Title: A prosodic analysis of the polysynthetic word

North American languages traditionally deemed “polysynthetic” have been considered to be at the extreme end of morphological typology with very long words that perform the expressive function of an entire sentence. There is evidence, though, that these languages may not be as extreme as the literature claims. Previous work (Russell 1999, Dyck 1994) using Nespor & Vogel's (1986) Prosodic Theory as their framework has shown that particularly long words in two unrelated North American languages (Cree and Cayuga) in fact consist of multiple phonological words (PWs). In this paper, I demonstrate that another unrelated North American language previously labeled “polysynthetic” is better analyzed along the lines of Russell and Dyck's work. Specifically, I show that the very long words in Kiowa, a Tanoan language, also consist of several PWs. I propose, furthermore, that the same kind of reanalysis may provide insight into polysynthetic languages as a whole.

According to Watkins (1986), the Kiowa verb complex can be extremely long (1) and consists of pronominal prefixes, optionally incorporated elements, a verb stem, an inflection/modal complex, and syntactic suffixes. Using Nespor & Vogel's (1985) discussion, I define a PW as any root along with any inflectional or derivational affixes. In Kiowa, I argue that these domains are characterized by syllabification-sensitive rules. First, consider Kiowa’s Closed Syllable Shortening rule, which causes underlying long vowels to become short in closed syllables. Using this rule as a test, we see that the STEM-{Inflect,Modal} sequence forms a single PW. In (2), the root's long vowel /ɔ́ː:/ surfaces in the Imperfect/Heresay form (Ipf/Hsy), while it becomes short in the Imperfect (Imp.) and Future forms. Syllabification spans the boundary between the root and inflectional suffix, thus allowing the root’s final consonant to form the onset of the new syllable including the Ipf/Hsy suffix /-è/:. The final consonant /m/ remains the coda in the other two forms and triggers Closed Syllable Shortening. As the process occurs across the morphological boundary, the morphemes form a single phonological domain.

In (3), Kiowa's Final Devoicing rule demonstrates that Kiowa's pronominal prefixes and STEMs do not form a single phonological domain. According to the rule, underlying voiced stops devoice syllable-finally. As seen (3), the pronominal prefix’s final /d/ devoices syllable-finally, even though /d/ could re-syllabify as the STEM’s onset. The fact that it devoices in this context indicates syllabification does not span the morpheme boundary, therefore confirming that the pronominal prefix and STEM form separate phonological domains. Note that considering Kiowa’s verb complex to form a single word would, in fact, lead us to assume (3) would form a single syllabification domain leading to incorrect predictions.

Previous descriptions of Kiowa (Harbour 2003, McKenzie 1946, Watkins 1984) show no evidence of voiced final stops in surface incorporated elements. I propose this is because incorporated elements are always roots, which means that they will always act as distinct PWs. Therefore, Final Devoicing always applies. My proposed structure for the Kiowa verb then consists of at least four PWs (4). Questions remain as to the status of pronominal prefixes and syntactic suffixes, but Watkins (1984) suggests they may be clitics.

Traditional assumptions regarding the polysynthetic word in Kiowa lead to incorrect predictions and subsequently inadequate phonological analyses. Based on previous analyses of Cree and Cayuga (Russell 1999, Dyck 1994) and my analysis of Kiowa (4), I propose that it may be possible to reanalyze all cases of polysynthetic words as consisting of multiple PWs. Furthermore, the fact that phonology shows that polysynthetic words are more correctly analyzed as smaller units suggests that a similar type of analysis might prove insightful in morphology and syntax, as well.
Examples:

1. á -k'já:hî:+dɔ:-mɛ -dɛ -ɛ;
   [3pl]-man +be -hsy-nom-when
   ‘be man-like’

2. | Root | Ipf/Hsy | Imp | Future | Gloss |
   | /ɔ̂:m/ | ɔ̂:m-ɛ: | ɔ̂m | ɔ̂m-tɔ̂: | 'do/make' |
   (Watkins 1984, p. 20)

3. bɛt -ɔ̂ɔ̂
   cf. /b-ià-e-d/ ‘2pl:inv’
   [2pl:inv] -gave
   (Harbour 2003)

Selected References:


