

Generative Syntax in the Twenty-First Century: The Road Ahead

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Short statement

Spyridoula Varlokosta
University of Athens, Greece

In the past fifty years Generative Grammar revolutionized the way language is viewed as a cognitive/mental phenomenon. Cross-linguistic research in syntax within the Generative tradition provided a framework within which a variety of (superficially unrelated) linguistic phenomena have been reduced to a narrow set of computational primitives (GB Theory, Minimalist Program). However, this knowledge is often (if not mostly) ignored in research within other disciplines, disciplines that, similarly to Linguistics, are interested in the human mental architecture (e.g. Psychology, Cognitive Neuropsychology, Cognitive Science). At the same time, forceful critics have been leveled against core assumptions that the Generative tradition espouses, prominently among them innateness and modularity (see, for example, the debate between the modular and the neuroconstructivist view of mental architecture in the Williams Syndrome literature; Clahsen & Almazan, 1998; Musolino & Landau, 2012 vs. Karmiloff-Smith et al., 1997; Thomas & Karmiloff-Smith, 2003) as well as against the methodology (or alleged lack thereof) employed in the Generative tradition (see the debate on the use of informal vs. formal/quantitative methods in syntax and semantics; Gibson & Fedorenko, 2013 vs. Sprouse, Schütze & Almeida, 2013 or Phillips, 2010). The concerns and criticism on methodology, although not usually explicitly articulated, pertain to the work pursued in language acquisition (and language breakdown to a certain extent) within the Generative tradition. For a number of years, small samples, at times careless designs, and informal quantitative analysis of the data characterized the analyses, theories, and hypotheses that were put forward in research aiming to bridge language acquisition and breakdown with linguistic theory. In the past fifteen years, though, this body of research has matured considerably. Certain methodological principles from the field of Psychology have been adopted and attempts to reach some kind of consensus regarding methodology have emerged (see European COST Actions related to language acquisition and language impairment). But although, I believe, there has been a lot of progress in the way we approach our research enterprise, as seen at least in the recent work performed in the fields of language acquisition and language breakdown, we have still a long way ahead to address the critics against our assumptions and methodologies as well as to compensate for the isolation that the field is facing within the broader discipline of Cognitive Science. Because as much as there is success in the Generative approach toward the language faculty (i.e. reduction of various linguistic phenomena to a narrow set of computational primitives), the way we have proceeded in this enterprise (e.g., our innate/modular approach to language), has been seriously questioned and has resulted in a barren isolation of the linguistic research from the rest of the Cognitive Science.

Thus, at the same time that Generative Syntax in the 21st century has to deal with a number of theory internal issues (such methodology and identifying the primitives) and issues pertaining to its interfaces with other levels of linguistic representation (that people far more competent than me can discuss in the Round

Table), the field has to focus seriously on theory external issues, particularly, on two axes where some self-criticism as well as some serious planning for the future is required (these two objectives should be tackled in combination, perhaps with one type of initiative feeding the other): First, Generative Syntax needs to enhance its interface with language acquisition and research on breakdown; and, second, the gap between formal linguistics and related disciplines in the broader field of Cognitive Science should be bridged as much as possible.

Regarding the interface between syntactic theory and language acquisition or breakdown, in the past thirty years Generative Syntax has been used to provide plausible explanations for the patterns of language development observed crosslinguistically, as it has offered specific, testable hypotheses. Developmental data, on the other hand, have not contributed anything to our understanding of the possible syntactic primitives and the architecture of the language faculty, perhaps with the exception of the research on the acquisition of binding relations. Crosslinguistic research in the 90s on the acquisition of different pronouns provided empirical evidence for the distinction between binding and coreference and gave rise to an interesting debate regarding the most adequate theory of Binding, Chomsky's version or Reinhart's version (see Reinhart & Grodzinsky, 1993). This is an interesting illustration that the particular choice of syntactic theory and its implementation in psycholinguistics matters, indicating that research on experimental disciplines which relate to Linguistics/Syntax may be quite theory-dependent. Thus, more interaction is necessary between syntacticians and psycholinguists that pursue theoretically informed experimental research.

Generative Syntax has also been quite influential in the study of language breakdown for similar reasons. Structural accounts of agrammatism (e.g. the Trace Deletion Hypothesis, the Tree Pruning Hypothesis) and Specific Language Impairment (SLI) (e.g. the Extended Optional Infinitive Hypothesis or the Agreement Deficit Account) heavily draw from the conception that linguistic competence is innate. Despite substantial disparities, these accounts have been quite prominent within the Generative tradition and have inspired crosslinguistic research in developmental and acquired disorders. At the same time, none of these accounts can be considered as generally accepted in the field today. And to make the picture even more complicated, there is serious criticism (internal and external) that the notion of structural deficit is problematic in itself, since these accounts fail to explain the fact that agrammatic or SLI performance does not exhibit complete loss of grammatical knowledge. At the opposite end of the spectrum, there are accounts of language breakdown stated in terms of processing factors, which in many instances are either non-linguistic (e.g. memory limitations or computational speed) or atheoretical (e.g. proximity of antecedents/nearest NP effect in Linebarger's (1995) Mapping Hypothesis on agrammatic comprehension). Although the kinds of linguistically motivated explanations put forward in the research on language breakdown may seem like a bottleneck in the interaction between Generative Syntax and these experimental subdisciplines, linguistically motivated explanations do not need to be sacrificed provided that they shift the focus from 'syntactic/grammatical loss' to difficulties in the processing of 'grammatical representations' (see Levy & Cavé, 1999, for a similar view). The Generalized Minimality framework put forward in Grillo (2009) provides a promising explanation for agrammatic comprehension in this direction, hinting - at least in my view - at a potential venture for future research on Generative Syntax and language breakdown.

Regarding the second axis, there is consensus at this point that Generative Syntax/Grammar should invest time and effort on bridging the gap with other

disciplines in the broader field of Cognitive Science. (Again, let me hasten to add that there are people far more competent than me to discuss the specific issues and approaches that should be pursued.) The remaining question is how one should proceed with this enterprise and this is far from trivial. Recent proposals to explore the neural correlates of core computational primitives within the Minimalist Program seem to be a promising step in this direction. For example, Schlesewsky & Bornkessel-Schlesewsky (2013) discuss Merge “as the most promising current candidate for a neurobiologically implemented primitive of syntactic computation.” (p. 258) and explore the possibility that “different subcases of Merge [internal and external] may be associated with measurably distinct neural correlates.” (p. 259).

References (to be added if necessary)