Unnatural Kinds*

Eric McCready

September 26, 2007

1 Introduction

Paradigmatically, natural language semanticists are concerned with the semantics of natural languages and logicians are concerned with the semantics of artificial languages. In the last few years, however, there has been substantial discussion within linguistics of the semantics of certain, seemingly artificial, operators and how they interact with natural language itself. I refer to the discussion of things like scare quotes and so-called 'mixed quotation' (see e.g. Predelli 2002; Potts 2007; Cappelen and Lepore 1997, i.a.), and the semantic contribution of appositive-introducing commas (Potts, 2005). In this note I want to focus on another artificial object that has substantial impact on natural language semantics, but lacks any of the intonational features associated with the above-mentioned operators. The object I have in mind is this one: '$^{\text{TM}}$', the trademark symbol.

Let me give first an example to show the efficacy of this operator. Some years ago I was looking at the menu of a fast food restaurant that shall remain nameless. The menu said that all hamburgers there were made from '100% All Natural Australian Beef$^{\text{TM}}$'. There was an asterix next to this line of text. The small print at the bottom of the menu stated that 100% All Natural Australian Beef$^{\text{TM}}$ was composed of no less than 90% Australian beef. It was not stated what the remainder was.

The above makes it clear that the following inference does not go through.

(1) $\dfrac{\text{This hamburger is made from 100\% All Natural Australian Beef}^{\text{TM}}.}{\therefore \text{ This hamburger is made from 100\% natural Australian beef.}}$

Is $^{\text{TM}}$ then an intensional operator? Or should we understand this as something like a quotation? These do seem to be the obvious options. But I think the situation is even more dire than that from the perspective of a consumer, and also more extreme from the perspective of a semanticist. What the $^{\text{TM}}$ operator allows us to do is simply to create new *kinds* of things. Consider the

*Thanks to Emar Maier, Christopher Potts, Katsuhiko Yabushita, and (indirectly) Corien Bary.

syntactic use of elements in the scope of $^{\text{TM}}$. They appear in just the places that nominals do. We find them appearing both as full DPs, as in (2), and as complements of determiners, as in (3).

(2) a. I like Cheetos$^{\text{TM}}$.

b. This hamburger is made from 100% All Natural Australian Beef$^{\text{TM}}$.

(3) a. I bought a new iBook$^{\text{TM}}$.

b. Every Lexus$^{\text{TM}}$ is a good car.

Notice that, in most of the examples above, it is probably more common to use the $^{\text{TM}}$-marked terms appear without the $^{\text{TM}}$ symbol. There are two reasons for this. The first is that capitalization is another way to indicate trademarking, and so it is enough just to capitalize the terms without explicit use of the symbol. The second is that none of the trademarked terms above have any meaning independent of the meaning assigned them in the trademarking process except for that in (2b). It thus seems rather dishonest to leave the $^{\text{TM}}$ off in that case, because an ambiguity is introduced that turns out to be spurious. But in the others $^{\text{TM}}$ can be filled in by the hearer, since no unclarity arises.

I claimed above that trademarking allows us to create new *kinds*. Here is why. Recall some basic characterizations of kind-denoting NPs (Carlson, 1980). They allow exceptions: (4), which is true despite the existence of penguins and emus. They always take narrow scope: (5a), where John cannot have any particular bird in mind, as opposed to the indefinite term-including (5b), where he can.

(4) Birds fly.

(5) a. John is looking for birds.

b. John is looking for a bird.

What we might call *trademarked terms* behave in exactly the same way. (6) is true even if some Kleenex is frozen solid, or extremely old and brittle. (7) has no *de re* reading for the object; for John, any Kleenex would be fine. I shift my discussion here away from fast food to make the examples less cumbersome. I also omit the copyright sign here as the kind term has already entered the language (to anticipate the discussion below somewhat).

(6) Kleenex is soft.

(7) John is looking for Kleenex.

So by these tests trademarked terms seem to denote kinds.

Still, we have seen that these terms can appear as complements of D. Can they really be kinds then? After all, terms with the semantics of kinds are usually taken to be realized as bare plurals in English. The answer is: yes, with the help of type-shifting operations of the kind already worked out by Chierchia (1998) and others. When they appear as D-complements, they are type-shifted

to a predicative (property) denotation. Still, it seems plain enough that, say, iBook is in fact a new kind: a subtype of computer or laptop or the like. The case is even plainer with trademarked terms that have the morphological realization of mass terms, like *Kleenex*, *Coke*, or the original example, *100% All Natural Australian Beef*$^{\text{TM}}$. It is obvious that these are new kinds. But they are, equally obviously, not natural kinds: they just aren't natural. I will dub them and their more N-like siblings *unnatural kinds*.

How should such terms be analyzed? I see two options. The first is primarily semantic. The second is primarily pragmatic. As I will show, I think the second one is right.

Let's first explore the semantic option. According to it, $^{\text{TM}}$ denotes an operator and one that depends on intentions, for the kind it yields depends on the vagaries of the trademarking process. The question now is what sort of operator it is. The first thing to note is that it admits arguments of any type and syntactic category in principle. Copyright law, which disallows certain too-obvious namings like Potato Chips$^{\text{TM}}$ for a brand of potato chip, introduces some restrictions, but these are purely artificial. We might therefore conclude that $^{\text{TM}}$ should be understood as having a polymorphic type: a function from terms of any type to kind terms. But I think this cannot be right.

Consider the examples immediately above involving the term 'Kleenex$^{\text{TM}}$'. What is the type of this term? This is open to debate: I believe it is a kind, as I have indicated. But it is a kind term only as the result of the application of $^{\text{TM}}$. Before it was trademarked, the term *Kleenex*, in a sense, did not even have a semantic type! It was not even in the language. This phenomenon is quite general. It is easy to find trademarked terms that have no meaning independent of that bestowed on them by the trademarking process. A few examples: Cheetos, Acura, iBook, Walkman. *None* of these terms had any meaning before the application of $^{\text{TM}}$. This means that we cannot take $^{\text{TM}}$ to have a polymorphic type, for the objects it applies to, in many cases, have no semantic content, and thus no semantically determined type at all.

Well, what is it then? If we take the semantic route, we must analyze it as something very strange: a function from *tokens* to kinds: not a function from semantic objects of one sort to semantic objects of another, but a function from words, as such, to semantic objects. To this extent it resembles direct quotation. Indeed, constructions like this exhibit one property of quotations that has been extensively discussed: $^{\text{TM}}$ takes (sequences of) words and treats them as (what amount to) singular terms. They differ from quotation in that $^{\text{TM}}$ is not sensitive to the meaning of its constituent parts in any sense; this content is simply no longer available. As we have already seen, saying that something is 100% Beef$^{\text{TM}}$ does not imply that it is actually 100% beef, or that it is beef at all, or even meat (assuming we don't know the definition of the newly formed kind term). No content is carried over from the constituent parts. This means that we cannot find anything analogous to indirect quotation for the domain of kinds produced by $^{\text{TM}}$; nor, I suspect, could there be anything like mixed quotation. The lesson is that, while direct quotation involves utterance-tokens, these utterance-tokens are still, in a sense, semantically transparent;

but in the case of $^{\text{TM}}$ kind formation, the word-tokens from which kinds are made are completely opaque. We might say that all cases where $^{\text{TM}}$ applies are non-cumulative in the sense of Recanati (2001).

Here an objection raises its head. Consider the analysis of mixed quotation of Geurts and Maier (2005). They wish to account for cases like the following. Suppose that you meet a 4-year-old in the park and ask her what her father does for a living. She responds: 'He is a philtosopher.' You report this information to your friend using a mixed quotation: 'Her father is a "philtosopher".' Geurts and Maier take this use of 'philtosopher' to simultaneously mention the (non-) word and use it. But how can it be used? It isn't even in the language. This, notice, is precisely the problem with something like 'Cheetos' that has caused me to claim that it has no semantic content. But Geurts and Maier analyze 'philtosopher' as something like 'the property that x denotes with 'philtosopher'' (x some contextually determined individual), meaning, clearly, 'philosopher.' So why couldn't this strategy be used for the trademarking cases?

The reason is simple. In the 'philtosopher' case, there was some way to resolve the property that x meant to use: the young girl in the park meant 'philosopher,' but pronounced it wrong, and this was clear to her interlocutor. But this kind of reasoning doesn't carry over to something like 'Cheeto.' This string simply had no extension at all before it was trademarked. It was neither a word of English nor close enough to some English word for it to be obvious what was meant by it. This is analogous to the young girl in the park saying 'He is a xpilogyaphy.' Surely we cannot recover anything sensible from this (and if our analysis allows us to, I submit that something has gone wrong). I take this to indicate that the Geurts-Maier analysis cannot carry over to these cases.

The upshot is that we must take $^{\text{TM}}$ to be a function from *objects* to kind terms. These objects must be phonological strings—words, or potential words—which we can take to be special objects of type e. (We could also have them of type u, the type of utterances, as in Potts (2007). I think this makes no difference for present purposes.) Thus the type of $^{\text{TM}}$ will be $e \rightarrow k$, k the type of kinds. A preliminary lexical entry:

(8) $||^{\text{TM}}|| = \lambda x_e.y_k$, where $||^{\text{TM}}||$ is undefined if x is not a phonological string

Thus $^{\text{TM}}$ denotes a partial function. Exactly what the output y_k will be is dependent on what the string is defined to mean by the individuals who register the trademark. The semantics of $^{\text{TM}}$ is therefore partly dependent on social institutions and not purely linguistic in nature. But, as we have seen, its *effects* are, absolutely, linguistic.

