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HOW TO MAKE THE WORLD FIT OUR LANGUAGE: AN ESSAY IN MEINONGIAN SEMANTICS

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> Language tempts us to employ locutions which rouse the fighting spirit of those who care about what exists and what doesn't. (Meyer and Lambert 1968: 15.)
>
> [Linguistics] is entirely obligated to deal with objects (*Gegenstände*) in word- and sentence-meanings.
>
> (Meinong 1904: 496.)

I. SEMANTIC EXPANSION

Some grammatical sentences of natural languages such as English seem clearly true, e.g., 'Secretariat is a race horse'; others, clearly false, e.g., ' 'Sherlock Holmes' is the name of a criminal in *A Study in Scarlet*'. Others, equally grammatical, seem to have no clear truth value; e.g., 'Pegasus is a flying horse', 'Sherlock Holmes was cured of cocaine addiction by Sigmund Freud', or 'The present Czar of Russia is a Democrat'.[1]

From a purely *syntactic* (i.e., grammatical) point of view, English is not significantly different from non-natural (formal or artificial) languages, such as those underlying systems of logic or such as a regimented fragment of English as in Montague 1970a,b.[2]

1. The first is arguably true on the basis of Greek mythology and certainly seems more truth-worthy than 'Pegasus is a mouse' (where 'Pegasus', here, names the same creature). The second is arguably true on the basis of Meyer 1974, yet it seems less truth-worthy than 'Sherlock Holmes's best friend was Dr. Watson', though more so than 'Sherlock Holmes was arrested for murdering Dr. Watson'.

2. On the question of demarcating natural and non-natural languages, cf. Montague 1970a: 189, 219 and 1970b: 373, and Dunn 1969.

But there is an important *semantic* difference. For a formal language, one usually only considers semantic interpretations which are *complete*: for each singular referring expression in the language, there corresponds an element of the universe of discourse. More precisely, there is (at least implicitly) a semantic interpretation function, i, whose domain is the union of the syntactic categories of the language, and which is *total* on the subset of its domain consisting of individual constants (perhaps including definite descriptions). E.g., for each name $n \in$ Dom (i), there corresponds an element $i(n) \in$ Rng (i), where Rng (i) is the "domain of interpretation". It is sometimes said that i is "defined" for all names $n \in$ Dom (i) or that n "exists" (cf. Stahl 1960, Montague 1967).

However, natural languages only have a *partial* interpretation function when given such a set- or model-theoretic semantics whose universe of discourse (or "model") is taken to be the real, physical world. There are names in English (e.g., 'Pegasus') for which the interpretation function is undefined (the *same* interpretation, it should be noted, which assigns the *horse* Secretariat to the *name* 'Secretariat' or to the *description* 'the 1973 triple-crown winner').

To put semantics on a par with syntax for parity of treatment of natural and formal languages, two alternatives suggest themselves. (1) The syntax of a natural language can be changed so that the interpretation function becomes total. This could be accomplished, following Russell and Quine, by paraphrasing away all non-denoting expressions (e.g., improper descriptions, names from fiction), thus enabling those grammatical expressions without clear truth-value to gain one (however arbitrary). Free logics, too, can be viewed as recommendations within the realm of formal languages for such syntactic change.

Despite their elegance and fruitfulness, two lines of criticism of these programs are worth recording. First, the reforms are ad-hoc. According to Russell, a sentence like 'The present Czar of Russia is a Democrat' must be reparsed as 'One and only one thing is presently Czar of Russia, and he is a Democrat' before being semantically interpreted. But this course of devising special syntactic changes for each new semantic problem is somewhat artificial.[3] Moreover, as Dana

3. Cf. Lorentz: "Poincaré has objected . . . that, in order to explain Michelson [and Morley]'s negative result, the introduction of a new hypothesis has been required, and that the same necessity may occur each time new facts will be brought to light. Surely this course of inventing special hypotheses for each new experimental result is somewhat artificial", cited in Sachs 1974: 298.

Scott has observed, such a "case by case presentation" of syntactic reforms runs the risk of allowing "some type of discontinuity . . . [to] creep in" (Scott 1970: 146; cf. p. 6 below).

Second (which should be obvious), if we are trying to understand the semantics of *natural* languages, we ought not to alter the *data*. Such tampering might prove useful as an *experimental* technique: squeeze the syntax a bit here, see what semantic nuggets are yielded there. But, ultimately, the goal of natural-language semantics ought to be just that – semantics – not syntactic reform.[4]

What I urge, on the other hand, is (2) that we change the *semantics* of natural language, as outlined earlier, by enlarging the range of the interpretation function to make it total. This suggestion is not new; the substitution interpretation of the quantifiers is essentially such a semantic reform, although its domain of interpretation consists of *names*. What I envisage, however, is an enlargement by means of additional object-like entities – but more on that anon.

Against the objection that enlarging the universe of discourse to obtain a total function is an idle game, consider the following: The problem with English on its intended interpretation in a physical-object universe is that while its syntax permits the construction of such well-formed sentences as (S1) 'Pegasus is a flying horse' and (S2) 'Pegasus does not exist', its semantics is at best unclear.

