hale 1994b and 1996b, I argued that all then identified difficulties⁷⁶ could be avoided by adopting a two part test, using modified versions of Dummett's original inferential tests to discriminate singular terms within the restricted class of substantival expressions—roughly, noun phrases—and then employing an Aristotelian test, based on Aristotle's idea that a substance has no contrary, to exclude expressions of other types, such as predicates and other kinds of incomplete expression. Dummett's original inferential tests were designed to distinguish between genuine singular terms and various other kinds of expression which may occupy positions in which singular terms may stand, such as the indefinite pronouns 'someone', 'everyone', 'no-one' and their impersonal counterparts and restrictions such as 'something', 'some philosopher', and indefinite noun phrases such as 'a policeman', etc. His leading thought was that there are certain simple patterns

⁷⁵ 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 2011.

⁷⁶ For earlier discussion of the difficulties, see Hale 1979 and 1987, Ch. 2, Wright 1983, §ix, and Wetzel 1990.

of inference that are characteristic of singular terms in the sense that, when relevant positions in their premises or conclusion are occupied by singular terms, the resulting inferences are valid, but when they are occupied by other expressions, one or other of the resulting inferences is invalid. Specifically, he proposed⁷⁷ that for an expression ‘*t*’ to be a singular term it must be the case that:

- (I) from any sentence containing ‘*t*’, it shall be possible to infer the result of replacing ‘*t*’ by ‘it’ and prefixing the whole by ‘There is something such that ...’
- (II) from two sentences ‘*A(t)*’ and ‘*B(t)*’, it shall be possible to infer ‘There is something such that *A(it)* and *B(it)*’
- (III) a disjunction ‘*A(t)* or *B(t)*’ of two sentences may be inferred from ‘It is true of *t* that *A(it)* or *B(it)*’.

(I) excludes ‘nothing’ and cognate expressions like ‘no politician’, but fails to exclude ‘something’, ‘some politician’, and the like—hence (II). But neither condition will exclude ‘everything’, ‘every politician’, etc.—hence (III).

Dummett observes that while these conditions may suffice to exclude various kinds of expression other than singular terms, when they stand in places where genuine singular terms can go, they will not exclude indefinite noun phrases such as ‘a policeman’, when they appear in positions *not* occupiable by singular terms. Thus, in particular, ‘a policeman’ as it occurs in ‘Henry is a policeman’ passes (I)—for we *can* infer ‘There is something such that Henry is it’; and from ‘Henry is a policeman’, ‘George is not a policeman’, we can infer ‘There is something such that Henry is it and George is not it’, so (II) fares no better. And while there is some awkwardness over the application of (III) to such examples, it is at least doubtful that it will suffice to exclude them. The rogue cases exploit the possibility of using ‘something’ to express higher-level generality. Dummett notes that such higher-level uses of ‘something’, as in our examples, contrast with standard uses to express first-level generality, as in ‘There is something Henry borrowed from George’, in that a point can always be reached where a request for further specification may be well formed but rejected as having no answer. For example, we may ask ‘What was it that Henry borrowed...?’ and be told, ‘A flame-thrower’. Here we can press the question further: ‘Which flame-thrower?’, and there must be answer, even if it is not known. But having asked ‘What is it that Henry is but George is not?’, and been told ‘A policeman’, we are not entitled to an answer to the further question: ‘Which policeman?’ Using this idea, rogue substantival expressions may be excluded by modifying the tests so to require that the conclusions of the displayed inferences are to be such that well-formed requests for further specification may not be rejected as not needing an answer.⁷⁸

⁷⁷ Dummett (1973), pp. 59–60.

⁷⁸ Dummett originally proposed a separate specification test for higher-level generality, modifying his inferential tests to require that ‘something’ be understood as first-level. In Hale 1979, I showed that his specification test is insufficient for higher-level generality, but that the problem could be solved by the present modification. For a fuller summary of the essential points, and further references, see Hale 1994b.

Even if these inferential tests suffice to pick out singular terms within the more general class of substantival expressions, they do not justify discounting, as candidate singular terms, non-substantival expressions such as adjectives and predicates in the standard logician's sense deriving from Frege. It is true, of course, that the conclusions of the inferences required by tests I and II, when the candidate singular term is a predicate, such as '...drinks', are at best very questionable pieces of English. Thus from 'Bill drinks' we would have to infer 'There is something such that Bill it', and from 'Bill drinks' and 'George drinks', we would have to infer 'There is something such that Bill it and George it'; and there appears to be no remotely acceptable way to formulate a suitable premise for the inference test III would require. But these difficulties are merely grammatical, not logical.⁷⁹ It would clearly be unsatisfactory to exclude predicates on such grounds—the distinction we are interested in concerns semantic function, not form. What is required to exclude such expressions is, therefore, a supplementary criterion based on the function of singular terms.

