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Semantic paralysis

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Abstract: I challenge Jackendoff's claim that semantics should not be paralyzed by a failure to solve Brentano's problem of intentionality. I argue that his account of semantics is in fact paralyzed because it fails to live up to his own standards of naturalization, has no account of falsity, and gives the wrong semantic objects for words and thoughts.

> *There is no reason to be paralyzed by the absence of a solution for intentionality . . .* (Jackendoff 2002, p. 280)

Of late, there are two big ideas at the extremes in cognitive science. One is that the mind itself, not just its referential content, extends beyond the head and into the environment (Clark & Chalmers 1998). The other is that not even the content of thoughts extends into the environment, for that requires solving the problem of intentionality – how thoughts come to be about things and mean things outside the head. Jackendoff defends this second idea in Chapters 9 and 10 of his recent book, *Foundations of Language: Brain, Meaning, Grammar, Evolution* (henceforth Jackendoff 2002). Elsewhere (Adams & Aizawa 2001), I have said why the first idea is a bad one. Here I'll say why the second idea is an unhappy one, as well.

Jackendoff accepts the following:

1. "People find sentences . . . meaningful because of something going on in their brains" (Jackendoff 2002, p. 268).

2. "There is no magic . . . we seek a thoroughly naturalistic explanation [of meaning] that ultimately can be embedded in our understanding of the physical world" (p. 268).

3. "[T]he basic problem [is to] situate the study of meaning in the study of the f-mind"[1] (p. 271).

4. Meaningful f-mental entities in cognition direct attention and make judgments on the world as perceived through the senses (p. 271).

5. Meaningful f-mental entities in cognitive processes connect linguistically conveyed messages with one's physical actions (p. 272).

Jackendoff also signals a departure from Jerry Fodor's views. Fodor (1990) wants syntactic items in the language of thought (LOT, Fodor's version of f-mind) to represent things – entities in the world. The meaningful entities, in this view, are meaningful *because* they represent things, are *about* things in the world. "Naturalized semantics" is all about how purely natural conditions and natural causes can make this happen (make things in the head mean or be about things outside the head). Finding a satisfactory account of the relations between the representing item and the represented is notoriously difficult. Jackendoff finds it so difficult ("one cannot make naturalistic sense of intentionality" [p. 300]) that he is ready to throw in the towel ("there is no physically realizable causal connections between concepts and objects" [p. 300]). He says:

> Fodor's problems arise from treating the combinatorial structures that constitute meanings/thoughts as symbols for something, representations of something, information about something. Instead, I am going to try to take them just as pure non-intentional structure . . . with

phonology and syntax. The problem will then be to reconstruct the intuitions that the notion of intentionality is supposed to account for. (p. 279)

Jackendoff thinks that one can simply push "the world" into the head as a conceptual structure or reconstruction, and dispense with the hard problem of naturalizing semantics in terms of causal relations to an external world (p. 303ff). He spends a good deal of Chapters 9 and 10 explaining why his *constructivist semantics* is not guilty of *solipsism.* Nevertheless, I think that he should leap at the chance for solipsism. After all, solipsists may wonder whether there is a world beyond their minds, but at least their terms have perfectly stable semantic contents. Their worry is largely epistemological ("How do I know there is more than just me?"), but the semantics of the terms in which they worry are perfectly ordinary meaningful terms. "Tree" means tree when they wonder whether there really are trees.

What would symbols in the conceptual semantics of Jackendoff mean? He says "A speaker (or thinker) S judges that a term or phrase in the f-mind refers to an entity E in the world conceptualized by S" (p. 304). He is proposing a mapping from terms in the f-mind to other objects in the f-mind E, where the first set of objects are the representational vehicles and the second set *are the meanings.* This way we don't have to worry about counterfactuals or causal chains or what information is: "in a conceptualist theory, reference is taken to be . . . dependent on a language user" (p. 304). Jackendoff retreats to the friendly confines of the head because this will somehow make semantics easier and because the conceptual structures inside the head "do exactly the things meaning is supposed to do" (p. 306). Language is meaningful because it connects to such conceptual structures. As per the numbered list above, we just have to construe "world" and "physical" as referring to conceptual structures of a mental model when we do the semantics of terms in the f-mind.