Consider, by way of analogy, the syntax of a language for arithmetic whose intended interpretation is the set of *natural* numbers. With a sufficiently rich vocabulary and flexible syntax, we could ask such questions as these: Are there numbers between 1 and 2? Is there a square root of 2? Does $x + 1 = 0$ have a solution? If $x + 1 = 0$ has a

4. Syntactic reform of some kind might be a by-product. An alternative interpretation of what I have been discussing is that the syntactic "reforms" of Russell, Quine, *et al.*, are really elucidations of deep structure. (Russell might have agreed; I'm not so sure about Quine.) On this interpretation, the semantic level of analysis is only reached via the deep-structure route. I shall have something to say about this on p. 6f and in n. 8. An alternative interpretation, then, of what I urge in the text is this: natural-language semantics should focus on *surface* structure (and if this tells us something interesting about *deep* structure, so much the better).

solution, does its solution have a square root?

Plainly, on the *intended* interpretation, the answers to these would all be in the negative: There are no (natural) numbers between 1 and 2. There is no square root of 2. $x + 1 = 0$ has no solution. There is no square root of the solution of $x + 1 = 0$.

Yet our understanding of mathematics would not have progressed far had mathematicians rested content with such answers. Instead, *the domain of interpretation was enlarged* to encompass negative, rational, irrational, and complex ("imaginary"!) numbers.[5] Perhaps we may progress in our understanding of the semantics of natural languages if its domain of interpretation is similarly enlarged: we should have a total, not a partial, interpretation function. (And just as one can, but need not, "reduce" all of those numbers to natural numbers, so the elements of the domain of interpretation of English need not be "reduced" or eliminated.)

There is a third method for achieving totality in addition to syntactic and semantic reforms: the syntactically well-formed but semantically uninterpreted expressions might simply be *ignored*. Call these the "artifacts" of English (or of English syntax). Of course, these artifacts are an essential part of English in its capacity as an everyday means of communication. Their presence is partly responsible for the ability of English (or any natural language) to deal with "absent" things – the so-called displacement feature of language. So it is probably not wise to wear a veil of ignorance: ignoring data is as bad as altering it. Nevertheless, it proves helpful to explore this method. Again, a comparison with mathematics helps:

(A) In von Neumann's set-theoretical (re-) construction of numbers (where $0 = \emptyset$, $1 = \{0\}$, $2 = \{0,1\}$, etc.), the *union* of two such numbers seems to be an artifact analogous to those of English. I.e., just as there are syntactically well-formed sentences like (S1) and (S2) which are semantically anomalous, so there are syntactically well-formed, set-theoretical expressions such as '1∪ 2'; are they anomalous? If numbers are *not* thus modeled, '1 ∪ 2' is meaningless. *After* modeling, this is not only syntactically well-formed, but also meaningful; it is *semantically* acceptable on the intended (set-theoretical) interpretation: Where m and n are (reconstructed, i.e., set-theoretical

5. For historical discussions, cf. Boyer 1968: 315f, Kramer 1970: 69ff. For similar philosophical remarks – leading to a radically different conclusion! – cf. Quine 1961: 18, 45.

models of) numbers, $m \cup n = \max(m,n)$. Ignoring this set-theoretical interpretation of the max-function would be impractical. So, if (as in (A)) numbers are sets, then and only then is '$m \cup n$' both meaningful and useful; such expressions are *not* anomalous. Hence, sometimes syntactic artifacts (i.e., accidental features of the syntax) are useful.

(B) In another case, however, it seems reasonable to ignore such artifacts. Consider the Wiener-Kuratowski set-theoretical reconstruction of ordered pairs, according to which $\langle a,b\rangle = \{\{a\},\{a,b\}\}$. Here, just as one can form (S1) and (S2), so one can form '$\langle a,b\rangle \cup \langle c,d\rangle$'. Is this anomalous? Since $\langle a,b\rangle \cup \langle c,d\rangle = \{\{a\},\{c\},\{a,b\},\{c,d\}\}$ – which, while a legitimate set, is not an ordered pair – the answer appears to be "yes": the expression for such a union is a useless, accidental feature of the syntax. So, if (as in B)) ordered pairs are sets, then and only then is '$\langle a,b\rangle \cup \langle c,d\rangle$' meaningful; but it is also useless. Hence, sometimes syntactic artifacts are *not* useful and can be ignored.[6]

Now, is the case presented earlier for an expanded domain of interpretation more like (A) or (B)? If it is more like (A), then perhaps we *have* a case; but if it is more like (B), then the third alternative (ignoring the artifacts) is still open. For the non-denoting terms (which are essential linguistic components of the artifacts of English) are to the special terms needed in an expanded universe of discourse as '$m \cup n$' is to the max-function. The latter are useful; perhaps the former are, too. But there is no similar use (but cf. n.6) – and no analogy – for '$\langle a,b\rangle \cup \langle c,d\rangle$'.

As in (A), the question 'What is the union of two numbers?' is meaningless unless numbers are sets. The question 'What is the denotation of a non-denoting term?' is meaningless unless those terms are of the kind to which 'denotation' is at least applicable.[7] In

6. Randall Dipert has pointed out to me that it *can* be useful, for $\langle a,b\rangle = \langle c,d\rangle$ iff the cardinality of $\langle a,b\rangle \cup \langle c,d\rangle = 2$, thus supplying us with an *identity criterion* for such ordered pairs. Now, either all similar mathematical artifacts can be shown to be useful, or they can't. The former possibility just strengthens my argument. If the reader can supply an example of the latter alternative, s/he may substitute it for mine in the text. However, I suspect that the notion of usefulness Dipert has in mind differs from the one I am employing, for, in (A), the max-function is the *interpretation* of '$m \cup n$', whereas , in (B), there is no *interpretation* of '$\langle a,b\rangle \cup \langle c,d\rangle$'.

7. Since I am in fact an only child, the question 'Who is the brother of Bill

English, they are. And so we can give an adequate response to the question: the special items in an expanded universe of discourse shall be their denotations.

In (B), the problem is this: if the set-theoretical union of ordered pairs is useless, why shouldn't non-denoting terms be? The question 'What is the union of two ordered pairs?' is meaningless unless ordered pairs are sets. If they are, the question is not meaningless, but the answer is useless (but cf. n.6). The question 'What is the denotation of a non-denoting term? ' is likewise meaningless unless such terms are of the kind to which 'denotation' is applicable. *But they are*; so all we need do is show that such denotations are not useless. If we can do that, our guiding model will be (A), not (B).

The usefulness can be shown in two ways – first, by showing the usefulness of non-denoting terms; second, by reflecting on the nature of natural-language semantics. There is not room to undertake the first task here. (The full story is told in Rapaport 1976, Ch. I, and summarized in Rapaport 1978: 153f; cf., too, Castañeda 1972.) Suffice it to say that reference to non-existents (for such would be the special items in an expanded domain) occurs more frequently than in mere stories or myths, and in more important contexts. In contemplating our actions, for instance, we must refer to merely possible items, which serve as standards for measuring the success of our actions. Other important cases of reference to non-existents can be found in negative existential sentences, psychological discourse, and the language of science. (Indeed, the latter presents us with an example of the sort of discontinuity or ad-hoc-ness Scott mentioned. Science avoids reference to non-existents, not by Russellian or Quinean maneuvers, but by couching its statements within the scope of an (implicit) existence assumption; e.g., 'quarks have such-and-such properties' is really elliptical for 'if quarks exist, then they have such-and-such properties'.)

Turning now to the second task, to give a semantics for natural language would be to give, *inter alia*, a domain of interpretation which would enable us to explain how a hearer comprehends the

Rapaport?' is "meaningless" in the sense in which I am using that term. It is not *necessarily* meaningless, since I'm a human and humans can have brothers. The question 'Who is the brother of the Eiffel Tower?' is necessarily meaningless (or else 'brother' is being used metaphorically).

meaning of sentences using their *surface* structure as *initial* data.[8] Since some sentences contain non-denoting terms, the domain would have to have entities corresponding to them. I.e., the interpretation function must be total; otherwise, we have not given an empirically adequate explanation. We have to make the "world" fit our language.

To understand a natural-language sentence, we "pretend" (or assume) that it is true and (mentally) construct a picture or model of the world based on it (cf. Clark and Clark 1977: 100ff and Findlay 1963: 48; I once had a teacher who told us, "Always believe every rumor you hear; it makes life more interesting!"). So, we understand 'The present King of France is bald' as predicating baldness of someone, and we know how to verify such a statement in general even though, as a matter of fact, we can't verify that one.[9] Indeed, the ontology of our ordinary experience (i.e., the world as we find it) can be elucidated, in part, by a semantics of ordinary language, and, as Hector-Neri Castañeda has urged, "the total domain of discourse we have at the back of our minds in our daily transactions includes *both* existing and non-existing" items (Castañeda 1975a: 5; cf. 1975b: 18.)[10]

It is a further question whether our picture of the world is accurate, e.g., whether a given term denotes an actual object (i.e., whether the rumor is true). The items which will serve as meanings, on this view, will be those things which are postulated to show what

8. This last point is controversial, but it seems to me to be required for empirical adequacy: we comprehend sentences by hearing or reading them. In both cases, it is the *surface* structure which is sensed first; any processing (such as analysis of the *deep* structure) *must* begin there. For contrasting discussions, cf. Chomsky 1965; Fodor *et al.* 1975; Katz 1971, esp. pp. 116f; Lakoff 1972; Martin 1978; Montague 1970b; and the references therein.

9. Cf. Grandy 1972: 140. While it is the (merely empirical) *impossibility* of verification which leads to empirically verifiable, Russellian paraphrases, the *un*paraphrased statement is not impossible to verify in *principle*, and some such statements, on my view and others' (cf. Meinong 1904), *are* verifiable, albeit not empirically (e.g., 'The round square is round', 'The golden mountain is golden').

