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Conceptual semantics and natural semantic metalanguage theory have different goals

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My interview with Istvan Kecskes, “On Conceptual Semantics (OCS),” offers some brief remarks on the relation of my approach to Anna Wierzbicka’s theory of semantic primitives, Natural Language Metalanguage Theory (NSM). Wierzbicka’s response, “Theory and Empirical Findings: A Response to Jackendoff” (henceforth TEF) calls for some further commentary.

My remarks began, “Although I think Wierzbicka has offered many insightful discussions of word meaning, I do not think that her approach ultimately responds to the goals of Conceptual Semantics.” TEF makes it clear that Conceptual Semantics does not respond to the goals of NSM either. That is, the two theories, although they overlap on some issues of word meaning, are ultimately asking different questions and setting different standards for answers.

Conceptual Semantics is concerned not only with encoding word meanings but also with accounting for (a) the combination of word meanings into phrase and sentence meanings, (b) the character of inference, both logical and heuristic, and (c) the relation of linguistic meaning to nonlinguistic understanding of the world, including the aspects of understanding provided through the perceptual systems. Conceptual Semantics in turn is embedded in a theory of the organization of language, the Parallel Architecture (Jackendoff 2002, Culicover and Jackendoff 2005), which addresses the relation of semantics to syntax, phonology, and the lexicon. This approach also leads to closer ties between grammatical theory and theories of language processing, language acquisition, and evolution of the language capacity.

TEF confirms my impression that NSM does not share all of these goals. In a note, it makes reference to works of Wierzbicka’s in which NSM has been applied to some issues in primate cognition (of which I was indeed unaware). But TEF is silent on semantic compositionality, on the relation of semantics to syntax, on inference, on language acquisition, and on language processing. Perhaps these are goals

1 of NSM, but I don't see them in the work I am familiar with in this
2 tradition.

3 I have no objection to "thick" crosslinguistic description of word
4 meanings in the style of NSM. Indeed, I think that work "very close to
5 the linguistic ground" is an important part of the linguistic enterprise; it
6 is far from "small potatoes" or "harmless activity down in the weeds." It
7 is just that there are other considerations to which I wish to speak as well;
8 these require lifting one's gaze at least part of the time. Every researcher
9 necessarily strikes a compromise in investing his or her efforts, but there is
10 no reason for everyone to make the same decision.

11 TEF raises three points of disagreement with OCS and Conceptual Se-
12 mantics to which I wish to respond. The first concerns the relation of
13 semantics to syntactic behavior. OCS argued that the semantic features
14 relevant to syntax are quite sparse: "Whatever their semantic differences,
15 dog and armadillo look identical in syntax, as do red and blue, as do five
16 and nineteen, as do jog and sprint." TEF takes exception with these ex-
17 amples, citing putative counterexamples. I apologize in advance for hav-
18 ing to discuss them in detail.

- 19
- 20 1. Three of the objections concern morphosyntax, rather than phrasal
21 syntax. First, *doggie* is good but **armadillo-ie* is not. This seems to
22 me just an unprincipled lexical fact of morphology, having nothing
23 to do with the meanings of *dog* and *armadillo* (though, as in
24 **donkey-ie*, it might have something to do with the phonology of *ar-*
25 *madillo*). What could it have to do with their meanings? What do *dog*
26 and *horse* have in common semantically that *cat*, *cow*, and *armadillo*
27 do not? Certainly, in terms of potential phrasal modifiers and poten-
28 tial positions in a sentence, all of these are freely interchangeable.
29 This is the sense in which I meant they are syntactically identical; in
30 contrast, the adjectives *likely* and *probable* are not, despite their sim-
31 ilarity in meaning (*John is likely/*probable to leave*).
 - 32 2. The formation of inchoative verbs from adjectives is also idiosyn-
33 cratic morphosyntax in English: we have *redden*, *blacken*, and *yel-*
34 *low(*en)* but not *bluen* and *greenen*. Again, this has nothing to do
35 with the meanings of these words per se—they are all primary color
36 words. And in terms of syntactic (as opposed to morphological) priv-
37 ileges of occurrence, *red* and *blue* are interchangeable.
 - 38 3. The use of numbers in compounds, such as *nineteen-thirties* referring
39 to a decade, is probably semiproductive morphosyntax as well. On
40 the other hand, I suspect that historians of the Dark Ages would
41 have no problem talking about, say, the religious conflicts of the
42 530s.

