

REFERENTIAL USE AND POLYSEMY*

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1. INTRODUCTION

What is the relationship between the meaning of a word and its referential uses? Katz (1979) argues that a word's meaning determines its referential uses--but only in "the null context". Putnam (1977), on the other hand, denies that meaning determines referential use. The present paper will focus on a third, and somewhat different, attempt to answer this question: namely, that of Nunberg (1978, 1979). Nunberg (1979, p. 177) espouses a relationship between meaning and referential use that results in the conclusion that it is possible for linguistics to give a proper account of the way language is used and understood "without having to say that speakers know what words mean." This conclusion is equivalent to the claim that there can be no coherent semantic theory because, as Nunberg puts it,

The semantics/pragmatics distinction cannot be validated even in principle; there is no way to determine which regularities in use are conventional, and which are not.

(Nunberg (1979), p. 143)

Nunberg calls this position "radical pragmatics" and it is clear that much of contemporary speech act theory would have to be drastically revised if Nunberg's claim about word meaning were valid.¹ Nunberg also claims that his arguments for this conclusion are based, in part, on arguments to be found in Wittgenstein.

In Section 2 of this paper, we will sketch Nunberg's arguments. In Section 3, we will show that these arguments are not valid, and that, therefore, his conclusion regarding knowledge of word meaning is false. In Section 4, we will briefly discuss Wittgenstein on this and a related matter. We do so partly to clear up misunderstandings of Wittgenstein to be found in Nunberg, but more importantly to lay the foundation for our own outline of the relationship between meaning and referential use to be found in Section 5.

2. NUNBERG'S THEORY

It is a curious and important fact that Nunberg bases his arguments concerning the possibility of meaning on the phenomenon of polysemy. According to Nunberg, a word is said to be polysemous just in case native speakers count it as a single word, but one which has several related uses. This type of word thus falls somewhere between single words with single meanings--i.e., univocal words--and homonyms.

Homonyms are words which have the same phonetic shape, but which have distinct unrelated uses. Bank is an example of a homonym: its two meanings--"side of a river" and "financial institution"--have nothing in common. In contrast to homonyms, Nunberg (1979, p. 148) lists the following (among others) as polysemous words: game, used to refer to activities on the one hand, or to a set of rules governing the activities on the other; window, used to refer either to the opening, or to the glass that goes in the opening; book, used to refer either to a physical object or to its contents; and, radio, used to refer either to the medium or to the Motorola itself. Nunberg notes that most (if not all) words also have metaphorical or non-standard uses. These kinds of uses do not make for polysemy: polysemous words must have several related normal uses.

The facts as thus far presented are rather straightforward facts about types of words; the distinction between univocal words, homonyms, and polysemous words is a common one. How, then, is Nunberg able to argue from such uncontroversial facts to such a controversial conclusion? He does so by arguing that there is a special relationship between meaning and ostension. He claims that there is a direct parallel between the two. That is, understanding what a speaker is pointing to and understanding what a speaker means by the use of a word is accomplished in the same way. Nunberg notices that the same "ambiguity" that can arise in ostension can arise in just the same fashion in the use of a word. For example, one can point to a newspaper copy and say:

- (1) Hearst bought that last month.

The speaker can be interpreted as referring either to a newspaper copy or to a newspaper company. In a like manner, a speaker may utter (2) with the same possibilities of interpretation:

- (2) Hearst bought a newspaper last month.

For Nunberg, the word newspaper is polysemous, having two related uses. Given the parallel in possibilities of interpretation between the pointing and the word-use case, Nunberg argues that an account of ostension can serve double-duty as an account of word meaning.

What, then, is Nunberg's account of ostension? He proposes, and works out in some detail, a theory of Referring Functions² which allow the hearer to figure out what a speaker may be referring to when he points to an object. In essence, the hearer uses a system of inferences based on mutual beliefs. Thus, changing example (1) slightly, a speaker might point to a newspaper copy and say:

- (3) Hearst bought that last month for a million dollars.