10. Some say that *their* domain of discourse is "out in the world" (rather than in the back of their mind); I can only respond that we sit on opposite sides of the philosophical fence. I'm not sure it's worthwhile or even possible to *argue against* them. Rather, I can try to convince them that the grass is at least as green on my side. (Cf. Rescher 1978 on the difficulty of reconciling such fundamentally different philosophical positions; cf., too, Castañeda 1978.)

the world *would* be like *were* it exactly as we talked about it.[11] Such items are useful in describing adequately the *structure* of our thinking about the world. They are, thus, quite literally the objects of our understanding and, more generally, of psychological attitudes.[12]

I believe that these considerations make what may be called "semantic expansion" a worthwhile methodology to follow in the development of natural-language semantics.

II. SYNTACTIC REGIMENTATION

Semantic expansion seems to be antagonistic to Russell-style "syntactic regimentation" in that there is a trade-off in complexity between syntax and population of the domain of (semantic) interpretation: a minimal ontology requires a complicated (deep-structure) syntax, whereas a simple syntax needs a crowded (some would say overcrowded) ontology.

However, semantic expansion need not rival, but might complement, syntactic regimentation. If a program of syntactic regimentation that is complete and "continuous" (in Scott's sense) can be developed, then it would be reasonable, following Scott, to regard the special items "as . . . *ideal objects* introduced to enhance the regularity of our language" and "to make clear the structure of the . . . domain" of actual objects (Scott 1970: 145, 147; cf. Quine 1961: 18, 45; and Findlay 1963: 55). We might then have *two* semantic techniques: An *indirect* semantics would translate a natural-language sentence that appeared to refer to special items into a regimented language and then interpret the translation in the "desert-landscape"-domain of actual objects. A *direct* semantics would interpret the natural-language sentance in the extended (or "jungle-landscape"-) domain of special items, thus enabling us to keep our *language* (as opposed to our ontology) simple (or, at least, natural) and to exhibit in a straightforward manner the structure of the domain of actual objects (which on this view is the intended interpretation, and which we augment for structural clarity with special items).[13]

Moreover, the technique of semantic expansion, as Scott has noted (1967: 189), can help us "check formulas without having to first eliminate the contextually defined notions." If the syntactically regimented language is adequate, each language can be used as a check on the adequacy of the other. For no true regimented sentence should be a translation of a false natural-language one, and, conversely, no regimented paraphrase should be considered adequate if it is false while its natural-language counterpart is true. The regimented language and its intended interpretation might be more ontologically perspicuous, but the natural language is "epistemologically" clearer in the sense that it is easier to use (to speak).

The usefulness of the *natural* language as a criterion of adequacy for the *regimented* one must be stressed, for it must be remembered that we *start* with the natural language and devise regimented paraphrases of it, not the other way around.[14]

11. Mark Pastin has pointed out that this sense of 'exactly' needs clarification: 'This pen is red' does *not* say *exactly* how the world is (since it doesn't indicate the precise shade of red). But if I believe that this pen is red, when it is in fact blue, then the world would be such that this pen were red, were the world "exactly" as I believed it to be.

12. Lest it be thought that my jump from a sort of picture-theory of semantics to the need for a certain sort of object is a *non sequitur* (or worse), let me anticipate Sect. III, below: what one "pictures" is an object in Meinong's sense, a *Gegenstand*. It is true that I can picture Pegasus even though there is no actual object to be pictured. But I do not assume, nor do I intend the picture-semantics to suggest, that we don't need actual objects for our semantics. We *do* need *Meinongian* objects or something like them. (I am indebted to Thomas McKay for pointing out the need for notes 10 and 12.)

13. One complication is that the extended domain might not be merely a superset of the actual-object domain. Consider the analogous situation in which negative integers are ideal objects introduced to clarify the structure of natural numbers. The feeling that they are somehow "less real" than the naturals leads to their construction from (i.e., reduction to) naturals (as, say, certain equivalence classes of ordered pairs of naturals). But, then, to maintain the univocity of reference to positive and negative integers, the former must be construed not as the naturals but as equivalence classes also. This new domain of "special" items has a subset isomorphic, but not identical, to the set of naturals with which we began. The Meinongian semantics discussed in Sect. III below has this feature; cf. Rapaport 1978, Sect. III.

14. In this respect, cf. the "special-item" approach of Robinson's non-standard analysis. His special items are infinitesimals, and the analogue of regimented language is the limits-approach to the calculus as developed by Cauchy, Bolzano, and Weierstrass. Cf. Robinson 1970, Chs. I, X.

III. MEINONGIAN SEMANTICS

Granted the value of semantic expansion, what should the domain of interpretation be? The problem is to provide a class of entities which can serve as, so to speak, the denotations of non-denoting terms. Frege suggested that 0 be the referent of improper definite descriptions (Frege 1892: 71n.); and Scott has suggested that the "null" element ought to be one *not* in the domain – e.g., it could be the domain itself (Scott 1967: 184). But such arbitrariness is, literally, unnatural. While we may not be sure exactly what 'the present Czar of Russia' denotes (if anything), it does great damage to our natural-language intuitions and is inadequate for *natural*-language semantics to have it denote, say, 0,Ø, or the entire domain (cf. Burge 1974: 310). Moreover, if we are willing to allow *one* arbitrary element (especially if, with Scott, it is one not in the domain), then we ought to be willing to open the door to (at least) as many elements as there are non-denoting terms.

