A conceptuocentric shift in the characterization of language

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Abstract: Recognizing limitations of the “syntactocentric” perspective, Jackendoff proposes a model in which phonology, syntax, and conceptual systems are each independently combinatorial. We can, however, whether he has taken this issue to its logical conclusion. The fundamental question that is not fully addressed is whether the combinatorial aspect of syntax originated in, and derives from, the indeed “far richer” conceptual system, a question to be discussed.

In Foundations of Language, Jackendoff (2002) has undertaken what is finally a rather profound reconfiguration of the generative framework in a manner that allows a potentially much more interrelated interaction with related aspects of the other cognitive sciences. Recognizing limitations of the “syntactocentric” perspective, in which the free combinatoriality of language is attributed to syntax alone, Jackendoff proposes to correct the situation by promoting a model in which phonology, syntax, and the conceptual system are each independently combinatorial.

Of particular interest is the status of the conceptual system as a “combinatorial system independent of, and far richer than, syntactic structure” (p. 123) in the parallel architecture, and the resulting questions concerning the functional relation between the conceptual and the syntactic components. In this aspect, Jackendoff has initiated an interesting debate, but in a certain sense he has failed to take his position to its logical conclusion. The fundamental question that is not fully addressed is whether the combinatorial capability originated in the indeed “far richer” conceptual system. This is consistent with the consideration that language arose primarily to enhance communication (p. 236) of thoughts, which assumes the precondition of a combinatorial conceptual system (p. 238).

If the combinatoriality of language serves the purpose of transmitting messages constructed from an equally combinatorial system of thoughts (p. 272, and Ch. 3), then the precedence for combinatoriality appears to lie in the thought or conceptual system. In this case, it would have been more interesting to see Chapter 3 on combinatoriality organized around the combinatoriality of the conceptual system, with an analysis of the extent to which the combinatoriality of syntax derives from that of its predecessor.

In any event, Jackendoff’s view of the conceptual system invites one to consider things from a more conceptuocentric perspective. Indeed, Jackendoff notes that (p. 417) “languages differ in their syntactic strategies for expressing phrasal semantics; but the organization of what is to be expressed seems universal,” again suggesting that the origin of the universal combinatorial capacity lies more in the independent combinatorial capability of the conceptual system than in syntax. In this context, one could consider the syntactic integrative processor as an algorithm for reading or traversing the conceptual structure data structure in order to generate a linear string that would be processed in parallel by the phonological integrative processor. In this sense, the observed generative component of syntax would derive from that of the conceptual system. Indeed, on page 417 Jackendoff indicates that “what is part of Universal Grammar, of course, is the architecture of the interface components that allow conceptual structures to be expressed in syntactic and phonological structures.” The interesting part of what is universal then, is the conceptual system and its interfaces.

If this were the case, then the syntactic integrative processor would perform an interface between conceptual and phonological structures. This perspective focuses on the relation between the structure of language and the structure of meaning, more than the syntactocentric approach does. In this context, one would expect a certain degree of isomorphism between conceptual structures and the linguistic structures that communicate them. Jackendoff thus notes that for “simple compositional” structure based on argument satisfaction, modification, and lambda extraction and variable binding, there is a “close correspondence between the configurations of lexical items in syntax and conceptual structure” (p. 387). Enriched composition such as the reference transfer depicted in Nunberg’s (1979) sentence “The ham sandwich over in the corner wants more coffee” manifests situations in which this iconicity is claimed to break down. Indeed, the development and use of this type of “verbal shorthand” will lead to the development of grammatical constructions that partially circumvent iconicity, here simply referring to an individual by his or her most context-
Generative grammar with a human face?

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Abstract: The theoretical debate in linguistics during the past half-century bears an uncanny parallel to the politics of the (now defunct) Communist Bloc. The parallels are not so much in the revolutionary nature of Chomsky’s ideas as in the Bolshevik manner of his takeover of linguistics (Koerner 1994) and in the Trotskyist (“permanent revolution”) flavor of the subsequent development of the doctrine of Transformational Generative Grammar (TGG) (Townsend & Bever 2001, pp. 37–40). By those standards, Jackendoff is quite a party faithful (a Khurschive or a Dubcek, rather than a Solzhentzyan or a Sakharov) who questions some of the components of the dogma, yet stops far short of repudiating it.

