

## Kashaya foot extrametricality as post-accentuation

Eugene Buckley, University of Pennsylvania

Kashaya has a complex but regular metrical system (Oswalt 1961, 1988, Buckley 1994, 1997). I focus here on examples of one type, but the conclusion applies more generally. For this set of data, the leftmost syllable is **extrametrical**, and **iambic feet** are constructed after it; only the accented, main stress foot is shown. This pattern is found within a word (1) and also in a phrase-level accentual phrase including an additional word (2) or enclitics (below).

- |     |                             |                   |                                |
|-----|-----------------------------|-------------------|--------------------------------|
| (1) | cuʔdán-t <sup>h</sup> umeʔ  | ‘don’t shoot! PL’ | <cuʔ>(dán)t <sup>h</sup> umeʔ  |
|     | cuʔdan-á:du                 | ‘keep shooting’   | <cuʔ>(daná:)du                 |
| (2) | bihšé hc <sup>h</sup> oyiʔ  | ‘the deer died’   | <bih>(šéh)c <sup>h</sup> oyiʔ  |
|     | bihše bóʔoʔk <sup>h</sup> e | ‘will hunt deer’  | <bih>(šebó)ʔoʔk <sup>h</sup> e |

An unusual aspect of the system is that, when the second syllable contains a **long vowel**, accent falls on the next foot. This too occurs in a word (3) or a phrase (4, 5).

- |     |                            |                             |  |
|-----|----------------------------|-----------------------------|--|
| (3) | maʔa:-qáʔt <sup>h</sup> uʔ | ‘don’t let it hex you!’     | <ma> <u>t<sup>h</sup>a:</u> (qáʔ)t <sup>h</sup> uʔ |
|     | maʔa:-wiyé: to             | ‘it hexed me’               | <ma> <u>t<sup>h</sup>a:</u> (wiyé:)to              |
| (4) | ʔima:tá =ʔyowam            | ‘former woman NOM’          | <ʔi> <u>ma:</u> (táʔ)yowam                         |
|     | ʔima:ta nášoya             | ‘young woman’               | <ʔi> <u>ma:</u> (taná)šoya                         |
| (5) | kulu: =šá: =ʔe: ma         | ‘you’re an expert woodsman’ | <ku> <u>lu:</u> (šá:)ʔe:ma                         |
|     | kulu: ʔamá: =tol           | ‘in the wilderness’         | <ku> <u>lu:</u> (ʔamá:)tol                         |

Any analysis must ensure that the shift occurs only **once**: with multiple long vowels in sequence, accent remains on the second (5). This pattern has been treated as **FOOT EXTRAMETRICALITY** (Buckley 1994 *et seq.*), limited to one constituent by the Peripherality Condition; or by rightward accent shift that applies one time (roughly, Oswalt 1961).

Depending on suffixation, a long vowel may end up in a closed CV:C syllable, in which case it **shortens** to CVC. Here the trigger of shift is not present on the surface, but there is ample evidence for its underlying length in the morpheme at hand: thus some accent shifts are **opaque**.

- |     |                   |                          |                           |
|-----|-------------------|--------------------------|---------------------------|
| (6) | šula:m-áʔba       | ‘would get sick’         | <šu> <u>la:m</u> (áʔ)ba   |
|     | šula(:)m-qám      | ‘the one who seems sick’ | <šu> <u>lam</u> (qám)     |
|     | šula(:)m-wiyé: to | ‘I got sick’             | <šu> <u>lam</u> (wiyé:)to |

A related set of facts has not been treated in the metrical literature, and is not highlighted in the original grammar. We expect a **two-syllable word ending in a coda consonant** to take final stress, regardless of what follows, as in (7). But in some such words, the accent shifts onto the next element – to a heavy third syllable, otherwise to the fourth (8, 9).

- |     |                               |                               |   |
|-----|-------------------------------|-------------------------------|---|
| (7) | q’ayál =yac <sup>h</sup> ma   | ‘duck NOM.PL’                 | <q’a>(yál)yac <sup>h</sup> ma             |
|     | šeʔéʔ cadu                    | ‘look at the pot’             | <še>(ʔéʔ)cadu                             |
| (8) | ʔacaʔ =yác <sup>h</sup> ma    | ‘person NOM.PL’               | <ʔa> <u>caʔ</u> (yác <sup>h</sup> )ma     |
|     | ʔacaʔ =yacóʔk <sup>h</sup> e  | ‘person BEN’                  | <ʔa> <u>caʔ</u> (yacóʔ)k <sup>h</sup> e   |
| (9) | calel cáhnoʔt <sup>h</sup> uʔ | ‘don’t speak haphazardly!’    | <ca> <u>lel</u> (cáh)noʔt <sup>h</sup> uʔ |
|     | calel cic’í:de: ma            | ‘you’re doing it haphazardly’ | <ca> <u>lel</u> (cic’í:)de:ma             |