In the normal case, the hearer reasons that newspaper copies don't cost that much, but that something closely related to them--i.e., newspaper companies--might. On this basis, the hearer can infer that the speaker was referring to a company and not to the copy that he was pointing to.

With respect to word uses, a speaker can say:

- (4) Hearst bought a newspaper last month for a million dollars.

And in this case too, a hearer can arrive at the correct interpretation, via the same reasoning used in case (3). For Nunberg, this kind of phenomenon is evidence that word use and ostension are similar.

An important part of Nunberg's account of ostension is that the hearer will compute the best possible referring function when he determines what the speaker is, in fact, referring to. Nunberg makes this assumption based on Gricean conversational principles of cooperation. The hearer must assume that the speaker is cooperating in the conversation, making it as easy as possible for the hearer to compute the proper reference.³ Thus, the speaker's referent must be the most rational one, given the mutual beliefs of the participants. For example, Nunberg states that a person cannot point to a picture of Mick Jagger and say, "Have you bought your tickets for that", with the intention of referring to the next concert after the Rolling Stones' (Nunberg (1979), p. 161). In this case, the best function would be from a picture of Jagger to the Stones' concert itself. Therefore the speaker must, if he is cooperating in the conversation, be referring to that concert. Word use is said to act in the same way: the function intended by the speaker must always be the best function available, given the mutual beliefs.

Given this picture of word use and ostension, Nunberg proceeds to argue that knowledge of word meaning is impossible. Nunberg uses the case of the language learner in his attempt to prove his point. The language learner, in constructing his lexicon, is charged with the task of pairing sound and meaning: he hears words being used to refer to various things, and this, according to Nunberg, is enough information to allow him to determine the meaning of a word. But in the case of polysemous words, the determination cannot be made. This is so, according to Nunberg, because it is in principle not possible to determine what the best referring function for these types of words is. For Nunberg, it is just as rational to refer to newspaper copies via referring to newspaper companies as it is to refer to newspaper companies via referring to newspaper copies.⁴ Why should this be a problem for the language learner?

Recall the distinction made earlier between univocal words, homonyms, and polysemous words. The latter are words with a single meaning, but more than one related use. The language learner must answer this question: what is the single meaning for the word newspaper? This word is unlike the homonym bank. Hearing the different uses of bank, the language learner concludes that there is no connection between the uses, and hence gives each use a separate lexical entry--i.e., gives two meanings to the word. But with newspaper (and other polysemous words) there is a relationship between the uses. According to Nunberg, for polysemous words:

The cue-validity of the best function from one referent to the other is exactly the same as its inverse: we would best define a in terms of b, and b in terms of a. Thus

books ('inscriptions') are criterially used for the purpose of representing certain contents, but books ('contents') are criterially intended for inscription in a certain way.... Similarly for our other examples. What defines game-activities, among other things, is that they are governed by a set of rules.... And what defines those rules is just that they ordain those activities.

(Nunberg (1979), pp. 172-173)

Since the language learner cannot tell which is the best function, he also cannot tell which is the most basic use of the word, and therefore cannot tell what the word means. He knows it's one of the two possibilities, but he cannot determine which.

Nunberg does not stop with polysemy. He claims that, given the arguments just presented, almost all the words of a language work like polysemous words. Since any general term is subject to a "type" or a "token" interpretation, the meanings of these words cannot be determined either. Furthermore,

This indeterminacy affects not only all common nouns, but verbs and adjectives as well, since the latter can be used to 'refer' either to first- or higher- order properties, states and activities.

(Nunberg (1979), p. 173)

His conclusion is stronger still: "there are virtually no words (except a few proper names) for which we can 'give the meaning'" (Nunberg (1979), p. 174).

