

### Contrastive Syllabification in Blackfoot

It is a common assumption of current phonological theory that syllabification is never used contrastively among the world's languages (Hayes 1989, Blevins 1995, McCarthy 2003), as contrasts of the type a.ta vs. at.a or ak.la vs. a.kla have not been convincingly documented. However, it is a matter of debate whether the absence of such contrasts is simply empirical or whether this absence needs to be encoded in formal linguistic theory (Morén 1999, McCarthy 2003). As it stands, such contrasts in syllabification are indirectly predicted by moraic theory (Hyman 1985, Hayes 1989), where contrastive consonant length is captured by associating long consonants (geminate) with a single mora underlyingly and short consonants are assumed to be non-moraic underlyingly. Geminate consonants are realised as ambisyllabic by virtue of the interaction between constraints requiring the preservation of underlying moras and syllabic constraints requiring (a) that coda consonants be moraic (requiring the underlyingly moraic consonant to be syllabified in coda position), (b) that onset consonants be non-moraic (eliminating the possibility of preserving the underlying mora in onset position), and (c) that all syllables have an onset (requiring that the underlyingly moraic consonant occupy both coda and onset position in order to preserve its mora). Under this analysis, the a.ta and at.a contrast differs from the a.ta vs. at.ta contrast only because languages tend to disprefer onsetless syllables, a syllable structure preference which is presumably distinct from any constraints requiring mora preservation; it is a matter of debate whether any language would rank the onset constraint lowly enough to result in such a contrast. On the other hand, the contrast between ak.la and a.kla is subject to no such limitation--both sequences are well-formed in terms of onset preferences. Moraic theory therefore predicts that languages with either of these contrasts, and particularly the second, should exist. I argue that Blackfoot, an Algonquian language, fills this typological gap by providing evidence of contrasts of the second type (ak.la/a.kla).

Blackfoot contrasts consonant length both intervocalically (/ni.na/ `man' vs. /nin.na/ `my father') and pre-consonantally (/istawásiwa/ `he grew' vs. /istatánsiwa/ `he bragged', /ikstsiksijiwa/ `he scratched himself' vs. /iksksiwa/ `it was stiff'). While the pa.ta/pat.a contrast is realised in Blackfoot as geminate/non-geminate contrast (/ni.naa/ vs. /nin.na/), phonotactics, preliminary phonetic measurements, and orthographic evidence suggest that the pre-consonantal contrasts listed above are indeed syllabified differently, as follows: /i.stawásiwa/ vs. /is.tatánsiwa/ and /i.kstsiksijiwa/ vs. /ik.ksksiwa/.

I argue that contrastive syllabification in Blackfoot is not specified in the underlying representation, but is instead a process which is dependent upon the underlying moraic associations of the segment, following the traditional moraic analysis of geminates. In the examples above, the instances of long /s/ and /k/ are underlyingly moraic, and are syllabified in coda position, as is warranted by the preference for coda consonants to be weight-bearing segments. On the other hand, the instances of short /s/ and /k/ are underlyingly non-moraic, and are syllabified as part of the onset, following from a dispreference for weightless codas. Contrasts in syllabification on the surface can therefore be simply accounted for by assuming that the segments in question are differentiated underlyingly by their moraic association, a concept which is already an integral part of moraic theory.

A consequence of the moraic account is that it makes different predictions than does an account in which syllabification is specified underlyingly. Note that in the examples given above, the realization of length in these contrasts is not consistent: pre-consonantal long /k/ is as long phonetically as the intervocalic geminate /k/, while pre-consonantal long /s/ is not as long phonetically as the intervocalic geminate /s/. A possible explanation for this difference involves the syllable contact law (Murray & Vennemann 1983), which states that the sonority of two segments should decrease over a syllable boundary. Given that fricatives are more sonorous than stops (Parker 2002), the main difference between the two sequences /is.ta/ and /ik.sa/ is that the first adheres to the contact law, while the second does not. Consequently, the sequence /is.ta/ may remain syllabified as is, while the underlyingly moraic /k/ must become ambisyllabic (/ik.ksa/), and thus eliminate the poor syllable contact. This account parallels the traditional moraic explanation for the ambisyllabic status of geminates by referring to syllable structure constraints. Therefore, under the moraic account, we would predict that languages like Blackfoot would contrast e.g. /i.ksa/ vs. /ik.ksa/; alternatively, in a language where syllable contact is not ranked so highly, we could expect a contrast between /i.ksa/ and /ik.sa/. However, the moraic analysis makes the prediction that no single language will contrast all of /i.ksa/, /ik.ksa/, and /ik.sa/, a possibility under syllable theory.

**References:**

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