The semantic analysis seems to get things right. But I think it is conceptually on the wrong track. Notice that the function $^{\text{TM}}$ is supposed to denote crucially depends on actions external to the composition. What Cheeto denotes is determined completely by what the trademarker of 'Cheeto' registers it to mean, just as what individual 'Maximillian' denotes is determined completely by who the name is applied to in the process of baptism (or registration at City Hall). This, I think, indicates that $^{\text{TM}}$ is secondary. It marks that the term

got its meaning via this artificial means, but does not grant it a meaning itself. Capitalization is the same. Both indicate the existence of a process of bestowing an extension, but the process itself comes from social institutions, and is not primarily linguistic in nature, though it does have a linguistic reflex and semantic effects, as shown above. The restrictions on new trademarks—that they must not be misleading—are then societal in nature, and not primarily semantic, with an important exception that will be discussed momentarily.

These facts are perhaps surprising for several reasons (assuming that I am correct in my analysis). A first point of interest is that we are here dealing with a kind of name assignment or baptism. Such processes are well known to apply to individuals such as babies or boats, i.e. objects which can be picked out by a straightforward process of reference, but not to 'kind individuals' that are less easy to point to. We often talk of names of natural kinds, but in this instance we find an actual naming process for them. This has potential repercussions for how theories of natural kinds, and theories of naming, should go. A second point involves restrictions on naming. With names of individuals, there is no difficulty in assigning the same name to two different individuals: I can easily name my newborn son Ezekiel no matter how many other Ezekiels are known to exist around me. But such is not the case with trademarks, as already mentioned: the existence of an existing kind term, whether a natural kind ('Potato Chips') or an unnatural kind ('Ruffles') disallows assigning the same name to a new kind (of, in this case, potato chip). This fact has consequences for how the theory of natural kinds should look: at minimum, each kind should have a single name, and each name pick out a single kind; that is, the name-kind mapping should be one-one.

Two further things of interest can be said about the facts discussed. The first is purely linguistic. It is a commonplace that trademarked terms of products can widen to denote a more general kind that the product exemplifies. One example, 'Kleenex', has already been mentioned; this term now refers, for most speakers of American English, to the kind 'facial tissues.' Another example is 'Coke,' which, for speakers of some American dialects, now refers to the more general kind 'carbonated (sweet) drinks.' The present analysis makes this kind of reanalysis seem natural: since trademarked terms already denote kinds, it is not hard to see why their meaning is able to widen along this dimension. It is also interesting to note that this sort of process never seems to apply to terms like 100% All Natural Beef$^{\text{TM}}$ that already have extensions before the 'renaming' marked by $^{\text{TM}}$; this, of course, is simply because of a kind of blocking effect.

The second is more general. There seem to me to be two points of interest in the facts discussed from a theoretical perspective. First, it shows that the distinction between natural language semantics and the semantics of artificial languages is perhaps not as clear-cut as it may seem to practicioners of linguistic semantics or logicians. This is hardly a new observation: the insight that natural language is amenable to the same sort of analysis as formal languages goes back to Montague (1974), the initial point of formal semantic studies. But the facts pointed out here show that natural language contains objects which, while completely artificial in nature and lacking linguistic content beyond marking

a certain way of entering the language, still have impact in the meaning of the language itself, both in blocking certain inferences and in making certain historical developments available. Second, it seems possible that the study of operators like $^{\text{TM}}$ could provide insight into puzzles involving the distinction between types and tokens, like that of quotation, that have worried philosophers for some time now, and linguists in recent years.

References

Cappelen, Herman and Ernest Lepore. 1997. Varieties of quotation. *Mind* 106:429–50.

Carlson, Gregory. 1980. *Reference to Kinds in English*. New York: Garland.

Chierchia, Gennaro. 1998. Reference to kinds across language. *Natural Language Semantics* 6:339–405.

Geurts, Bart and Emar Maier. 2005. Quotation in context. *Belgian Journal of Linguistics* 17(1):109–128.

Montague, R. 1974. The proper treatment of quantification in ordinary English. In R. H. Thomason, ed., *Formal Philosophy: Selected papers of Richard Montague*, pages 188–221. New Haven, CO: Yale University Press. Originally published in *Approaches to Natural Language*, 1973.

Potts, Christopher. 2005. *The Logic of Conventional Implicatures*. Oxford University Press. Revised version of 2003 UCSC dissertation.

Potts, Christopher. 2007. The dimensions of quotation. In C. Barker and P. Jacobson, eds., *Direct Compositionality*, pages 405–431. Oxford.

Predelli, Stefano. 2002. Scare quotes and other semantic issues. *Linguistics and Philosophy* 26(1):1–28.

Recanati, Francois. 2001. Open quotation. *Mind* 110:637–687.