In Foundations of Language, Jackendoff (2002) offers his version of TGG, in which the primacy of syntax (“an important mistake,” p. 107) is abolished, the related notions of Deep Structure and Logical Form (“the broken promise,” cf. Précis, sect. 3) are set aside, the links to other domains of cognition are discussed, and a hand is extended in peace to psychologists and other cognitive scientists. Foundations is an enjoyable, thought-provoking and useful book that fulfills the promise of its title by presenting—and attempting to tackle—foundational issues in linguistics. It is an excellent overview of the ground that must be covered by any serious contender for a linguistic “theory of everything.” Its non- dogmatic style engages skeptical readers of cognitive and empiricist persuasions (“can my theory explain this set of facts better?”) instead of alienating them.

Among the more positive aspects of Jackendoff’s stance in Foundations are: the emancipation of semantics as one of the three equal-status components of the “parallel architecture” (p. 125); the realization that not all rules are fully productive (admitting constructions p. 189); and the construal of meaning as a system of conceptual structures (p. 306). The pervasiveness of TGG dogma is, however, very prominent throughout the book. On the most abstract level, the dogma manifests itself in the bizarre mentalistical nomenclature (f-knowledge, etc.) that Jackendoff uses instead of the standard explanatory machinery of representation found in all cognitive sciences. Jackendoff shuns a representational account of linguistic knowledge because of his (understandable) wish to avoid joining Fodor and Searle in the philosophical quagmire of intentionality. There exist, however, psychophysically and neurologically plausible accounts of symbolic representation that hinge on counterfactual causality and manage to stay clear of the Fodorian mire (Clark 2000; Edelman 1999).

The preponderance of Chomskian bricks in Foundations is revealed in Jackendoff’s official insistence, in the introductory chapters, on rule-based combinatoriality. His initial formulation of this concept (pp. 38–57) is so strong as to be incompatible with his own views on constructions (pp. 152–87) and on their graded emergence (p. 189), expressed later in the book. It is satisfying to observe that these latter views are on a convergence course with some of the best-known and most promising work in cognitive linguistics (Goldberg 1998; Langacker 1987). As such, they can stand on their own: Computationally explicit construction-based accounts of linguistic productivity need no extra propping (Solari et al. 2003). In any case, Jackendoff should not count on any help from TGG, a Protean theory that, despite decades of effort, has failed to garner empirical support for the psychological reality of the processes and entities postulated by its successive versions, such as movement and traces (Edelman, in press; Edelman & Christiansen 2003). In a recent attempt to obtain psycholinguistic evidence for traces, for example (Nakano et al. 2002), only 24 subjects out of the original 80 performed consistently with the predictions of a trace/movement theory; while 39 subjects exhibited the opposite behavior (the data from the rest of the subjects were discarded because their error rate was too high). Jackendoff’s continuing to cling to TGG (complete with movement and traces), despite its empirical bankruptcy and despite his self-proclaimed openness to reform, is difficult to explain.

Even Jackendoff’s highly commendable effort to treat semantics seriously may be undermined by his continuing commitment to TGG. Conceptualist semantics is an exciting idea, but to develop it fully one must listen to what cognitive psychologists have to say about the nature of concepts. Instead, Jackendoff erects his own theory of concepts around scaffolding left by the generative linguists, which, in turn, is only as sound as those decades-old intuitions of Chomsky and Fodor. In particular, incorporating Marr’s and Biederman’s respective theories of visual structure (pp. 346–47), themselves patterned on TGG-style syntax, into the foundations of semantics cannot be a good idea. Jackendoff’s acknowledgment, in a footnote 10 on p. 347, that Marr is “out of fashion” with the vision community holds a key to a resolution of this issue. Current perceptually grounded theories of vision (Edelman 1999, 2002) and symbol systems (Barsalou 1999) are a safe, additive-free alternative to TGG-style semantics.

Commentary/Jackendoff: Précis of Foundations of Language: Brain, Meaning, Grammar, Evolution