Turning to “polysynthesis” to evaluate current phonology-syntax interface theories

Current phonology-syntax interface models diverge in terms of what phonology needs to reference to form domains for phonological processes: primarily phonology (the Phenomenon-Based Approach), a mix of morphology and syntax (Relational Mapping), or syntax only (Syntax-Driven Mapping and the Syntactic Spell-Out Approach). While a few approaches have been compared, the four main models have yet to be tested side-by-side with the same data set. This paper will use data from two “polysynthetic” languages (Kiowa and Saulteaux Ojibwe) to do so. The languages’ extreme, overlapping morpho-syntactic structures form a strong test as they yield different predictions from each model.

Unless otherwise cited, the following data comes from fieldwork on Kiowa in Oklahoma and Saulteaux Ojibwe in Manitoba. First, I determine the application domain of phonological processes across the clause. I then compare the results to each of the model’s predictions. In total, I survey 11 processes in Kiowa and 10 processes in Saulteaux Ojibwe. Consider, for example, the Kiowa verb complex and Syllable Final Devoicing (SFD).

The Kiowa verb complex consists of a pronominal (Pron.), optionally incorporated roots (Adv, N, V), the verb stem (STEM), an inflectional or modal suffix (I/M), and an optional syntactic suffix (Synt). SFD applies at some, but not all, morpheme boundaries showing the domain for syllabification. When final, /tò:d/ ‘send’ devoices in (1), but it does not devoice when paired with a vowel-initial negative (I/M) suffix /-s/ (già-tò-d:3) ‘They do not send the food.’). SFD applies to STEM /ɔ:tɔ:b/ ‘meet,’ however, before switch-reference (Synt) /-e/. It also applies at the end of incorporated elements like /tɔ:ð: websocket/ ‘dry’ in (3) and pronouns /b-i-a-a-d/ in (4). Therefore, syllabification applies to each morpheme and across the STEM-I/M boundary. Accounting for 11 processes, I find the following domains in Kiowa: [[Ppfx]-[Adv]-[N]-[V]-[STEM-I/M]-Synt].

The Phenomenon-Based Approach fails to account for the data in a theoretically valuable way. Without phonology-independent criteria, any phonological domain may form its own constituent disallowing cross-linguistic predictions. Syntax-Driven Mapping (Match Theory2) requires a complete match between phonological and surface syntactic constituents (X0 = phonological word (PW), X = phonological phrase (PPh)). The model correctly predicts that the full verb forms a domain (PW), but it fails to predict the smaller domains within. The Syntactic Spell-Out Approach references phases (VoiceP, CP = PPh and nP, aP, vP = PW). The model correctly predicts the smaller phonological domains, but it fails to predict the larger domain due to theoretical requirements. The Phase Impenetrability Condition2 disallows reference to incorporated roots in later derivation, and Domain Suspension1 disallows the verb’s larger domain as V must move to T for feature checking before Spell-Out.

Relational Mapping alone successfully predicts domains in Kiowa (and Saulteaux Ojibwe), mapping the smaller domains (PWs) by referencing morphological information (e.g. roots, prefixes, suffixes) and the full verb (PPh) by referencing syntactic information (e.g. XP, head, complement). Relational Mapping is often criticized because it assumes a separation between morphology and syntax. I conclude and discuss whether it is possible to yield the same predictions without morphology.

Word Count: 498