

FOOT AND SYLLABLE IN SOUTHERN PAIUTE

There are two theories about the relationship between the syllable and the foot in phonology. The “Prosodic Hierarchy” (e.g., Selkirk 1995) claims that every foot boundary coincides with a syllable boundary, while Halle and Idsardi’s metrical theory (1995) allows foot and syllable boundaries to not coincide, because metrical (stress) structure and syllables are on orthogonal planes. Southern Paiute (SP) presents evidence for choosing between these theories.

SP counts vowels, not syllables, for stress assignment. Every second vowel from the left edge of the word is stressed; long vowels and diphthongs count as two units. SP stress is clearly accounted for by an iambic, binary foot. A foot boundary may appear in the middle of a syllable, as in [pAcáIkàI], ‘to hang, as a branch.’ (Capital letters are voiceless; main stress is on the first (lowercase) /a/, and secondary stress is on the penultimate /a/. SP devoices only unstressed vowels, in environments discussed in the full paper). Clearly, the boundary of the first foot falls between the two vowels /a/ and /i/ ([I]). These two vowels are tautosyllabic (see below, and the full paper).

Hayes (1995), basing his analysis on Harms (1966), argues that every vowel in SP constitutes a syllable; for him, the syllable is universally the stress bearing unit. Hayes says that vocalic devoicing provided evidence for this; because geminate integrity would not allow devoicing to affect only one half of a long vowel, and because a sequence of two identical vowels can be split by devoicing (just like half of a diphthong), then two adjacent vowels belong to different syllables. However, this argument ignores the fact that devoicing can affect half of a diphthong, not just one of a pair of identical vowels. Therefore, geminate integrity arguments are irrelevant in this domain. I argue in the full paper that “long” vowels are in fact a sequence of two, tautosyllabic identical vowels, *pace* the OCP.

Second, Hayes ignores Sapir’s (1930) evidence from three sources that long vowels and diphthongs had to be tautosyllabic. First was Sapir’s report of “direct phonetic observation.” Second, when describing diphthongs, he mentioned that, whereas long diphthongs (i.e., diphthongs consisting of a long vowel followed by a short vowel) were frequent, they were “only secondary [allophonic] developments of short diphthongs; no three-moraed syllables are allowed” (Sapir, p. 7).

The third and most convincing area supporting Sapir’s analysis of syllable structure is the behavior of vowel sequences across morpheme boundaries. Stem final vowels and suffix initial vowels were both preserved when they met across a morpheme boundary. However, if the stem final vowel was /aa/ and the following vowel was /i/, the first vowel shortened. Sapir says that “this [shortening] is because organically long diphthongs are not allowed in Southern Paiute” (p. 17). This is readily accounted for by Sapir’s analysis of SP syllables as allowing up to only two vowels within a syllable. We must analyze the resulting shortened /a/ and /i/ as tautosyllabic to account for this shortening phenomenon.

Generalizing from the above, a sequence of two vowels is tautosyllabic, even though this may result in a foot boundary in the middle of a syllable. SP thus provides empirical evidence against the universality of the syllable as the universal stress bearing

unit, and it casts doubt on the validity of the prosodic hierarchy. This analysis, if valid, constitutes evidence in favor of the Halle/Idsardi approach, where the metrical plane is orthogonal to the syllable plane.

The full paper goes into further arguments in favor of the analysis, alluded to above, of foot and syllable in SP, by focussing on the processes that account for vocalic devoicing and geminate simplification. An OT account is compared with a rule based analysis; a version of OT that assumes the prosodic hierarchy must be modified by adding constraints that prohibit foot boundaries from bisecting syllables. This appears to be a serious, although perhaps not insurmountable, problem for OT. Furthermore, SP phenomena not mentioned here suggest that geminates must not be analyzed as moraic.

If the analysis of SP sketched above is valid, why is it so rare among the world's languages? I suggest that this is a rare phenomenon because language learners anticipate that foot boundaries will coincide with syllable boundaries, and must be presented with positive evidence to the contrary in languages like SP.

How did SP develop such a marked state of affairs, unique in Shoshonean? Diachronically, SP apparently lose intervocalic nongeminate /n/, /s/, and /h/. I propose tentatively that many long vowels and diphthongs did originally belong to different syllables, separated by a consonant that subsequently deleted; at this stage, all foot boundaries coincided with syllable boundaries. These sequences were subsequently reanalyzed as tautosyllabic.

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