3. DIFFICULTIES WITH NUNBERG'S ANALYSIS

It is important to keep in mind that Nunberg does not consider polysemous words simply to be ambiguous. They are not homonyms—even their syntactic behavior is different from that of homonyms.⁵ An explicit statement of this position is as follows:

Among forms that have multiple uses, we intuitively distinguish two classes. We would be inclined to say that English has two different words that are pronounced [bæŋk], one of which is used to refer to a kind of shoreline configuration, and the other to a kind of financial institution. But when presented with the two uses of chicken, to refer once to a kind of bird, and once to a kind of meat,... we are more likely to say that these are "different uses of the same word." On this basis, we say that forms like chicken are polysemous, rather than homonymous.

(Nunberg (1978), pp. 5-6)

It is for this reason that newspaper must be treated formally different than bank: their representation in the lexicon cannot be of the same kind. Therefore, if bank is given two entries, one for each of its meanings, then this cannot be done for newspaper.

The main problem with Nunberg's analysis is this: given his conclusion (that speakers do not know what words mean), we are faced with a logical contradiction. Nunberg must be able to answer the following question: in virtue of what can it be ascertained that there is a distinction between polysemy and homonymy in the first place? Given that we do not know what our words mean, what basis is there for positing two meanings for the word bank? What basis do we have for saying that newspaper has one meaning, but several related uses? Clearly, the basis can only be our knowledge of word meaning--the very knowledge that Nunberg denies the possibility of.

Not only are the number of meanings a word has able to be detected by Nunberg, but the actual meanings of some words are given in Nunberg's work. Moreover, the claim is made that certain of these meanings are unrelated--i.e., in the case of homonyms. Such determinations are determinations of the semantic properties and relations of the words in a language. Their basis is the intuition of the native speaker--the semantic intuition, that is. But "semantic intuition" includes "knowledge of meaning". Just as the syntactician uses native speaker intuition about structure as a guide in the construction of grammars, so too does Nunberg use semantic intuitions in making his arguments. If the syntactician were to deny that speakers knew their native language, he/she would not be able to make any statements regarding linguistic structure. (Cf. Chomsky (1980), p. 5: "Let us assume that it makes sense to say, as we normally do, that each person knows his or her language, that you and I know English for example...").

Nunberg wants to make at least some statements that rest on semantic knowledge--namely that there is the semantic phenomenon of polysemy which differs from the semantic phenomenon of homonymy. This distinction, if it can be made, contradicts his conclusion about knowledge of word meaning. And on the other hand, his conclusion, if true, makes the distinctions on which it is based false. Either way, Nunberg loses.

4. A WORD ON WITTGENSTEIN

Nunberg (1978, 1979) invokes Wittgenstein as a source for some of his arguments. The invocations are themselves explicit,⁶ but the purported influence is not spelled-out by Nunberg, nor does he claim that Wittgenstein is being followed in any precise way. In addition, Quine is also listed as an influence. Nevertheless, the impression is given that there is some resemblance between what Nunberg says and what Wittgenstein thought. We want to show very briefly in this section that there is, in fact, great divergence between Nunberg and Wittgenstein on the matters of knowledge of word meaning and on polysemy in particular.

With respect to semantic knowledge, Wittgenstein takes just the opposite position that Nunberg does.⁷ It is true that Wittgenstein attacked the concept of meaning, but this attack was aimed at theories of meaning which took meaning to be either reference or mental constructs. A very straightforward statement of Wittgenstein on knowledge of word meaning occurs in On Certainty:

Admittedly, if you are obeying the order "Bring me a book", you may have to check whether the thing you see over there really is a book, but then you do at least know what people

mean by "book"; and if you don't you can look it up,—but then you must know what some other word means. And the fact that a word means such-and-such, is used in such-and-such a way, is in turn an empirical fact, like the fact that what you see over there is a book. [n.b., book is one of Nunberg's examples of polysemy, of a word whose meaning cannot be known.]

Therefore, in order for you to be able to carry out an order there must be some empirical fact about which you are not in doubt. Doubt itself rests only on what is beyond doubt.

But since a language-game is something that consists in the recurrent procedures of the game in time, it seems impossible to say in any individual case that such-and-such must be beyond doubt if there is to be a language game—though it is right enough to say that as a rule some empirical judgement or other must be beyond doubt.⁸

(Wittgenstein (1972), p. 68e)

Thus, what is impossible according to Nunberg is necessary according to Wittgenstein.

