

DISTRIBUTED MORPHOLOGY – AN INTERVIEW WITH JONATHAN BOBALJIK

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REVEL – In your opinion, which are the most prominent advancements by Distributed Morphology for the understanding of grammar and human language?

Bobaljik – DM is fundamentally a thesis about the architecture of grammar and the relation among its various components. DM provides a scaffolding for thinking of morphological problems not in isolation but in terms of specific connections to syntax, phonology, and semantics. It has been widely recognized across frameworks that there are aspects of grammar, for example patterns of syncretism, that do not fall to phonological or syntactic explanations and are best stated in purely morphological terms (say, hierarchies over features, perhaps in turn best understood as reflecting the internal structure of complex features). Many feature contrasts that are relevant for syntax and semantics are neutralized in the morphology (for example, first person pronouns in many languages lack gender, or certain word classes lack case) even though the underlying distinctions seem to be relevant to the syntax. DM adds a measure of explicitness about the relationship between the syntax and the morphology.

The starting point is the idea that the syntactic representations, for which we can provide independent syntactic evidence, should be the input to the morphological

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operations. If we take a direct relationship between (sub-word) syntax and morphology as the null hypothesis, we force special light on instances where the morphological structure and syntactic structure do not line-up. The general tenets of DM force us to ask questions about the nature of these mismatches and the limits of variation. In this way, DM provides tools for thinking not only about how syntactic evidence can bear on morphological analysis, but also the other way around: how morphological evidence can bear on syntax. This is a theme in my work on comparatives and superlatives, for example, where I think there is substantial morphological evidence (robust generalizations in irregular morphological patterns such as suppletion) that require the underlying syntactic representations must have particular properties – the DM approach allows one to connect the dots across components in this way.

REVEL – Distributed Morphology contains a variety of proposals regarding some components of the grammar, such as the PF branch organization (e.g., Embick and Noyer 2001, Embick 2010, Arregi and Nevins 2012) and the nature of the primitives feeding the syntactic component (e.g. if roots are abstract or not). Keeping these in mind, would it be possible to say that Distributed Morphology figures as a research program that includes a set of theories about the organization of the grammar, in which only two basic assumptions remain constant, namely: (i) Syntax-all-the-way-down and (ii) Late Insertion?

Bobaljik – Yes, this is at the core of DM and is what the ‘distributed’ in the name of the theory refers to: the role of classical ‘morpheme’ is distributed over (at least) two components (i) a list of atomic, but abstract, elements that are the input to combinatorial rules (syntax) and (ii) rules of vocabulary insertion/exponence that provide for the phonological realization of those elements. What makes this exciting as a research program is that the evidence from the syntax (and semantics) for some structure is sometimes at odds with the apparent evidence from investigation of overt exponents—we find unexpected affix orders, or mismatches in the number of pieces (morphemes) the different considerations would suggest, and the like. Particular DM

theories constitute proposals for a restrictive theory about the ways in which the two types of representation (abstract syntactic, and overt morphological) may vary.

One way of approaching the apparent mismatches might be to enrich the syntactic apparatus, positing a more complicated syntax, reducing the content of the morphological component. A leading idea in DM is that at least some of the appearance of complexity in morphosyntax is the product of two interacting, but internally relatively simple, systems: a ‘merge-and-move’ style syntax that composes, and a morphology that manipulates the output of the syntactic derivation so as to integrate with the phonological component of grammar.

Some of the issues that you mention, for example, the question of the abstractness of roots, are strongly associated with the DM literature, but cross-cut the central tenets of DM. One could pursue a DM architecture in which roots have categories, or one could pursue a theory with category-neutral roots outside of the DM perspective. Other work you mention is more central: the Arregi and Nevins (2012) study of the Basque auxiliary engages explicitly and implicitly in very important questions about the ways in which surface variation in the forms of words does and does not coincide with syntactic variation.