Such a theory is available. One of the tenets of Alexius Meinong's Theory of Objects is that "the meaning (*Bedeutung*, though not necessarily in Frege's sense) of every noun phrase or sentence is an object (*Gegenstand*)" (Meinong 1904: 496, 513; cf. Meinong 1910: 25). 'Object' here has a technical sense: psychological experiences are analyzable into an *act* (such as judging or thinking), an *object of* the act – e.g., a proposition (technically, an "objective") or an individual (technically, an "objectum") – and a *content* which "directs" the act to its object. According to Meinong, a word means (*bedeutet*) the object of an act for a person (perhaps in a certain context) (Meinong 1910: 25f). Thus, a Meinongian theory can provide a foundation for a natural-language semantics by taking the meaning of a term to be the least ambiguous reference from the domain of objects.[15]

Before filling in this picture a bit, I want to lay to rest a potential objection. The use of Meinong's much-maligned theory to supply the domain of interpretation commits us *neither* to the truth of that theory (as a theory about what there is), *nor* to its consistency (for, if our language is inconsistent, why expect its interpretation – the world

15. Kohl 1971: 23 suggests "that for fluent speakers all material object words denote perfectly determinate classes."

built by it – to be consistent?), *nor* in an ontological fashion to such suspect entities as round squares or existing golden mountains which do not exist (for not everything we talk about exists). There are *other* theories which can serve as well (e.g., Castañeda's (1972) theory of guises and consubstantiation), and there are variant versions of Meinong's theory itself (e.g., Parsons 1974; Rapaport 1976, 1978, and 1979). Any Meinongian theory, i.e., any theory containing versions of the key theses of the Theory of Objects (cf. Rapaport 1976, 1978), will suffice. Moreover, each of these theories can be defended and justified as metaphysical theories on independent grounds; and none commits us to the actual existence of undesirable entities, but only to the recognition that we can and do talk and think about them.

Since anything that can be denoted by a noun phrase or expressed by a sentence of some language can be an object of thought (i.e., a Meinongian object) – indeed, the objects of thought = the objects of language – every noun phrase and sentence can be given a meaning, and, so, the semantic interpretation function can be made total.

The particular Meinongian theory I shall use as an example makes a few adjustments in Meinong's original theory in order to strengthen it. So that we may see how this theory can be put to semantic use, I shall just present the relevant parts of it here. (See Rapaport 1976 and 1978 for motivational and other details.)

In addition to the *Meinongian* object of a psychological act, I suggest that there is also, in some cases, an "actual" (usually physical) object which is distinct from the Meinongian object and of which properties are predicated by a different mode of predication from that associating properties with Meinongian objects (cf. n. 13).

Suppose, e.g., I am thinking that the person in the next room is happy. If there is no such person, then I am thinking at most of a Meinongian object; if there *is* such a person, then there is – in addition – an actual object. (Meinong's original theory holds that there is only *one* object in the two cases, viz., the Meinongian object, which does not exist in the first case but does in the second.) Let us say that actual objects "exemplify" properties while Meinongian objects are "constituted" by properites. Thus, the Meinongian object *the golden mountain* is constituted by (and only by) the properties goldenness (G) and mountainhood (M); let us represent this by: $\langle G, M \rangle$. The Meinongian object *the tallest mountain*, $\langle T,M \rangle$, is constituted by (and only by) the properties of being taller than all other

mountains (T) and mountainhood. The *actual* tallest mountain *exemplifies* these properties *plus* such properties as being in Asia, being named 'Mt. Everest', etc., *plus* all properties which logically follow from them. Finally, we may say that a *Meinongian* object, o (say, $\langle T,M\rangle$), *exists* (or "has Sein", to use a Meinongian turn of phrase) if some *actual* object (in this case, Mt. Everest) exemplifies all the properties which constitute o. I call such an actual object a *Sein-correlate* of o.

Now, if the meaning of a noun phrase is a Meinongian object, what does 'bachelor' mean? This question is improper, since, in the absence of contextual information, there are several meanings. One important restriction (or disambiguating device) is who the speaker (or hearer) is, as has already been noted. But even that is not enough. We also need to know the time of the utterance by the speaker, the place, the speaker's (or hearer's) expectations, information about the previous fragment of the conversation, etc. 'Bachelor' *tout court* could mean <being a bachelor> or <being unmarried, being male>, for instance.

This ambiguity is compounded when we ascend from words to sentences. Sentences, too, are not unambiguous when isolated from context; i.e., they are only (or at most) unambiguous when viewed holistically, taking an entire "text" or conversation as minimal unit of meaning. Sentences, like words, *can* be given meaning outside of context, though not necessarily uniquely without certain disambiguating principles (discussed below). (And, if Quine is right, neither can texts taken singly be given unique meaning.)

The meaning of a sentence is an *objective*; it is very much like a proposition and is, more precisely, the object of acts such as judging and assuming. So, what does 'Bachelors are unmarried' mean? Once again, in the absence of contextual information, it could mean (using obvious abbreviations) *U is a constituent of* $\langle B\rangle$, *U is a constituent of* $\langle U,M\rangle$, or even $\exists\alpha[\alpha$ *is a Sein-correlate of* $\langle B\rangle$ & α *exemplifies* $U]$, for instance.

