

"Mismatches" of Form and Interpretation

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Note:

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The theme of this conference, expressed as "semantics meets acquisition," has an amusing ring to it as it harkens back to B movie titles such as "Wolfman meets Frankenstein." This latent reference to movie monsters turns out to be apt, in a certain sense, as when I think about the twin issues of acquisition and semantics, and how to put them together, it does seem a monstrously hard problem indeed. Were this presented to me as an abstract problem in a form that I didn't recognize as really about learning and meaning, I'm sure I would throw up my hands and soon declare the problem insoluble. But this of course would be a misjudgment, as it is contradicted by the simple daily facts of the world.

In this talk I wish to take a fairly superficial, perhaps even ignorant or naive, perspective on matters of meaning and learning. I am going to assume that language learners have, at best, access to knowledge of surfacy kinds of linguistic information, and some knowledge of context, and present in overview style some of the challenges learners might face in trying to construct a consistent form-to-meaning mapping. One way to begin thinking about the issue is "from the top", so to speak. The experience of extracting information from natural language utterances is a global one—the experience is that of understanding something you didn't before the utterance event occurred, and that's about it. This does not distinguish for instance among presuppositions, conveyed meanings, implicatures, literal, or metaphorical meanings, nor any other information derived from the utterance, e.g. location, gender, emotional state of the speaker, etc, etc.. Some take this intuition about the unity of our experience at face value—I regard this to be the underpinnings of "holism of meaning", but I and many others believe that messages extracted from natural language are susceptible to analysis, and upon analysis it becomes clear that meaning *in toto* is composed of a variety of distinguishable factors. Let me draw a parallel: upon hearing a single word, say, the English word "cats" one has the experience of hearing a noise and pairing it with a certain type of animal, very roughly. And that's about it. There is nothing, I believe, in this experience that comes identified as also experiencing "a word", "two morphemes", "a stem", a feature [-sonorant], "Noun", and so on and so forth. Yet, upon analysis it becomes clear that this experience is somehow informed by a constellation of such factors, that all these factors or factors like them contribute their part to the whole. I take it that the experience of meaning is likewise amenable to such analysis, and when one considers the factors it becomes

clear that "meaning experienced" in its broadest sense results from a combination of similar factors, factors that do not wear their rank on their sleeves but which become apparent upon consideration through the lens of theory. When we talk about "semantics", we intend a certain component of meaning, that component which is in some sense referentially based and which is connected most intimately with the syntax of natural language: I'm going to code this as "the truth-conditional" aspect of meaning, a phrase I use here for convenience rather than in its fullest theoretical sense. This is the aspect of meaning which, I believe, is absent from otherwise meaningful objects and events, such as the dark colors in a painting, the rattling sound in my car, music, and, apparently (though I want to be a bit careful here), animal communication systems. However, language clearly conveys meaning in ways in common with such things, as well. Consider a point emphasized in Grice's work on conversational implicatures. He takes pains to point out that these implicatures apply to actions in general, not just the linguistic actions of executing utterances. So, for instance, one can congratulate someone by patting them on the back or shaking their hand, or one can do it linguistically by saying something like "Way to go there, Bob" or by using the stodgy performative utterance "I hereby congratulate you on your success." Meanings of actions then, including linguistic actions, contribute one component to the meaning of the whole. Another type of meaning that is not commonly discussed in truth-conditional approaches is that of connotative meaning, associated with words. To learn a language is to learn, in part, facts like "butt" is a cruder way of making reference to certain body parts than "hind end," and that "derriere" is almost affectedly silly, in most contexts, despite common reference. Such social/emotional meaning is omnipresent in language, and seems most highlighted in poetry, song lyrics, and corporate presentations, but is a type of meaning clearly present in nonlinguistic artistic objects and events as well. Background cultural knowledge also informs meaning. For instance it is not a good idea in English to wish someone a refreshing night's sleep by saying "Rest in peace" as this is a formulaic phrase that used to appear routinely on gravestones. Or, in Norwegian one should not literally thank someone for everything (as one can in English), as the literal translation is a phrase found commonly in obituaries.

My purpose here is not to enumerate or catalog the variety of meanings that the use of natural language gives rise to. Rather it is to make the point that when we begin to talk about the semantics of a quantifier or the scope of tense marking, and how they might be acquired, we are already a long ways from the starting gate in considering the general issue of meaning and language. Meaning comes at us—and people learning a language—from a variety of different directions, at a large numbers of levels, and only one among them is the subject of the kinds of semantic theories I and many others are used to working with. And, apparently, it is a component of overall meaning learners must identify.

Even restricting consideration to this semantic aspect of meaning the difficulty of the problem of learning hardly abates. Obviously, perhaps most obviously, one must learn the meanings of the words of the language (or, a significant subset of them, at any rate), and there are many terrifically interesting learning issues that have been explored within this domain, at least in the area of learning meanings of

"Et" appeared, from a semantic point of view, right where it is supposed to be between the elements conjoined, like most conjunctions we're used to seeing. The enclitic "-que", on the other hand, appeared attached to the end of the first word of the phrase conjoined. Thus in (1) "-que" appears after the first word but signals that the whole phrase is a conjoined element, and not just the word "two":

1. ... duasque ibi legiones conscribit
"...and there he enrolled two legions"

In a slight wrinkle probably driven by prosodic considerations, it appeared attached to the second word if the first was a monosyllabic preposition:

2. ob easque res
"...and because of these things"

If one treats -que as having the meaning of a conjunction, and compositionally combines it with whatever it is combining with on the surface syntax, one would not be able to get these meanings. Instead, one must in some sense raise it up to a higher position in the tree structure, and put it in its rightful place. (This is a lot like QR, of course, with the notable difference that in the case of -que one does not wish to leave a variable behind.) Of course in such examples -que is not in any wrong place to put it elsewhere would be wrong because the grammar says it's to be put where it is. But from a compositional semantic point of view, one needs to do some rearranging that one does not have to do with "et," "and," "und," etc.