REVEL – Since Marantz (2000), many different proposals for a phase-theory within word formation have been advanced in Distributed Morphology. What is the relevance of a phase-based approach to a syntactic theory of word formation? Which of these proposals seems to bring more robust evidences for delimiting phase boundaries?

Bobaljik – The fundamental questions here are about locality, and it seems to me that the most interesting questions are about why different processes obey the locality conditions that they obey, and how (or whether) the locality domains across different components are related. Proposals for syntax have tended to come back to three distinguished domains: the nominal phrase, the clause, and some intermediate verbal functional projection, with an open question being whether these are determined inherently (certain categories are designated phase heads) or contextually (e.g., in Bobaljik and Wurmbrand 2005, we argued that the verbal complement of a lexical

verb is inherently a phase, regardless of the label or head of its maximal projection). In morphology, we find that there are word-internal processes, most notably contextual allomorphy (suppletion being the limiting case) that appear to be subject to locality domains. The null hypothesis could be that whatever determines domainhood in phrasal syntax should determine domainhood within the morphological word, e.g., within a complex X° . To take a programmatic example, if certain heads render the contents of their sister opaque to further processes, then in the best case, we might expect to find correlations between, say, conditions on extraction in syntax and corresponding conditions restricting contextual allomorphy.

In broad terms, this seems promising enough to be worth exploring further, although there are many challenging questions to resolve (see for example, Embick 2010, or recent papers by Tobias Scheer from a different perspective). Looking at this is hard, since the clearest syntactic phases (CP and DP/NP) are also domains across which word-formation (head movement) typically does not occur, leaving the intermediate phases (e.g., vP or AspP) as the area in which the most interesting questions can be asked. I think one promising line of research is to look at (morpho)-phonological differences between verbs and nouns: if there is an intermediate domain delimiter (phase head) in the ‘clausal spine’ (the projections from V up through T and C), and inflected verbs include the heads running from V up through T, including this phasal head, then we would expect cyclic phonological effects in verbs that are lacking in corresponding nouns: for example, if syllabification proceeds by domains, there will be more internal domains in verbs than in nouns. This is an area ripe for further exploration, on the model, for example, of the paper by Newell and Piggott in *Lingua* (2014) and related work. In a different vein, Harðarson 2013 extends the kind of ‘dynamic phase’ approach of Bobaljik & Wurmbrand to morphophonological interactions within complex words, drawing on evidence from Icelandic compounds.

It’s also clear that there are morphophonological processes (stress, vowel harmony) that are not confined to particular domains. This observation suggests that if there is a general theory of locality domains to be had, it is not one in which domains (phases etc.) are completely ‘frozen’ or categorically ‘impenetrable’ to operations from outside. That may be true on the syntactic side as well (e.g., phases do not limit the agreement dependency between an antecedent and a pronoun, even when this is a

grammatical dependency such as a quantifier and a bound variable). Thus we might be led to a view more like the Cyclic Spell Out of Pesetsky and Fox 2005, where the freezing effect of phase-like domains is not absolute, but only fixes certain properties of the representations. A very interesting research program then not only asks why (in both morphology and syntax) the domains are the ones they are, but also which processes are domain-sensitive. There may also be asymmetries in the direction of dependencies – it seems that root allomorphy (suppletion) is tightly constrained in what heads may trigger changes on the root (Moskal, to appear in *Linguistic Inquiry*, provides new evidence for this), but the locality conditions appear to be laxer regarding how idiosyncratic classes of roots determine allomorphy of more peripheral functional heads.

REVEL – Taking into consideration your recent book, *Universals in Comparative Morphology: suppletion, superlatives and the structure of words* (2012), we raise two questions: how typological studies can influence formal generative researches? And what is the best way to develop a large-scale typological study in parallel to a formal study of grammar?