Consider these for a moment. Some may feel that part of "the meaning" of 'bachelor' is "unmarried". I don't. A Martian anthropologist studying an English-speaking society might discover, as an empirical fact, that all and only those males called "bachelors" were unmarried. If s/he (it?) were familiar with philosophy, s/he (it) would probably consider a sentence expressing that fact to be synthetic. The objective *U is a constituent of* $\langle B\rangle$ is "synthetic" and

false (since $U \neq B$); the objective *U is a constituent of* $\langle U,M\rangle$ is "analytic" and true; and the objective $\exists\alpha[\alpha$ *is a Sein-correlate of* $\langle B\rangle$ & α *exemplifies* $U]$ is "synthetic" and true.

The generally accepted belief that 'Bachelors are unmarried' is "analytic" when understood as expressing a relation between B and U can be explained as follows. Consider the word 'bachelor' and all "synthetic relations" involving it (e.g., that John is a bachelor, that Barbara isn't a bachelor, that bachelors are unmarried, that no women are bachelors, that bachelors are men, etc., but *not* that bachelors are bachelors).[16] Find among them those which have the largest number of others among them as deductive consequents (e.g., according to classical logic). Call these "analytic" in a *derivative* sense. Thus, e.g., while 'Bachelors are unmarried males' expresses a synthetic objective, since all the other meanings (or "semantic relations") of 'bachelor' can be deduced from it (along with relevant other premisses, e.g., about John, 'John', etc.), it holds a central place in the logical network of these relations and so may be termed "analytic" (in the derivative sense).

Now, how do we understand a sentence such as 'Bachelors are unmarried' *in practice*? I suggest that we employ a *principle of minimization of ambiguity* (PMA) and a *principle of maximization of truth* (PMT). The least ambiguous interpretation of 'Bachelors are unmarried' *in the absence of further context* is: *U is a constituent of* $\langle B\rangle$.

16. If 'unmarried male' were the NP under consideration, that unmarried males were bachelors and that John is an unmarried male would be "synthetic relations", but that unmarried males are unmarried would be *analytic* in the *primary* sense.

This raises an important problem. There is a fundamental principle of "analyticity" in my Meinongian theory to the effect that FG's are F and G: unmarried males are unmarried and males. This appears to be contradicted by modifiers like 'alleged', 'former', etc. However, the principle *is* fundamental in the sense that we have to *learn which* modifiers are like 'alleged', etc. Indeed, even after learning it, it's a common mistake to assume that alleged murderers are murderers (N.B.: they *are* alleged!), and we have constantly to be reminded of the fact. Fundamental laws of thought, like habits, are hard to break. FG's *are* F and G, but laws about the *actual* world put limitations on that principle in some cases (cf. Rapaport 1976: 161-71; 1978: 166): *Actual* alleged murderers *exemplify* being alleged but do not necessarily exemplify being murderers. Meinongian *alleged murderers*, $\langle A,M\rangle$, are constituted by *both* properties. Cf. n. 25.

Since 'Bachelors are unmarried' thus construed is false, and since PMA together with considerations arising from the Martian radical-translator case rule out *U is a constituent of <U,M>*, PMT *in the absence of further context* instructs us to interpret is as $\exists\alpha[\alpha$ *is a Sein-correlate of* $<B>$ *&* α *exemplifies U*].

The sentence 'The present Czar of Russia is a Democrat' (indeed, *every* sentence) is infinitely ambiguous in the absence of both context and PMA/PMT. One's instinctive reaction to that is to say something along the lines of, "But a (native) speaker of English knows that at least it means that the present Czar of Russia is a Democrat". As it stands, such a reaction is incoherent. But it expresses an instinctive application of PMA, according to which the sentence means *D is a constituent of* $<P,C,R>$.[17] Thus construed, it's false. So PMT must come to the rescue; in the absence of further context as before, PMT at first instructs us to interpret it as (*) $\exists\alpha[\alpha$ *is a Sein-correlate of* $<P,C,R>$ *&* α *exemplifies U*]. Unfortunately, this is of no help, since it, too, is false (there being no actual present Czar of Russia, royalists notwithstanding). But, except for philosophical or linguistic essays, such sentences are not uttered out of some context. PMT, which is essentially a principle of charity, urges us to search for a context – or, rather, to pay attention to the *actual* context before rashly producing the unfortunate interpretation (*). In real life, the hearer usually would know sufficiently much about the context to interpret (i.e., disambiguate) the sentence with the help of PMT and PMA. E.g., if the speaker is seriously discussing politics, interpretation (*) would be the best one, and the hearer might decide that the speaker doesn't know what s/he's talking about. (Or else, the hearer might decide that the speaker was a royalist or joking, and decide on the truth-value accordingly.) If the speaker were telling a story, then the meaning of 'the present Czar of Russia' might be $<P,C,R,F,G, \ldots>$, where F,G, etc., are other properties attributed to the character in the story. In that case, PMT would yield *D is a constituent of* $<P,C,R,F,G, \ldots>$, and the sentence would be true if $D = F$ or $D = G$ or . . . .[18]

17. C = being a czar, R = being a czar of Russia, P = being presently czar of Russia.

18. One *might* use interpretation (*) but either put it within the scope of a story-operator or introduce a new story-quantifier together with a relation of story-exemplification. I reject these alternatives on grounds analogous to those discussed in Castañeda 1978.