- 1 4. The fourth putative counterexample concerns sprint and jog. Both
2 she was jogging for two hours and she was sprinting for two hours
3 are syntactically well-formed, and the latter is not semantically odd,
4 as Wierzbicka claims. However, it probably implies repeated sprints,
5 parallel to she was jumping for two hours: it is interpreted with the
6 help of aspectual coercion, a productive principle of interpretation
7 (Jackendoff 2002, section 12.2). If he was jogging on the spot is
8 good and he was sprinting on the spot is odd (and I'm not sure I
9 share the judgments), this is for semantic, not syntactic reasons; simi-
10 larly for go for a jog vs. go for a sprint. And there is no problem be-
11 yond pragmatic plausibility for we saw two sprinters on the road,
12 which Wierzbicka unaccountably claims is odd (they may or may
13 not have been sprinting at the time we saw them).

14
15 It is only by failing to distinguish syntactic well-formedness from mor-
16 phosyntactic idiosyncrasy, semantic well-formedness, and pragmatic plau-
17 sibility that these examples can be considered problematic to the state-
18 ment in OCS quoted above. In short, one can get so “close to the
19 linguistic ground” that one loses sight of important theoretical distinc-
20 tions. If these objections are representative of the standards for gramma-
21 ticality in NSM, then we are indeed in serious disagreement.

22 A second criticism takes up the bulk of TEF: the treatment of rights in
23 Jackendoff (1999, 2007). This is intended to impugn the notion that Con-
24 ceptual Semantics genuinely deals with semantic universals. Because I use
25 the English word “right” in my exposition, TEF incorrectly assumes that
26 the analysis is about the meaning of this word, and takes it to be a defect
27 in the analysis that this word does not occur universally across languages.
28 Part of the “proof” that it does not is that figures of speech involving
29 “right” in English do not translate into other languages. As with the ex-
30 amples above, I disagree with this step in the argument: it is as if blue
31 would necessarily mean something different if there were a word bluen.

32 As I (try to) make clear early in the exposition of Jackendoff 1999, the
33 sense of rights I am concerned with in fact does not entirely mirror the
34 English word. In particular I set aside things that are now called “human
35 rights,” which are the main focus in the political theory of rights. My
36 analysis concerns rather more mundane sorts of rights such as those in-
37 volved in possession (one has the right to use this object as one wishes,
38 within parameters, and the right to give it away), agreements and con-
39 tracts (one has the right to demand that the other person fulfill his/her
40 side of the deal), authority (one has the right to impose demands on
41 others), and marriage (one has the right to engage in sexual relations
42 with this person). My own reading of the anthropological literature (e.g.,

1 Brown 1991; Eibl-Eibesfeldt 1989) suggests that these issues occur in every
2 society.

3 Cultures differ in how these issues are realized, what the exact rights
4 are, and how they are enforced. These are differences that must be part
5 of a “thick” description. But the basic concept seems to be present univer-
6 sally, whether or not a particular language has a word for it. The central
7 principle is instantiated in a rule of inference along the lines: “If person X
8 has a right to do action Y, and person Z prevents X from doing Y, then
9 X acquires a right to impose sanctions on Z.” It is twinned with the fun-
10 damental rule of obligations: “If person X has an obligation to person Z
11 to do action Y, and X does not do Y, then Z acquires the right to impose
12 sanctions on X.” In turn, “X imposes sanctions on Z” can further be de-
13 constructed as “X does something of negative value to Z”, where “value”
14 in turn receives further explication (Jackendoff 2007).

15 Jackendoff (1999, 2007) notates these twin concepts as RT and OB, de-
16 liberately abstracting away from the English words. Wierzbicka objects
17 to this treatment and proposes to substitute her own primitive CAN. She
18 finesses the ambiguity of CAN (presumably the meaning of the English
19 modal can) by saying that it means “possibility” in the context CAN
20 HAPPEN but “ability” in the context CAN DO (note 1). Thus she takes
21 the meaning of CAN to be polysemous and context-sensitive. I find this
22 an odd characterization of a semantic prime, in that different inferences
23 obtain depending on which sense is chosen. More crucial to the present
24 point, neither of these senses properly captures the semantics of rights
25 sketched above. In order to distinguish these meanings, some further de-
26 ontic primitive is necessary regardless of what you call it.