So why is this not going to work? I have space to state only a few reasons (but there are more). First, even for objects inside the head, Jackendoff has to give the naturalistic conditions under which one object represents another. He gives none. Second, what he does say violates his own principle (2) above. How can the origin of reference depend on a language user, unless there is already language with meaning to be used? It *would be magic* to invoke meaning in the explanation of the origin of a system of language use. Naturalized accounts of meaning must avoid magic.

Third, since everyone is familiar with Searle's (1980) example of the Chinese Room, through reference to it I can register my strongest complaints. Jackendoff admits that "On this picture our thoughts seem to be trapped in our own brains" (p. 305), but things are even worse – as if that weren't bad enough. There is no sense in calling what is trapped in the brain *thoughts.* At most there are structures, perhaps even information-bearing structures delivered by the senses. But there seems little reason to think these are more than semantically uninterpreted squiggles and squoggles (in Searle's terminology) that come in through the sensory oracles. They might as well be Chinese characters to non-Chinese speakers.

Here is an example: I see beer and say "beer, please" because I want a beer. Now in Jackendoff's view there is in the f-mind a syntactic object that I would call my symbol for beer. He can't call it that because it is not a symbol *for beer.* It is a symbol for a perceptual structure that may occur in me in the presence of beer (but also may not). There is no nomic semantic intentional relation between "beer" and beer in his picture. Normally we would say that it was because I wanted beer that I said "beer, please." It was because of the semantic content of my thought (there is beer here) that I intentionally tried to order beer. Thoughts do that. They cause things like behavior because of their contents and they derive their contents, at least in part, from their causal connections to their environments. And they can be falsely tokened – I could mistakenly have thought there was beer.

Now, how can any of these things constitutive of *thoughts* be

true of Jackendoff's conceptual structures? They can't. Take just the last case. If I apply "beer" to the structure conceptualized by me *now present in my head and that normally is tokened in the presence of beer* (but which can be tokened whether or not there is beer actually nearby), how could my thought be false? It can't. There is no mismatch with *my reality* and *no falsity according to me.* So it is not *thoughts* that are trapped in the brain, according to Jackendoff's picture. Thoughts really can *be false* (not just *conceived false,* whatever that comes to in his semantics [p. 329]).

Finally, at the end of the day one often wants a beer. In Jackendoff's proposal, what one actually wants is a beer percept or an as-perceived-beerly-by-me conceptual structure to be tokened. Not for me – I just want a beer.

NOTE
1. Editor's note: "f-mind" stands for "functional mind" (Cf. *Foundations,* p. 21).

On the role of frame-based knowledge in lexical representation

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Abstract: In this commentary I discuss the role of types of knowledge and conceptual structures in lexical representation, revealing the explanatory potential of frame-based knowledge. Although frame-based lexical semantics is not alien to the theoretical model outlined in Jackendoff's conceptual semantics, testing its relevance to the analysis of the lexical evidence presented in his book has been left out of consideration.

Through the years, Jackendoff's approach to describing lexical representation and characterizing the nature of lexical storage and retrieval has been strictly conceptualist. However, in *Foundations of Language* (Jackendoff 2002) he has not addressed several factors of the mental representation of lexical information extensively, and consequently, various important details have remained unexplained or have been overlooked. One of these concerns the relation between the linguistic (i.e., the "dictionary") versus the encyclopedic meaning of lexical items; that is, as Jackendoff refers to them in discussing the views of others, their semantic versus pragmatic potential (Jackendoff 2002, pp. 285–86). I would argue that in discussing this conceptual facet of lexical representation we are not strictly facing meaning. Rather, in my view, we are facing here various types of knowledge and their conceptually based role in lexical representation and the mapping of meaning. As outlined by Clark (1992; 1996) and by Andor (1985; 2003), however, the relation does not only hold between "dictionary" (i.e., lexical) and encyclopedic types of knowledge, but is manifold and can occur as a result of the interaction of multiple types of knowledge, including generic and private or socio-cognitively based communal and expert knowledge during communication. All of these types of knowledge contribute to the common ground shared by speakers of a linguistic community (Andor 1985; 2003; Clark 1992; 1996, p. 92–121). In *Foundations,* Jackendoff does not address in detail the complex issue of the relation between these types of knowledge based on empirical evidence. For instance, how exactly does encyclopedic knowledge, a body of stereotypically-based knowledge, serve as a source for lexically represented knowledge? Conversely, does the latter type of knowledge serve as a source for the saturation of lexical meaning embodied by the lexical items represented in a given language?