Consider the treatment of English double negatives. 'I don't got none' must be interpreted *in the absence of contextual clues* "directly", in accordance with PMA, as "It's not the case that I have none", i.e., as "I have some". It is only when it is embedded – as it would ordinarily be, of course – in some context (including consideration of intonation, dialect, or sociolinguistic features) that, in accordance with PMT, we interpret it "indirectly" as "I don't have any".[19]

Besides meaning, semantics is concerned with truth. Some have held that truth is its only concern (e.g., Davidson 1970), but it seems more plausible, as indicated in the preceding discussion, that meaning and truth are inextricably intertwined. Meinong seems to have held to a two-valued logic. He spoke of the "being" of "objectives" rather than of the "truth" of "sentences" (or even "propositions"), and so he could speak univocally of the "being" of the Meinongian object *the horse* and of the "being" of the Meinongian object *The horse is an animal.* For any object o, either o has being or o lacks being, according to Meinong (1904: 494); thus, either *The present King of France is bald* has being (is true) or lacks being (is false). (If it means, using obvious abbreviations, *B is a constituent of* $<P,K,F>$, it's false.)[20]

General truth-conditions are hard to give, especially for relational and quantificational sentences (cf. Rapaport 1976: 176ff). Even the basic case of a simple subject-predicate sentence whose NP is a singular referring term is not easy. For one thing, we cannot give a truth-condition of the form "φ is ture iff . . .$i(x)$. . .", where x is φ's NP and $i(x)$ is the meaning of x, since that would make truth a relative notion – relative to speaker and context, on the grounds that i is thus relativized. Rather, we need something of the form, "the truth-value, V, of φ *as uttered by* speaker S in context C is T iff . . .$i_{S,C}(x)$. . .". In the basic case, I suggest the following:

(V) $V_{S,C}$('x is F') = T iff (i) F is a constituent of $i_{S,C}(x)$
or (ii) $\exists\alpha[\alpha$ is a Sein-correlate of
$i_{S,C}(x)$ & α exemplifies F].

19. This is merely a plausible proposal offered as a clarifying example. For an alternative analysis from a linguistic viewpoint, cf. Labov 1969, esp. Sect. 4. Idiomatic expressions can be treated similarly.

20. This, incidentally, points up a serious fault with Parsons' (1974) Meinongian semantics insofar as it is supposed to be *Meinongian*, since he allows for truth-value gaps (cf. Rapaport 1978: 167f).

Here, $i_{S,C}$ is the total semantic interpretation function relativized to a speaker S and a context C, $i_{S,C}(x)$ is the Meinongian object which is the meaning of the NP 'x' for S in C, and it its understood that $i_{S,C}(x)$ is "calculated" with the help of PMA and PMT.[21]

I might also note that this Meinongian semantics appears to be merely a notational variant of Katz and Fodor's semantics (Katz and Fodor 1963; Katz 1971). Their theory provides formal representations ("readings") of the meanings of words. Readings are sets of formal objects called "semantic markers". Thus, one reading for 'bachelor' is: {(Object), (Physical), (Human), (Adult), (Male), (Not married)}. What are these formal objects? Such a question is properly answered by providing a semantic interpretation (a "model") of the abstract theory. Readings, I suggest, might be modeled as Meinongian objects. The meaning of 'bachelor' for S in C might be <being an object, being physical, being human, being adult, being male, being unmarried>. The apparent convergence of these two theories seems a task worth pursuing, both for the light it may shed on the Katz-Fodor theory and for the use it may provide for Meinong's.

IV. SOME APPLICATIONS

Meinongian semantics can account for the usual semantic phenomena such as synonymy, ambiguity, etc., much along the lines that the Katz-Fodor theory does. It can also account for pragmatic or "performance" phenomena. Take misunderstanding, which can be defined as

H misunderstands S with respect to S's utterance of 'x' (or *that* φ) iff $I_{H,C}('x') \neq i_{S,C}('x')$ (or $i_{H,C}(\varphi) \neq i_{S,C}(\varphi)$).

21. Things might be worse than this. For '*F*' in 'x is *F*' is a word (albeit not necessarily an NP) whose meaning perhaps ought to be $i_{S,C}('F')$. But *that* is a Meinongian object, hence not a *constituent* of $i_{S,C}(x)$. If things *are* this bad, then (V) should be amended to read, "... iff (i) $\exists\alpha[\alpha$ is a Sein-correlate of $i_{S,C}('F')$ and α is a constituent of $i_{S,C}(x)]$ or (ii) $\exists\alpha\exists\beta[\alpha$ is a Sein-correlate of $i_{S,C}(x)$ & β is a Sein-correlate of $i_{S,C}('F')$ & α exemplifies $\beta]$.