With respect to the relationship between meaning and referential use, there is also disagreement between the two authors.⁹ Nunberg argues that meaning is indeterminate because, given two related uses of a word, it is not possible to pick one of the uses as the meaning of the word. One obvious solution is to say that the (polysemous) word has two meanings, but as we have seen, this move would fail to capture the distinction between polysemy and homonymy. Wittgenstein believed that such a distinction was a valid one,¹⁰ but had his own solution to the problem—a solution which, unlike Nunberg's, does not require making the claim that speakers don't know what their words mean.

Wittgenstein discusses the meaning of the word understanding in the following way:

We speak of understanding a sentence in the sense in which it can be replaced by another which says the same; but also in the sense in which it cannot be replaced by any other. (Any more than one musical theme can be replaced by another).

In the one case the thought in the sentence is something common to different sentences; in the other, something is expressed only by these words in these positions. (Understanding a poem).

(Wittgenstein (1958), pp. 143-144e)

For our present purposes, we will not argue that Wittgenstein's analysis of the particular word understanding is correct, but rather, that he is making a claim about the meaning of a word which has two related uses.¹¹

Then has "understanding" two different meanings here?—I would rather say that these kinds of use of "understanding" make up its meaning, make up my concept of understanding.

For, I want to apply the word "understanding" to all this.

(Wittgenstein (1958), p. 144e)

Wittgenstein's solution, thus, is to combine the two related uses of the word into a single meaning.¹² We may not, in the end, want to call understanding polysemous, but the possibility of combining related uses into a single meaning for polysemous words avoids the problems encountered by Nunberg's solution.

5. POLYSEMY RECONSIDERED

In this section, we will discuss briefly two aspects of polysemy, in the hopes of pointing the way to a more satisfactory treatment of the phenomenon than is presented by Nunberg. Our suggestions will be tentative and somewhat speculative in nature, both requiring further research.

5.1 Use and Meaning

As we have seen above, Nunberg gets into difficulty because he assumes that, given two related uses of a polysemous word, one of the uses must be chosen as the (basis for the) meaning of the word.¹³ In effect, this assumption can be stated as a slogan: one meaning per use, per word in the lexicon. In the case of polysemy, one of the uses must constitute a word's meaning and the other use must be derived in some way. But as we have also seen, Wittgenstein suggests the possibility that the relationship between meaning and use may be less-rigid than the slogan just given.

Following this suggestion, consider these possible relationships between words, meanings, and uses:

- A. 1 word--1 meaning--1 use (Univocality)
- B. 2 words--2 meanings--2 uses (Homonymy)
- C. 1 word--1 meaning--2 uses (Polysemy)

Nunberg concurs with the first two of these; our suggestion for polysemy--i.e., C--differs from his. In what sense is C different from B? It is not the case that B is simply two separate lexical entries, while C is one entry, but with the lexical information (the "meanings") split up somehow. Our contention is that the formal difference can be used to indicate a real difference in the relationship between uses. What makes polysemous words one word is just that the relationship of its uses is, in some sense, closer than that to be found in homonyms. This "closeness" is reflected in the lexical entries. Moreover, there seems to be a difference between someone who knows only one use of a polysemous word, and someone who knows only one use (and hence one meaning) of a homonym. The intimate connection between uses of polysemous words requires that the language-learner know both uses before he/she can be said

to know the meaning of the word. We can only hint at this difference here, but consider our intuitions about the difference between someone who saw only one interpretation for (6) as opposed to (7):

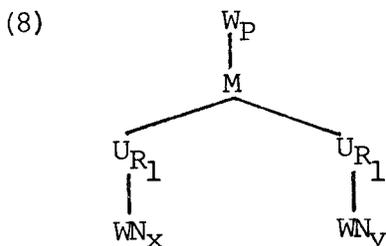
- (6) The chicken is ready to eat.
 (7) The bank is ready to collapse.