27 Wierzbicka also objects to my question about the ontological status of
28 rights and obligations. She says “there is no mystery” here: the ontology
29 of rights and obligations is that “they are simply the meanings of English
30 words.” I fail to appreciate her point: by such reasoning, the ontology of
31 dog and nineteen is that they are the meanings of English words too. This
32 reduces the question to triviality. The issue that I’m addressing is that the
33 meaning of dog picks out a type of physical object, and the meaning of
34 nineteen picks out a number; so what sort of entity does the meaning of
35 obligation pick out? Jackendoff 1999 leaves it open; Jackendoff 2007 sug-
36 gests that it picks out a Situation.

37 This brings me to TEF’s final and most important objection to Concep-
38 tual Semantics: its visceral opposition to formalism, bolstered by quotes
39 from Ives Goddard and no less than Jonathan Swift. Wierzbicka seems
40 to think that the only alternative to definitions of words in terms of other
41 words is ostension—which obviously won’t work for rights and obliga-
42 tions, not to mention cheese and ale. The difficulty is that definitions in

1 terms of words alone don't work either. To be sure, many of the formal
2 expressions and inference rules of Conceptual Semantics can be recoded
3 in ordinary English, or presumably in NSM if the primitives of the meta-
4 language are rich enough. (Many of them can also be encoded in terms of
5 the diagrams of Cognitive Grammar, which in the end are just another
6 formalism.) But there are several reasons why definitions purely in terms
7 of words are inadequate.

8 First, in order to deal with combinatoriality, it is necessary to use de-
9 vices with the effect of typed variables (or slots), for example X, Y, and
10 Z in the inference rules for "right" and "obligation" above. Just about
11 everybody concerned with combinatoriality uses variables or the moral
12 equivalent. Natural language can approximate typed variables with pro-
13 nouns: "If someone has an obligation to someone else to do something,
14 then if the first person doesn't do that action, the second person . . ." etc.
15 But this relies on one's pragmatic understanding of the first person, the
16 second person, and that action. The typed variable notation makes the
17 multiple roles of the characters explicit, and it also makes clear where
18 the syntactic arguments of a word such as "right" are plugged into the se-
19 mantics to achieve combinatoriality.

20 A second reason for introducing formalism is that even within words,
21 there are meanings that cannot be expressed clearly in terms of combina-
22 tions of words (Jackendoff 2002: chapter 11). Among these are cluster
23 concepts, whose conditions are combined by a non-Boolean connective
24 (let's call it "smor") for which there is no natural language word. If a
25 concept C is characterized by [condition X "smor" condition Y], then
26 stereotypical instances of C satisfy conditions both X and Y, and more
27 marginal cases satisfy either X or Y. This connective is involved in the
28 analysis of Wittgenstein's famous example game, in the verbs "see" (Jack-
29 endoff 1983: chapter 8) and "climb" (Jackendoff 2002: chapter 11), in the
30 preposition "in" (Jackendoff 2002: chapter 11), and countless other cases.
31 It is also pervasive elsewhere in cognition, for example gestalt principles
32 of perceptual grouping (Wertheimer 1923; Jackendoff 1983: chapter 8)
33 and even music and phonetic perception (Lerdahl and Jackendoff 1983).
34 NSM-style definitions could spell out the effect of "smor" in ordinary
35 words, over and over again in each word where it applies, but it makes
36 more sense to recognize it as a conceptual connective in the same seman-
37 tic space as "and" or "but" with a different meaning that happens not to
38 be lexicalized.

39 Another situation where patterns of meaning cannot be expressed in
40 terms of ordinary words is when a particular semantic feature spans a
41 number of semantic fields. Conceptual Semantics grew out of the funda-
42 mental observations of Gruber (1965), who showed that the notions of

1 location, change, and causation extend over the semantic fields of space,
2 possession, and predication. Depending on the language, sometimes these
3 fields share vocabulary and sometimes they don't. Nevertheless, the se-
4 mantic generalizations ring true crosslinguistically. The best way to cap-
5 ture this crosscutting is by analyzing, for instance, motion and change as
6 a primitive function GO (alternating with BE and STAY) plus a "field
7 feature" that localizes it to a particular semantic field (space vs. posses-
8 sion vs. predication). Neither the function nor the field feature is lexical-
9 ized by itself: GO is not the meaning of go. They are more like features in
10 phonology, where for example voiced is not on its own a phonological
11 segment but, when combined with other features, serves to distinguish
12 one segment from another. Thus these meaning components cannot be
13 expressed as word-like primes.

