Introducing Lexical-Realizational Functional Grammar*

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1 Our project

- We are developing a theoretical framework that couples Lexical-Functional Grammar (LFG; Bresnan et al. 2016) with the realizational, morpheme-based approach to word-formation of Distributed Morphology (DM; Halle and Marantz 1993).
- The resulting framework, which we call Lexical-Realizational Functional Grammar (L_RFG), is particularly well-suited to model North American Indigenous languages, which are characterized by *polysynthesis* and *nonconfigurationality*.
- In this talk we will summarize the framework, and demonstrate it with an analysis of Anishinaabemowin/Ojibwe inflection.
- The talk will proceed as follows:
  - Section 2 outlines the L_RFG framework, comparing and contrasting it to standard LFG and providing details on the exponence function.
  - Section 3 provides a brief introduction to Ojibwe, and a background on relevant aspects of the language's morphosyntax.
  - Section 4 provides a demonstration of our analysis, including the structures of a representative example sentence, as well as presentation and discussion of the templates used and specifications of the Vocabulary Items needed for animate agreement in Ojibwe and for the examples in the handout.
  - Section 5 indicates some directions for future research.
  - The two appendices provide structures for additional example sentences, demonstrating most of the Ojibwe agreement morphology under discussion (Appendix A) as well as providing additional discussion of conjunct-order agreement (Appendix B).

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2 The framework

2.1 Motivation

- L_RFG is the offspring of an unlikely marriage between Distributed Morphology as a theory of morphological realization and Lexical-Functional Grammar as a theory of syntax and grammatical architecture.
- L_RFG combines the strengths of the two frameworks:
  1. Like LFG, it is a declarative, representational and constraint-based theory (without the bottom-up, phase-based derivations of Minimalism) that is ideally suited to modelling nonconfigurationality.
  2. Like DM, it provides a realizational, morpheme-based view of word-formation and is good at modelling complex morphological structures including those found in polysynthetic languages, such as many North American Indigenous languages.
- Additionally, because the realizational module, v(ocabulary)-structure, has access to prosodic structure, LrFG has the potential to give non-transderivational (computationally simpler) prosodic explanations for morpheme alignment and surface form phenomena that are typically alternatively analyzed in transderivational harmonic approaches to the morphology-phonology interfaces such as Optimality Theory (Prince and Smolensky 1993, 2004).

2.2 Comparison with standard LFG

- L_RFG is similar to standard LFG, with changes to the c-structure and its relationship with morphosyntactic elements.
- The terminal nodes of c-structures *are not words*, but instead are f-descriptions (sets of f-structure equations and constraints)
- The c-structure is mapped to a v(ocabulary)-structure, a linearized structure in which vocabulary items (VIs) *expone* (i.e., realize) the features in the terminal nodes, via a correspondence function, ν.
- Formally, v-structure is a list, each member of which is a feature structure defining morphophonological properties relevant to the linear placement and metrical properties of the item.
  - This includes the phonemes/segments, as well as the metrical frame which determines syllable structure, affix/clitic status, and so on.
  - Thus, the v-structure roughly corresponds to the p(honological)-form portion of a lexical entry in the metrical theory of Bögel (2015).[1]
- In this talk, only the strings themselves are relevant, so we make some simplifying assumptions:
  1. We represent the output of the exponence function, ν, simply as a string, not a full VI structure.
  2. We show alignment informally using the standard notational convention of adding a dash to the left or right of the string.
  3. We do not show the $o \circ \rho$-mapping (see Figure 1 below), but instead let the phonological forms stand in for the VI strings (i.e., we conflate the two for simplicity/presentational purposes).

[1] We would like to thank Tina Bögel for her insightful comments on this point at the LFG20 conference, and in extensive discussion afterwards. The details of the interaction between v-structure and the phonological string, in particular the effects of the metrical properties of VIs on mismatches in ordering between c-structure and the p-string, are currently being worked out and will be presented in future work in the L_RFG framework.