Interactions Between Footing, Accent, and Lengthening in Seneca

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The Problem
Seneca, an Iroquoian language of New York, shows complex interactions between footing, accent, and length. Accent, characterized as a H tone, appears on qualified non-final even syllables as counted from the left. In order to bear a H tone, these syllables must (a) themselves be closed by an obstruent, or (b) be followed by a syllable closed by an obstruent. If an even syllable is not qualified – i.e., it is open or closed by a sonorant – and followed by an unqualified syllable, no H tone will appear (Chafe (1967); Michelson (1988)). The data are given in (1).

Further, Seneca shows two unusual lengthening processes. The first, called even penult lengthening (EPL), is an apparent relic of Proto-Lake Iroquoian stress. Unless the syllable is closed by a laryngeal, the vowel of an even penult will lengthen. Interestingly, a syllable which has undergone EPL is not eligible for accent. An example is given in (2). This pattern is in opposition to compensatory lengthening (CL), a process in which intervocalic h deletes at a morpheme boundary and the preceding vowel lengthens. A syllable which has lengthened under CL is, unlike a syllable lengthened by EPL, eligible for accent. This is shown in (3).

Analysis
There are several theoretical and typological challenges involved in the analysis of these facts. First, the analysis of Seneca footing is controversial on several levels. Foot structure can only be elucidated through accent; there is no other evidence. This paper follows Melinger (2002) in proposing a trochaic analysis, as opposed to the iambic analyses of Stowell (1979) and Prince (1983).

Second, the analysis formally separates foot structure and accent in a way compatible with the word-prosodic typologies set forth in Hyman (2006, 2009). Although accent is partially dependent on foot structure (much like stress), it does not have a number of defining properties of stress systems. The analysis goes on to follow Gussenhoven (2000, 2004)’s proposal that accent introduction and assignment must be viewed as separate processes.

Finally, there is the problem of opacity. Both accent shift and lengthening appear to be opaque processes. These kinds of phenomena are challenging for OT analyses, which by nature are not equipped to deal with opacity. The analysis here shows that accent shift cannot be done in parallel OT: Accent shift necessitates insertion of a tone and later reference to the original position of the tone. Likewise, accent shift absolutely must be ordered after compensatory lengthening. The paper explores a stratal analysis, and indicates that strata for Seneca are ill-defined at best.

Conclusions and Predictions
The paper makes several conclusions and predictions. First, it provides evidence that footing and tonal accent should be separated, as per Hyman, and also provides further evidence for the formal separation of the introduction and assignment of tones. Finally, it shows that a stratal analysis cannot rest on well-defined strata in the language.
1 Data

(1) a. de.wak.hih.döh
   “I’ve broken it to pieces.”
b. de.wa.gë’.ni.göh.hö:’
   “I long to be somewhere else.”
c. dë.ga.de.nye.o.dë’
   “I’ll put a necktie on.”

(2) a. sha.go.ge:.tas
   “He hates her.”
b. de.wa.gah.së:t.hwëh
   “I’m crying.”
c. de.wa.ge’.nyo.da.ge’.’öh
   “I’m busy.”

(3) o’.khe:.wat
   UR: o’-khe-hewaht-0
   “I punished her.”

References


1The orthography is that used by the Seneca community. The glottal stop is represented by ’, the nasalized o by ö, and nasalized e by ë. Accent is shown with boldface.