14 An extension of this approach involves force-dynamic predicates
15 (Talmy 1988; Jackendoff 1990: chapter 7), where for instance "force,"
16 "entail," "be obligated," and the various senses of "must" share a fea-
17 ture, and "permit," "be consistent with," "have a right," and the various
18 senses of "may" share another value of the same feature. At the same
19 time, these predicates differ in whether they are in the semantic field of
20 physical force, social constraint, logical relation, or prediction—basically
21 the ways in which Wierzbicka's proposed prime CAN varies. To my
22 mind, the use of natural language words to encode these dimensions of
23 meaning obscures the systematicity of conceptual space, while a feature
24 system (à la Wierzbicka's hero Jakobson) brings it out clearly.

25 Another such case is the strong semantic parallel between the mass-
26 count distinction in material substances and the process-event distinction
27 in situations (Jackendoff 1991). There are few words that cut across these
28 domains that could serve in NSM-style definitions. One happens to be the
29 word "end," which can be applied to speeches, to periods of time, and to
30 tables of certain shapes (e.g. long ones but not circular ones). On my
31 analysis, "end" encodes a boundary of a one-dimensional entity of any
32 type—and because only certain table shapes can be construed as elabora-
33 tions of a one-dimensional skeleton, only these have ends. (Note that an
34 approach in terms of metaphor only restates the problem. Why do these
35 metaphors exist? Answer: Because conceptualization has this feature
36 structure.)

37 Jackendoff 1996 goes on to show how this system of features helps de-
38 termine the aspectuality of sentences; for example, why "John ran into
39 the room" is telic but "John ran toward the house" and "people ran into
40 the house" are atelic. Without a formal system to abstract out the rele-
41 vant features and coordinate them, such insights cannot be stated clearly.
42 There are no "elementary" or "primitive" words that help with this

1 characterization. And here the use of these features goes beyond word
2 meanings to how semantic properties of phrases and sentences are created
3 combinatorially.

4 A final issue, perhaps the most fundamental of all, concerns the status
5 of the semantic primes of NSM: what are they supposed to be? This issue
6 comes to a head in TEF's claim (note 4) that the primitives of NSM can
7 also be used to characterize primate thought. If these primes are words,
8 then it's unclear why gorillas can't learn to talk. If they aren't words, but
9 rather conceptual primitives, then they have the same theoretical status
10 as the primitive features and functions of Conceptual Semantics: they are
11 pieces of meaning, independent of linguistic expression, which in humans
12 come to be associated with phonology and syntax to form language. If
13 this is this case, the very same issue arises as in Conceptual Semantics:
14 what is the fundamental set of primitives needed to encode all possible
15 concepts (and not just those expressible as single words)? This is a ques-
16 tion where NSM and Conceptual Semantics look almost the same.

17 However, a semantic theorist should also be asking: what are the mech-
18 anisms available to combine these primitives into word and phrase mean-
19 ings? NSM seems to assume that these mechanisms are just the ones ex-
20 pressible by the combinations of words into sentences; but it offers no
21 account of the meanings of these combinatorial mechanisms. By contrast,
22 Conceptual Semantics thinks that the semantics associated with ordinary
23 language syntax (a) is not self-evident, (b) requires more rigorous expli-
24 cation, and (c) is not sufficient to describe the full range of conceptual
25 combination. The formalisms of "unification," "smor," "argument satis-
26 faction," "modification," and "lambda-abstraction" (Jackendoff 2002:
27 chapter 12) are developed in an effort to make these combinatorial pro-
28 cesses in lexical and phrasal semantics more explicit.

29 In the interests of addressing the whole range of issues mentioned here,
30 Conceptual Semantics has not concentrated on the depth of lexical cover-
31 age that is the great virtue of NSM. I don't think there is any reason not
32 to incorporate many of NSM's insights into Conceptual Semantics. How-
33 ever, Wierzbicka evidently feels the reverse is not the case. I find this a
34 shame: in trying to understand language and its relation to thought, we
35 need all the tools we can get.

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