The idea inspired by Aristotle's observation is that singular terms may be distinguished from predicates by appeal to the consideration that whereas for any given predicate there is always a contradictory predicate, applying to a given object just in case the original predicate fails to apply, there is not, for singular terms, anything corresponding to this—we do not have, for any given singular term, another 'contradictory' singular term such that a statement incorporating the one is true if and only if the corresponding statement incorporating the other is not true. The exact formulation of a criterion based on this idea is a matter of some delicacy—it is a feature of English (and, so far as my knowledge extends, of other natural languages) that generality is expressed by means of pronouns, rather than pro-verbs, or pro-adjectives, for example; but this bias in favour of the substantival is not something on which we should trade, in the present context. To achieve a more neutral formulation, we might proceed as follows. Let t be some expression that forms part of a sentence, the remainder of which we can represent by $C()$, so that the whole sentence is $C(t)$. And let us use ' $\Sigma\alpha$ ' and ' $\Pi\beta$ ' as substitutional quantifiers, the substitution class for α comprising all and only those expressions which can replace t in $C(t)$ preserving grammaticality, and that of β comprising, similarly, all and only those expressions which can replace C . Thus a pair consisting of one expression from the α class and one from the β class will always make a well-formed sentence, which we may schematically depict by ' $\ulcorner\alpha, \beta\urcorner$ '. In this notation, we may formulate an Aristotelian criterion purporting to give a necessary condition for singular termhood as follows:

$$(A) \ t \text{ functions as a singular term in } C(t) \rightarrow \neg \Sigma\alpha \Pi\beta (\ulcorner\alpha, \beta\urcorner \leftrightarrow \neg \ulcorner t, \beta\urcorner)$$

Thus consider 'Plato is wise'. The idea is that 'Plato' will pass the test, because there is no choice of α which makes all the bi-conditionals ' α is wise \leftrightarrow not-(Plato is wise)', ' α smokes \leftrightarrow not-(Plato smokes)', etc., all true, but that 'is wise' will fail because, when

⁷⁹ The inferences required by tests I and II can be unproblematically formulated, and are clearly valid, in second-order logic; they have the forms: $Fa \vdash \exists X Xa$ and $Fa \wedge Fb \vdash \exists X(Xa \wedge Xb)$.

it occupies the t position in the schema above, we can choose as α the contradictory predicate ‘is not wise’ and the requisite bi-conditionals will all hold. The test will not do as it stands, however, for without further restriction, the substitution class determined by a genuine singular term such as ‘Plato’ will include such expressions as ‘some philosopher’, with disastrous results. For with such expressions available in the β -class, we cannot ensure that ‘is wise’ fails the test by choosing ‘is not wise’ as α , since the bi-conditional ‘Some philosopher is not wise iff it is not the case that some philosopher is wise’ is obviously false. Since there does not appear to be any other choice of α which would secure the desired result, the test fails to exclude ‘is wise’. To get around this problem, we need to impose a suitable restriction on the β -class. In 1994b and 1996b, I proposed that this could be accomplished by restricting it, whenever appropriate, to expressions which pass the inferential tests. Taking in some further needed modifications⁸⁰ to the inferential tests themselves, my proposal was that we may first use the inferential tests to exclude bogus candidates for singular termhood within the broad class of substantival expressions, i.e.

- (1) A *substantival* expression t functions as a singular term in a sentential context ‘ $A(t)$ ’ iff
- (I) the inference is valid from ‘ $A(t)$ ’ to ‘Something is such that $A(it)$ ’
 - (II) for some sentence ‘ $B(t)$ ’, the inference is valid from ‘ $A(t)$ ’, ‘ $B(t)$ ’ to ‘Something is such that $A(it)$ and $B(it)$ ’
 - (III) for some sentence ‘ $B(t)$ ’, the inference is valid from ‘It is true of t that $A(it)$ or $B(it)$ ’ to the disjunction ‘ $A(t)$ or $B(t)$ ’

where

- (i) the conclusions of the inferences displayed in (I) and (II) are neither of them such that a point may be reached where a well-formed request for further specification may be rejected as not requiring an answer
- (ii) the displayed occurrence of t in ‘ $B(t)$ ’ of condition (II) itself meets condition (III)
- (iii) the displayed occurrences of ‘ $A()$ ’ and ‘ $B()$ ’ in (II) and (III) are essential
- (iv) ‘ $B(t)$ ’ neither entails nor is entailed by ‘ $A(t)$ ’.