Bobaljik – Formal generative theories are explicit theories of possible grammars, thus also of possible languages. Knowing what happens in the world’s languages should thus be central to the enterprise. I think one of the hurdles to seeing more fruitful interaction between typological studies and formal generative approaches lies in the granularity of the questions being asked, and the degree to which we are ready to look beyond the surface descriptions, and to ask questions about patterns at a higher level of abstraction. This point has been made by many others, and there is an excellent discussion by Baker and McCloskey in their 2007 paper ‘On the Relationship of Typology to Theoretical Syntax’ (*Linguistic Typology* 11:273-284). They discuss one way to balance the breadth versus depth trade-offs in syntax, but these remarks apply as well to morphology.

In working on the book you mention, I was lucky to find an area where the relevant data is generally well covered in descriptive grammars, and where the level of

abstraction needed to see extremely robust grammatical patterns is not that far removed from the surface. It does require some digging beneath the surface: for example, a study oriented towards surface patterns might note that superlatives are sometimes derived by adding morphology to comparatives (as in Hungarian, Czech, and Ubykh), but in many cases such nesting is not visible in the surface morphology (as in English) and leave it at that. Without asking theoretical questions about what might explain that, it would be hard to see how to go beyond this level of observation, and so it was the formal generative research, providing an explicit model for (in many cases) locality conditions on suppletion, that spurred the question of whether the variation in the surface forms might conceal an underlying unity in (abstract) structure, as I argue. Some researchers talk of ‘theory-neutral’ description, but this is a misnomer—there is always some level of abstraction to any study, and I think there is a healthy tension in trying to find the right level of abstraction, where we can connect the theoretical postulates to observable phenomena especially in the large scale studies.

In at least some cases, the disconnect between typological studies and generative work might be based on challenges in relating the descriptive observations and theoretical entities. I think, though, that there is ample room for cross-fertilization: formal generative theories are explicit models of possible and impossible grammars. Even if these range over entities that are not directly visible (constituents, features, movement, etc.) the theories stand or fall not only on notions of internal coherence, but also on whether they make the right empirical predictions. In addition, typological studies can provide extremely valuable evidence about specific cross-linguistic generalizations, and are a great resource for identifying challenges and areas requiring deeper investigation. So in my view, large scale, cross-linguistic studies should be central to the formal generative endeavour, and conversely, the importance of the universal grammar hypothesis within a theory of cognition could well inform the kinds of questions that might be profitably investigated in large-scale typological studies.

REVEL – Could you suggest a list of influential works (seminal and recent ones) in Distributed Morphology for our readers?

Four recent monographs provide in-depth exploration of topics in DM:

Arregi, Karlos and Andrew Nevins 2012 *Morphotactics: Basque Auxiliaries and the Structure of Spellout*, Springer.

Bobaljik, Jonathan David 2012 *Universals in Comparative Morphology: Suppletion, Superlatives, and the Structure of Words*, MIT Press.

Embick, David 2010 *Localism versus Globalism in Morphology and Phonology*, MIT Press.

Kramer, Ruth to appear. *The Morphosyntax of Gender: Evidence from Amharic*. Oxford University Press

The papers collected in Matushansky and Marantz (2013) represent a selection of current thinking in DM by researchers who have contributed to the development of the framework.

Matushansky, Ora and Alec Marantz, eds. 2013. *Distributed Morphology Today: Morphemes for Morris Halle*. MIT Press.

Among older works, some of the most widely cited (other than overview articles) in DM and its immediate precursors are:

Bonet, Eulàlia. 1991. *Morphology after syntax: Pronominal clitics in Romance*. MIT Press.

Halle, Morris and Alec Marantz. 1993. Distributed Morphology and the pieces of Inflection. In Ken Hale and Samuel Jay Keyser, eds. *The view from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, Cambridge: MIT Press, 111-176.

Embick, David and Rolf Noyer. 2001. Movement operations after syntax. *Linguistic inquiry*, 32(4), 555-595.

- Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania working papers in linguistics*, 4(2), 14.
- Noyer, Robert Rolf. 1992. *Features, positions and affixes in autonomous morphological structure* (Doctoral dissertation, Massachusetts Institute of Technology).