Syllabification of laryngeals in Kanien'kéha | *Simon LiVolsi, McGill University*

The Northern Iroquoian language Kanien'kéha (Mohawk) has two laryngeals: /ʔ/ and /h/. While previous analyses have syllabified the laryngeals into the onset or the coda (e.g. Michelson 1988), I argue, based on my own fieldwork, that they can also be syllabified into the nucleus, with /ʔ/ doing so obligatorily (see Bonneau (1988) for a similar analysis on Kanien'kéha).

The first piece of evidence for this analysis comes from the interaction between the laryngeals and tone/length. Kanien'kéha is a pitch accent language in which the accented syllable is associated with a H(igh) tone (marked with an acute accent) (Michelson 1988). Following Michelson (1988), I assume this to involve a H linked to the head of the nucleus. When the stressed syllable is open, the vowel is lengthened (compare (1a-b)). If the stressed vowel is followed by /ʔ/ or /h/+[+son], the laryngeal deletes, the vowel lengthens and takes on a falling tone (HL) (marked with a grave accent) (Michelson 1988). Compare (2a, 3a) with (2b, 3b).

(1) a. /wak-hninũ/→[wa.kh.nía:.nũ] 'I bought it' b. /s-k-ate-wejʌ̃-st-haʔ/→[sga.de.we.jʌ́̀s.tha] 'I study again'

(2) a. /wak-jaʔk-ũ/→[wagjà:gũ] 'I cut it off' b. /te-k-jaʔk-s/→[dégjaʔks] 'I break it in two'

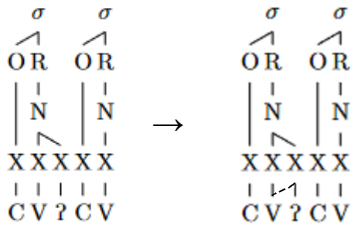
(3) a. /je-la-hlek-s/→[jehà:leks] 'The pusher' b. /je-lo-hlek-ũ/→[jehohlé:gũ] 'He has pushed'

As lengthening only takes place in stressed open syllables, I propose that it occurs in order to achieve bimoraicity in the stressed syllable. In this way, vowels carry intrinsic morae while morae can only be assigned to consonants via Weight-by-Position (WBP) (Hayes 1989).

When the stressed vowel is followed by /ʔ/, as mentioned above, lengthening occurs. This suggests that /ʔ/ does not contribute weight. This could either be because /ʔ/ does not get WBP despite being in the coda, or because it is not in coda. If /ʔ/ is in the following onset, there is no reason why /ʔ/ would delete and cause HL on the preceding vowel when it is stressed. If /ʔ/ is in the coda but does not get WBP, this is anomalous behaviour and, though feasible, is not parsimonious. Additionally, it would have to be the case that /ʔ/, (i), deletes after vowel lengthening because three position rhymes (VVʔ) are prohibited and, (ii), relinks to the vowel or to the nucleus (to cause HL). I propose that there is a simpler explanation.

If /ʔ/ is syllabified in the dependent position of the nucleus, the lengthening and tonal patterns are natural results. /ʔ/ does not contribute weight because it is not in the coda, so lengthening must occur to achieve bimoraicity in the stressed syllable. When the vowel spreads from the head of the nucleus (to which a H is linked) to the dependent position, this results in both /ʔ/ and the vowel in this position. This is shown in (4).

(4)



I propose that the combination of /ʔ/+V in the same position phonetically surfaces as a L toned vowel, falling from the H linked to the head. This is consistent with the cross-linguistic tendency for /ʔ/ to cause L tone (Kingston 2011).

I follow Hagstrom (1997) in arguing that /ʔ/ must be syllabified in the same slot as a vowel. This implies that /ʔ/ has a close relationship with the head of the nucleus. This close relationship is, in fact, the case as /ʔ/ must always follow a vowel. That is, /ʔ/ may never appear word-initially, and when in derived C+/ʔ/ environments, epenthesis breaks up the cluster, as in (5a).

(5) a. /w-ahskw-ũt-ʔ/→[wáhsgũdeʔ] 'lean to' b. /ʌ̃-hla-ʌ̃tũni-ʔ/→[ʌ̃hlʌ̃dű́:niʔ] 'He'll be lonely'

/h/, on the other hand, is not as uniform in its behaviour as /ʔ/. When the stressed vowel is followed by /h/+[-son], /h/ does not delete and the vowel does not lengthen nor surface as HL. In this case, /h/ is patterning as a coda consonant: it contributes weight and thus nullifies the need for lengthening (see (6)). In contrast, when the stressed vowel is followed by /h/+[+son], lengthening occurs, the vowel gets HL and the /h/ deletes (see (3) above). In this context, the /h/ is not behaving as if it is contributing weight.

(6) /s-waʔ-l-ahkat-ʔ/→[sahágade ʔ] ‘he went back’

In fact, this asymmetry follows from the Syllable Contact Law (Murray & Vennemann 1983). When /h/ is followed by an obstruent, it forms a licit coda-onset cluster as the sonority does not rise from /h/ to the following obstruent. In this way, I assume /h/ to have the sonority value of an obstruent. Further, /h/ does not have a place of articulation of its own. As the coda is often cross-linguistically restricted in such terms (i.e. sonority and place) (Itô 1988), it makes sense that /h/ may be in the coda in this environment. Since /h/ is in the coda when preceding an obstruent, it gets WBP and nullifies the need for lengthening. When /h/ is followed by a sonorant, on the other hand, the sonority rises from the /h/ to the sonorant. This would result in an illicit coda-onset sequence, so the /h/ cannot syllabify into the coda. As with /ʔ/, if /h/ were syllabified into the following onset, there would be no reason why it would delete and cause HL when the preceding vowel is stressed. Therefore, /h/ must be syllabified in the dependent position of the nucleus in /h/+[+son] strings.

The derivation of HL, then, is the same as with /ʔ/ (see (4)). /h/ does not contribute weight because it is not in the coda when preceding a sonorant, so the vowel must lengthen. When the vowel lengthens, it spreads to the dependent position of the nucleus. This results in both /h/+V in the same slot in the nucleus. As with /ʔ/, I propose that this yields L. Although /h/ commonly causes H cross-linguistically, it also can lead to the development of L, so this is not a far stretch (Kingston 2011).

Independent evidence that /h/ may be in the nucleus comes from the widespread ChC sequences in Kanien’kéha. The first C can be any stop, while the second C is unrestricted. If /h/ is in the nucleus, we can explain why the first C must be a stop while the second C may be any consonant in the language: there cannot be a fall in sonority from the onset to nucleus, and there are no sonority restrictions between the nucleus and the following onset. (7) shows /h/ in ChC sequences (note that stressed vowels do not lengthen preceding Ch syllables - this will be expounded upon in the presentation).

(7) a. [jóthdelũ] ‘it is scary’ b. [wadewagadewí:ʃaʔkhseʔ] ‘The ice broke on me’
c. [sgáthne] ‘together’ d. [khjá:dũs] ‘I write’

In sum, the syllabification of the laryngeals into the nucleus accounts for the tone and length patterns in Kanien’kéha, and follows from basic cross-linguistic syllable profile trends.

References

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