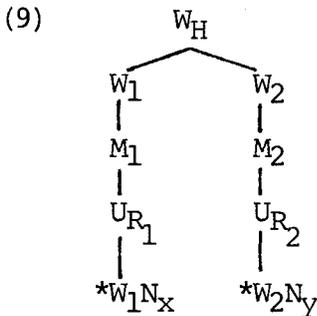
5.2 Modification Use

Aside from questions of knowledge, there may be another reason to posit a single meaning for polysemous words. If we confine ourselves to nouns, and ignore the type/token sort of polysemy suggested by Nunberg,¹⁴ there is some tentative evidence that there is an unexpected relationship between uses of polysemous words, as opposed to homonyms. The exact nature of this relationship would take much more extensive investigation of examples, but there is something peculiar about some of Nunberg's examples of polysemy. Consider the word window. Its two related referential uses may be individuated in the following way: use₁ = window pane; use₂ = window opening. Or, take newspaper, where use₁ = newspaper copy, and use₂ = newspaper company. This is certainly not the only way of specifying their uses, but it is a possible way. But now look at one of the homonyms, bank. Is there an equivalent way of specifying the two uses of this word? We can say, perhaps, that one use = bank company, but there is no such specification possible for the "side of a river" interpretation of the form: bank _____. So too with the homonym file: file ____ = dossier; file ____ = carpenter's tool?

These (sparse) facts suggest that it might be worth investigating the modificational uses of homonyms as opposed to the modificational uses of polysemous words. It may turn out that there are purely syntactic reasons for any differences along the lines suggested above.¹⁵ And it is true that even for Nunberg's examples there is not always this pattern--e.g., for chicken: use₁ = chicken meat, but use₂ = chicken ____? ¹⁶ However, we cannot think of a counter example on the homonym side--that is, a homonym (restricted to nouns) whose two meanings can be individuated via a modificational use of the homonym.

We therefore suggest that research along the following lines may be of some interest. Suppose that, for polysemous nouns, their related uses may be individuated by modificational use of that very polysemous noun; suppose, on the other hand, that, for homonymous nouns, this cannot be done. Schematically, in (8) and (9) below, we would start with the following assumption (where P = polysemous, H = Homonymous, U_R = Referential Use, N = Noun, M = Meaning, and W = Word):





This schematization is suggestive at best, and as we stated above, it is falsified by at least the word chicken. We can also see at least one modification that must be made for the polysemous words. There must be the option of specifying the uses, not only in the form $W_p N$, but also in the form N of W_p . For example, with game, we can specify one use as game activities, but the other use must be specified as rules of a game--game rules seems odd.

We do not know at this point what the results of such an investigation would be. Nevertheless, it seems clear that the phenomenon of polysemy is of considerable significance to an over all theory of use and meaning at the level of the individual word, and that, moreover, its role will be somewhat different than that proposed by Nunberg (1978, 1979).

FOOTNOTES

*I would like to thank the many people who took the time to read versions of this paper and offer their suggestions for improvement. Dick Oehrle originally brought Nunberg's work to my attention and has helped me sort through many of the issues raised by Nunberg. Adrian Akmajian, Dick Demers, R.M. Harnish, and Adrienne Lehrer have all discussed the paper at length with me. Robert Caldwell helped me come to an understanding of Wittgenstein's position on the matters discussed in this paper. Carol Larson offered her encouragement and support, as well as suggestions for improvement and clarification. My sincerest thanks to all of these people for their involvement. Opinions, incorrect interpretations, and mistakes are my own. Finally, I would like to thank Gloria Bernat.

¹The Bach and Harnish (1979) Speech Act Schema, for example, presupposes a level of linguistic meaning available to the hearer as he/she attempts to infer the illocutionary act being performed by the speaker. It is not at all obvious how such a theory would have to be modified if there were no such thing as knowledge of meaning.