I'm not raising this as a curiosity, a funny little fact to note and tuck away. The position of -que is of course a Wackernagel position phenomenon, one so common it has a name like that, and it is possible to produce many more similar examples. But the semantic phenomenon of having to "rearrange" elements extends well beyond Wackernagel position particles. Consider how common it is to treat tense, for instance, as both syntactically and semantically a higher-level operator, and for good reason. A very common type of example from English VP deletion will illustrate this point—the deleted VP in (3) does not carry the tense information of the antecedent VP, even though tense is expressed as an inflection on the verb:

3. John wrote a paper because he had to (*wrote a paper).

Or, it appears plurality must be dissociated from the noun it appears attached to, by similar evidence:

4. John has two dogs and Fred has one (*dogs).

It would be quite easy to extend this listing to include a lot of other inflectional categories, as is commonly done in the work on semantics and in syntax both. But let me move on, noting that it is probably extraordinarily common to have functional, including inflectional, elements not, in some sense, in their proper

place. Is this something we're born knowing already? That would help, it seems, but how can one tell?

Coalescence phenomena between adjacent functional elements is extraordinarily common—it is the classic definition as to what is meant by an "inflectional

6. "house" ro o e p "their house"

French "ne...pas" would be a possible candidate for a more familiar example. But far more commonly this is found in agreement or concord forms: an agreeing plural article, two plural adjectives, and a plural noun add up to simply one plurality, not four. A definite article combined with the definite form of a noun, still add up to one definite. Multiple negations, as given in the Old English example in (7), add up to a one single negative:

7. Ac he ne sealde nanum nytene ne nanum fisce nane sawle.
and he NEG gave NEG beasts NEG NEG fish NEG souls
"And he did not give beasts or fish souls"

Such examples are so familiar we might easily overlook the language learning problem: if we build a signal-detector that generates an associated meaning upon encounter with a certain type of form, we're going to get extra meanings all over the place which are not parts of the actual interpretation as best we can determine it. Note that the strategy of treating certain forms as meaningless, and localizing the meaning to just one of the forms, may work in some instances but not generally. Let's take a really simple example, the English phrase "These houses". Two plurals, so let's treat the one on the noun as "real". The problem is "These have wooden doors" has a plural subject, semantically and in all other respects, and so does "Houses have wooden doors".

It also appears on occasion that sounds are not paired with meanings. We are all used to work on expletives, so I'll draw on examples from another domain, that of Classical Latin semi-deponent verbs. Latin had a productive inflectional passive marker that normally signaled passivization (i.e. the subject is semantically the direct object), but in many semideponents while the present tenses were formed from the usual active paradigms, the perfect forms required the passive morphology, but without a corresponding effect on passive meaning. Here's a textbook example in (8):

8. audeo "I dare" ausum sum "I dared" (not, "I was dared")

Or, consider the habitual markers that appear in contrafactuals in some languages. In (9) is an example from Hindi due to Bhatt (1997):

9. a. ??Meera do baje bhaashaN de rahii ho-tii (hai)
M 2 o'clock speech give prog be-HAB (Pres)
b. agar Meera kal do baje bhaashaN de rahii ho-tii...
if M yesterday 2 o'clock speech give prog be-HAB
"if Meera had been giving a speech yesterday at 2:00..."

Here, there is no discernible semantic contribution of the HAB marker in (9b), while in (9a) its presence makes the point-time adverbial sound strange (as

bought apples at the store" + "I bought some apples...". But in other contexts the contribution would have to be different: "Apples contain vitamin C" does not mean "Some apples contain vitamin C", but something a lot more like all, or most apples.

What's emerged in the past fifteen years or so is a kind of consensus that one should not look to the empty determiner position, if there is one, as a kind of ambiguous quantifier to give a proper account. Rather, the quantificational force is gotten from other elements of meaning in the sentence that the noun phrase combines with; treating them as indefinites within a DRT framework is one way of expressing this view. Some people posit null determiner positions in such noun phrases, other don't. But no one, to my knowledge, is currently wrestling with the question of trying to systematically accord it some lexical contents.

One type of fact that militates, in a general way, against the view that quantificational force should be localized in a null determiner, is the phenomenon of scopelessness. On the existential reading, and on the more general reading as well, these noun phrases do not interact scopally with other sentential elements, such as negation or other quantifiers, to produce the characteristic scopal ambiguities (Here, I'm setting aside a few widely-known exceptions). One could equally well represent these facts with a null determiner, or no determiner at all, at least at this level.

Now one somewhat unfortunate side effect of this line of work has been to pass

They may not be modified (unlike bare plurals):

13. a. They sent him to *(big) jail.
b. I watched it on television *(that had a 31" screen)

However, in conjunct cases and a couple others, the lexical restrictions are eliminated or reduced:

14. a. University and highschool alike require much study.
b. Neither television nor radio have become educational tools.

Impressionistically, these structures appear to share many of the positional

It seems many noun phrases with definite articles work this way in English, but