We may then disqualify predicates and other non-substantival expressions by requiring that

- (2) t functions as a singular term in $C(t) \leftrightarrow \neg \Sigma \alpha \Pi \beta (\ulcorner \alpha, \beta \urcorner \leftrightarrow \ulcorner t, \beta \urcorner)$

where the β substitution class comprises all expressions grammatically congruent with ‘ $C()$ ’, except any that fail our stage (1) tests, when they are applicable.

⁸⁰ For a detailed explanation and defence of the modifications, some of which are needed to deal with a variety of ingenious counter-examples given in Wetzell 1990, see Hale 1994b.

A serious difficulty for this package was subsequently uncovered by Ian Rumfitt.⁸¹ Note first that, as he points out, for the purposes of the inferential tests, it is necessary to understand validity in primitively modal terms: an inference is valid iff it is impossible for its premises to be true but its conclusion not. Both proof- and model-theoretic characterizations presuppose a prior syntactic specification of the language, and so are ruled out in the present context. This gives rise to the following problem. When there is, as a matter of necessity, one and only one F , 'some F ' (e.g. 'some even prime') as it occurs in a context 'Some F is G ' will pass all three inferential tests. Obviously 'Something is such that it is G ' follows from 'Some F is G '. Further, where ' B (some F)' is any (other) sentence that passes the first test, 'Something is such that it is G and B (it)' will follow from 'Some F is G ' and ' B (some F)'. And finally, from 'It is true of some F that A (it) or B (it)' we may infer ' A (some F) or B (some F)'.

One might respond⁸² that this does not matter, since 'some even prime', etc., will anyway be excluded by the Aristotelian test—since there is an α such that for all β , $\ulcorner \alpha, \beta \urcorner \leftrightarrow \neg \ulcorner$ some even prime, $\beta \urcorner$, namely 'no even prime'. But it does matter, as an argument due to my former student Paul McCallion shows. The argument is that since we are restricting attention to extensional contexts, we shall have:

$$\ulcorner \text{some even prime, } \beta \urcorner \leftrightarrow \ulcorner 2, \beta \urcorner \quad \text{for all choices of } \beta$$

hence:

$$\neg \ulcorner \text{some even prime, } \beta \urcorner \leftrightarrow \neg \ulcorner 2, \beta \urcorner \quad \text{for all } \beta$$

But now given:

$$\Sigma \alpha \Pi \beta (\ulcorner \alpha, \beta \urcorner \leftrightarrow \neg \ulcorner \text{some even prime, } \beta \urcorner)$$

we have:

$$\Sigma \alpha \Pi \beta (\ulcorner \alpha, \beta \urcorner \leftrightarrow \neg \ulcorner 2, \beta \urcorner).$$

In particular, since 'no even prime' is a suitable choice of α to disqualify 'some even prime' from being a singular term, it can serve also to disqualify '2'. As McCallion observed, in effect, the problem is not confined to special cases. For any genuine singular term t , we can produce a quantifier phrase equivalent to t for the purposes of the tests, viz. 'something identical with t '. Since this will fail the A-test because 'nothing identical with t ' will always be a suitable α , we have the resources to disqualify t as well, for any choice of t , and can thereby demonstrate that by the lights of the tests, there are no singular terms! I think we can see, thanks to Rumfitt's and McCallion's efforts combined, that it is disastrous if 'some even prime' and its tribe are allowed to get through the inferential tests—for if they do get through, they will be available as substituends for α in the A-test, with the catastrophic results just seen.

Can we solve the problem? To see how we might, we should first go back to a point Dummett makes in presenting his tests—that the tests are framed relative to a particular

⁸¹ *Vide* Rumfitt 2003.

⁸² This was the response Wright and I made in a reply to Rumfitt—see Hale & Wright 2003, p. 257.

language, and assume both a certain degree of competence in that language, and a capacity to recognize as valid or otherwise certain simple inferences involving its sentences. Important as this point is, my proposed reformulations of Dummett's tests do not make as much of it as they could, and—as I shall argue—should. They do exploit it to some extent, of course, just because they speak of inferences couched in English. But they do not exploit it to the full, precisely because they are formulated, much as Dummett formulated their originals, in terms simply of certain inferences *being valid*. Thus, Dummett's first test for t to be a singular term in $A(t)$ was that from any sentence ' $A(t)$ ', it shall be possible to infer 'There is something such that $A(it)$ '. Clearly Dummett means that it must be possible *validly* to infer, etc., and I in turn reformulated the composite inferential test as:

A substantival expression t functions as a singular term in a sentential context ' $A(t)$ ' iff (i) the inference is valid from ' $A(t)$ ' to 'Something is such that $A(it)$ ', etc.

However, since we are thinking of the tests as being applied by a suitably competent speaker of English, it would be perfectly sensible to formulate them in terms of such a speaker's *being able to recognize* the relevant inferences as valid. Thus we might restate the inferential test in the form:

A substantival expression t functions as a singular term in a sentential context ' $A(t)$ ' iff a suitably competent speaker of English *can recognize as valid* the following inferences:

(i) the inference from ' $A(t)$ ' to 'Something is such that $A(it)$ ', etc.

Once the test is so restated, it lends itself to a simple modification which disposes, so far as I can see, of the Rumfitt–McCallion problem. Consider first McCallion's recipe for wholesale evacuation of the class of singular terms: given any proper name or other putative singular term t , the substantival expression 'something identical with t ' will pass the inferential test, but will be excluded from the class of singular terms by the A-test, and will take ' t ' with it. Behind the envisaged mass exodus lies a simple theorem of first-order logic with identity, viz. $Fa \leftrightarrow \exists x(Fx \wedge x = a)$. However, *recognizing* that from ' $B(\text{something identical with } t)$ ' and ' $C(\text{something identical with } t)$ ' one may validly infer 'Something is such that $B(it)$ and $C(it)$ ' depends upon recognizing that ' $B(\text{something identical with } t)$ ' is true if and only if ' $B(t)$ ' is so. In effect, recognition that 'something identical with t ' as it occurs in a context ' $A(\text{something identical with } t)$ ' passes the inferential test is parasitic on recognition that ' t ' as it occurs in ' $A(t)$ ' does so.⁸³ We may thus block the manoeuvre at a stroke, by requiring that the test inferences may all be *immediately* recognized as valid by any suitably endowed speaker—that is, recognized as valid *without the need for any intermediate reasoning*.

⁸³ Thus one must reason somewhat as follows: Suppose $B(\text{something identical with } t)$ and $C(\text{something identical with } t)$. Let s be anything identical with t . Then $B(s)$. Likewise $C(s)$. But then 'Something is such that $B(it)$ and $C(it)$ '. This does not explicitly involve any intermediate inference from ' $B(t)$ ' and ' $C(t)$ '—only one from ' $B(s)$ ' and ' $C(s)$ ', where it is assumed that $s = t$. But this does not matter. The important point is that some subsidiary reasoning is involved.

How about quantifier phrases like the one Rumfitt originally pointed out—‘some even prime’—as slipping through the tests because their embedded predicate is necessarily uniquely satisfied? Well, evidently, recognizing that from, say, ‘some even prime is small’ and ‘some even prime divides 6 without remainder’, one may validly infer ‘Something is such that it is small and divides 6 without remainder’ will not require reasoning of *precisely* the kind involved in examples featuring terms of the form ‘something identical with *t*’. But it *will* involve reasoning—so much is clear from the fact that a speaker who fails to grasp that there is only one even prime will *not* recognize the relevant inference as valid, any more than, in general, she will recognize as valid other inferences of the form ‘Some *F* is *G*’, ‘Some *F* is *H*. ∴ ‘Something is such that it is both *G* and *H*’ as valid—and that is enough to ensure its exclusion by the amended inferential test.⁸⁴

To sum up, the Rumfitt–McCallion objections do show that my hitherto best version of the composite test for singular terms fails dramatically—for every *bona fide* singular term, *t*, there is a bogus Doppelgänger (specifically, a quantifier phrase) which can be exploited to disqualify *t*, with the disastrous result that the test declares that there are no singular terms. But the problem appears not to be—as McCallion thought—terminal. What the objections bring out is the need to recast the inferential component of the test in terms of the recognizability, without reliance on subsidiary reasoning or additional premises, of the relevant inferences as valid, rather than in terms of the validity of those inferences *simpliciter*.

⁸⁴ In fact, the reasoning will be very similar. For one must surely argue: Suppose some even prime is small and that some even prime divides 6 without remainder. There is only one even prime. So the even prime is both small and divides 6 without remainder. So something is such that it is small, etc.