²According to Nunberg (1978, p. 29):

Let us say that the hearer has been enabled to identify something when he can give a description that is true of it and false of everything else. In ostension, this requirement is satisfied when the hearer is made to know that the intended

referent stands uniquely in a certain relation to the demonstratum; i.e., that the intended referent is the value of a particular function on the demonstratum. We will call this function the referring function (RF) of a given use of a term, and say that an act of ostensive reference is successful just when the hearer can identify the referring function.

³If the Gricean principle were to rule the day completely, it is hard to see, on Nunberg's account, why anyone would ever refer to one thing by pointing to another (the only reason would seem to be the absence of the intended referent from the context). Even so, if the object were not immediately present, the most cooperative way of doing things would be to use the proper referential expression: the clearest way to refer to a newspaper company is, after all, by using the expression "newspaper company". Dick Oehrle (personal communication) suggests two possible reasons for deferred ostension: (1) if there were no proper linguistic expression for the intended referent, and (2) when some particular evocative effect was desired on the part of the speaker.

⁴In this case, it is probably not equally rational, or at least not equally likely in the language-learning situation. The copy use seems primary.

⁵See Nunberg (1978, Section 1.3) for discussion.

⁶Nunberg (1979) states that "we do not have to know what a word names to be able to say what it is being used to refer to" and then continues:

I do not think that this is exactly what Wittgenstein had in mind when he cautioned that we should look for the use, rather than the meaning, but his apothegm is apt.

(p. 177)

Nunberg (1978), which is the dissertation that serves as a basis for the later work contains the following statement:

Many of the arguments that follow are either paralleled or directly influenced by arguments to be found in Quine and Wittgenstein, in particular, though I will talk about the former only briefly,... and about the latter not at all.

(pp. 4-5)

⁷Given Nunberg's reticence on the matter, it may be that his denial of knowledge of word meaning comes, in his mind, from Quine alone. At any rate, it is not Wittgenstein's position.

⁸The last paragraph of this passage is somewhat of an anomaly in Wittgenstein's later work. It seems to contradict his general claim that it is possible for individual empirical judgements to be beyond

doubt. Indeed, it contradicts the immediately preceding paragraphs in the passage quoted. Moreover, it contradicts what is found three paragraphs further on in On Certainty:

We say: if a child has mastered language--and hence its application--it must know the meaning of words. It must, for example, be able to attach the name of its colour to a white, black, red or blue object without the occurrence of any doubt.

And indeed no one misses doubt here; no one is surprised that we do not merely surmise the meaning of our words.

(Wittgenstein (1972), pp. 68-69e)

⁹A rather obvious and important difference is that Nunberg restricts the concept of use to "used to refer" throughout his work. Wittgenstein made no such restriction on the concept. For further discussion, see Larson (forthcoming).

¹⁰This is very clear in the Philosophical Grammar (1978), where Wittgenstein writes:

Thus there is probably no single characteristic which is common to all the things we call games. But it can't be said either that "game" just has several independent meanings (rather like the word "bank").

(p. 75)

¹¹It might be thought that the uses of understanding as Wittgenstein discusses them are not referential uses, strictly speaking. There is no reason to suppose, however that such considerations would not also apply to the strictly referential cases.

¹²For more extensive discussion of this, and related, matters, see Larson (forthcoming).

¹³Fodor (1960) discusses the question of related uses, and defines a Standard Use of a word as being the use which best explains other uses of the same word. There is thus a similarity between Nunberg and Fodor on this matter--and yet Fodor does not come to the conclusion that Nunberg does.

¹⁴It would seem that the type/token distinction, insofar as it can be made, should be a redundancy rule that applies over (part of) the lexicon.

¹⁵Adrienne Lehrer (personal communication) suggests that investigation along the lines of Lees (1960, Ch. 4) may prove fruitful.

¹⁶Adrian Akmajian (personal communication) suggests that the way polysemous nouns may be used in non-definitional modificational combinations may also yield interesting results. For example, "newspaper boy" normally refers only to some one who sells newspaper copies, whereas "newspaper man" normally refers only to someone who works for a newspaper company.

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