Things might be worse yet! For 'is' in 'x is *F*' is a word. If *its* meaning is some sort of Meinongian object, still further revision would be needed. Cf. Sect. VI, below.

Since the definiens is almost always going to be true, it follows that people almost always misunderstand each other! In practice, this is not usually a problem, since there will usually be considerable overlap between two people's meanings. Indeed, as Russell has argued (1918: 195f), daily communication would be impossible if everybody always meant precisely the same thing by each word (and learning would be impossible, too).

Or consider this: suppose Max (a mathematician), Phil (a philosopher), and Sal (a book salesman) attend a conference C on Leibniz and that a speaker at the conference says, "Leibniz codiscovered the calculus". Let D = being co-discoverer of the calculus, M = being the inventor of monads, $m = i_{Max,C}$ ('Leibniz'), $p = i_{Phil,C}$ ('Leibniz'), and $s = i_{Sal,C}$ ('Leibniz').[22] Suppose that D is a constituent of m but not of p or s, that M is a constituent of p but not of m or s, and that s = <being someone's name>. When they hear the speaker utter that sentence, Max might wonder why the speaker is uttering an analytic truth, Phil might learn something about someone he already knew something about (and so something is added to the meaning of 'Leibniz' for Phil), and Sal might learn either that someone named 'Leibniz' co-discovered the calculus or that a co-discoverer of the calculus was someone named 'Leibniz'.

A further application of Meinongian semantics might be to the historical phenomenon of change in meaning. What does it mean (*sic*) to say that a word has "changed its meaning", e.g., that 'janitor' no longer means what it did (viz., "usher in a school") in Bacon's day (i.e., around 1584)? In light of the present theory, we must say something like this: what most people today mean by 'janitor' ≠ what most people in Bacon's day meant by it. ("It", by the way, is the *sound*. How did it change? Slowly, by small accretions to and deletions from the speakers' meanings (i.e., Meinongian objects). A similar explanation can be given to explain changes in "the" meaning of, e.g., 'electron'. The theory is thus applicable to the vexed question of theory-change in science.

22. I believe that proper names have meanings but won't argue the point here. While the present example is most perspicuously presented using names, the same point can be made using any common noun.

V. EXTENDING THE THEORY

Two notions of "context" can be distinguished. A broader notion is the one subscripted as "*C*" above; it includes intonation, information about the dialect being used, information about speaker's and hearer's beliefs, etc. A narrower notion is that part of the broader one consisting of the sentence- or utterance-fragments "surrounding" the NP whose meaning we seek. Let us consider those narrower contexts which are so-called open sentences or propositional functions. If we extend the notion of a Meinongian object so that it is constituted, not by properties *per se* (thus avoiding certain ontological problems), but by these contexts, we can then replace <being male, being unmarried> by <. . . is male, . . . is unmarried>.

We can now say that the meaning of a NP for *S* in *C* is a certain "extended Meinongian object" constituted by those open sentences which are fragments of utterances heard by *S* in the past. There will have to be some limitations on the constituents. For instance, after a period of time, it seems reasonable that not all new contexts will add to or change a meaning for *S* (in a pre-theoretic sense); so those which don't "change the meaning" need not be constituents. Not all heard contexts will be remembered or recognized by *S*, though some "forgotten" or "unrecognized" ones might be stored in or recognized by *S*'s "unconscious"; so those contexts which are completely eradicated need not be constituents.

As an example, the meaning of 'bachelor' for *S* in *C* might be <. . .s are unmarried, John is a . . ., that guy is a . . ., no women are . . .s, . . .s are men, [etc.]>. One *might* even say that the meaning of 'bachelor' for *S* in *C* = the (ordinary) Meinongian object which "satisfies" (in a reasonably obvious sense) all those contexts. This does *not* run afoul of extension problems. For two words which appeared to mean the same thing on this theory could be distinguished via intensional or even quotational contexts.

One advantage of the extended theory is that it might be able to be used in accounts of initial-language acquisition: for, as we learn our language (which we do continually), we add to or change the contexts constituting the meanings of words for us.[23] If it is felt that

23. Perhaps we could use the extended theory to deal with the relation of 'cat' to 'cattle'. I would not be at all surprised if the meaning of 'cat' for some child in some context is constituted by (*inter alia*) . . .*s say 'meow'* and . . .*tle give milk*. At a later stage of the child's development, certain contexts might be completely dropped from the meaning, or transferred to other meanings.

the notion of "narrow" context used here is either too restrictive or too arbitrary, then the broader notion could be used instead: the meaning of a word *w* for *S* in *C* would then be constituted by (almost all) the contexts in the broader sense in which *w* was previously used in *S*'s presence. (The 'previously' helps avoid circularity.) Clearly, this is only a rough sketch: an explication of the notion of context in the broader sense is needed, *inter alia*. But this theory appears to be interestingly "mentalistic" *and* Quinely holistic.

Moreover, it can be further extended to cover *all* words, not just NPs. For (to return for the moment to contexts in the narrower sense) why not let the meaning of 'and' for *S* in *C* be constituted by those contexts of the form *p*. . .*q* which are such that they are true iff both *p* and *q* are true?[24]

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