Nor is the issue of the role of frame-based, scenic and scriptal knowledge in lexical storage and retrieval, as well as in the representation of lexical and encyclopedic knowledge types, discussed, although Chapters 9, 10, and 11 abound in traces of this domain.

Jackendoff refers to difficulties in separating domains of encyclopedic and lexical semantics, for instance, in clarifying the difference between the lexical meanings of *murder* and *assassinate.* He argues that the "latter implies a political motive on the part of the agent" (Jackendoff 2002, p. 286), but fails to identify the real core of difference: These verbs belong to the lexical networks in the representation of different conceptual scenes and frames, and thus have different scripts of associated performance in their conceptual makeup.

This is an important issue to be taken into account in studying the criteria and borderlines of synonymy. Although words that are members of a given lexical field may fall into different types of synonym sets, some of them may be freely substitutable by another member of the same field and may even show the same patterns of syntactic alternations, and hence be identified as absolute synonyms; others in the same domain may be near or partial synonyms only (Cruse 2000, p. 156–60). Absolute synonymy is known to be quite rare. According to Jackendoff, items are synonymous in case they are mutually subordinate (1983, p. 104). But perhaps the most important issue concerning the set of criteria of synonymy has been overlooked by researchers of the field: Although lexical items belonging to a given lexical field may share similar denotational, categorical, subcategorization, and perhaps even selectional and relational features (i.e., argument structure), they may still reveal different grades of distance in prototypicality due to differences in their frame relatedness and the scriptal makeup of their background concepts. The higher the frame dominance, the greater the distance from the prototypical instance within the given lexical domain, and the looser the synonym relatedness to other members of the field.

This can be tested experimentally. For instance, within the domain of verbs of cutting, *mow, trim,* and *prune* are quite distant from *cut,* the prototypical member of the group, whereas *slice* is nearer. Concerning verbs of jumping, *bounce* is lower down in the gradience of prototypicality than are *spring* and *hop,* whereas *prance* and *dance* are even further away from the prototypical member *jump* in this lexical domain. Features of categories and their lexical representation in a certain domain occur as clusters, as pointed out by Jackendoff and others. However, an important property is overlooked: The more types and kinds of features are shared by members, the higher the rate of prototypicality manifested, but at the same time, a high coincidence of feature clusters results in a lower rate of frame dominance. In Jackendoff's view "the prototype is simply an instance that happens to maximally satisfy the cluster conditions" (2002, p. 356). I believe that the role of the prototype lexical concept in a lexical field is more marked: It is the item that provides the criteria of coherence within the lexical domain and sets boundary conditions on membership in its lexis.

Finally, let me briefly address Jackendoff's approach to the interesting issue of frame-based reference, the case of frame-based lexical items. In his conceptualist view, "reference is taken to be at its foundation dependent on a language user, . . . being in the *real* world is *not* a necessary condition" (2002, p. 304). Such is the case of *unicorns, dwarfs, trolls, goblins, chimera,* and so forth. All such entities require some rate of conceptualization, as Jackendoff suggests, in at least some minimal way to gain reference (2002, p. 304). However, he fails to provide adequate terminology for such cases of items. As frames are types of conceptual structures which are based on global and stereotypical information, are dominantly dependent on encyclopedic knowledge, and are acquired in lack of direct exposure to empirical experience contrary to scenic knowledge (Andor 1985), the above lexical items are typically acquired and retained in memory on such grounds. A great many lexical concepts such as *marmots,* but even *tigers* or *cows* may first be acquired on such grounds, and then, based on exposure to direct experience, scenic knowledge, their content is modified and standardized upon speakers' gaining full lexical competence. Thus, their feature makeup may show analogies to those acquired on the basis of scenic knowledge.