For Oswalt, these words contain an **underlying long vowel**, e.g. /cale:l/, that eventually shortens, so that the accent is shifted by the same mechanism as in opaque forms (6). The difference is that

there is no other evidence for the long vowel; these are non-verb stems, and do not have the morphological alternations that enable the long vowel to surface in some contexts.

These long vowels are not only quite **abstract**, but also make a **prediction** that is not borne out. There is no morphologically simple word of the shape \*/?ima:nta/ (cf. ?ima:ta in (4)) that patterns for accent as though the medial vowel were abstractly long. Instead, such words are always stressed on the second syllable, e.g. *šahp<sup>h</sup>énta* ‘bluebird’.

This points to an intimate connection between the idiosyncrasy of words like ?aca? and the right edge of the word. I propose that they are actually **POST-ACCENTING**, with a word-level requirement that the accent fall on the **foot that is aligned with its right edge**. Since this is not based on a long vowel, there is no abstraction, and no prediction that a medial syllable could be the locus of the idiosyncrasy. (Only C-final words can have this irregular post-accentuation, presumably because a V-final word has a surface contrast available between long V: which independently causes shift, and short V which does not.)

Additional support for post-accentuation as alignment comes from another observation. A glottal stop at the beginning of an enclitic (e.g., copular /?e:/, nominative /?emu/) surfaces as glottalization of a preceding obstruent, and disappears after a sonorant. In either case, that consonant **resyllabifies** as an onset.

- |      |                    |   |                          |                    |
|------|--------------------|---|--------------------------|--------------------|
| (10) | /yahmoʔ =?emu/     | → | <yah>(moʔ'é)mu           | ‘the panther NOM’  |
|      | /siʔbal =?e: mito/ | → | <siʔ>(balé:)mito         | ‘you are far away’ |
| (11) | /?aca:ʔc =?emu/    | → | <ʔa>(cac'é)mu            | ‘the person NOM’   |
|      |                    |   | *<ʔa> <u>ca</u> :(c'émú) |                    |

In (11), ?aca? shows its underlying final /c/.

The supposed long vowel in /?aca:c/ does not surface here, even though the syllable is open. And strikingly, **accent shift has disappeared** (11). This is uniformly the case whenever resyllabification occurs, including as the result of epenthesis (12), but accent shift still occurs with a clitic that does not cause resyllabification (13, and above in 8).

- |      |                                      |   |   |                     |
|------|--------------------------------------|---|---|---------------------|
| (12) | /?aca:ʔc =?yow-a-l/                  | → | <ʔa>(cac'i)yowal                        | ‘former person ACC’ |
|      |                                      |   | *<ʔa> <u>ca</u> (c'iyó)wal              |                     |
| (13) | /?aca:ʔc = <sup>th</sup> in =?e: mu/ | → | <ʔa> <u>ca</u> ?( <sup>th</sup> iné:)mu | ‘it’s not a person’ |

I argue that the post-accentuation of ?aca? is ineffectual when the final consonant of the word resyllabifies, because the right edge of that word is not aligned with the following foot.

I extend this analysis to /CV:/ feet; they trigger post-accentuation at the **foot level**, and so can have an effect word-internally. This approach does not rely on foot extrametricality, which, unlike syllable extrametricality, has weak cross-linguistic support (McCarthy 2003). It also addresses opacity (6), since the cause is transferred from the long vowel to alignment. Finally, the limit on skipping a single long vowel is handled easily: where multiple demands for post-accentuation are present, preference goes to the **leftmost**, in accordance with the general end-rule-left orientation of the language.

---

**Buckley**, Eugene. 1994. Persistent and cumulative extrametricality in Kashaya. *NLLT* 12, 423-464. • **Buckley**, Eugene. 1997. Optimal iambs in Kashaya. *Rivista di Linguistica* 9, 9-52. • **McCarthy**, John. 2003. OT constraints are categorical. *Phonology* 20, 75-138. • **Oswalt**, Robert L. 1961. *A Kashaya grammar (Southwestern Pomo)*. Dissertation, UC Berkeley. • **Oswalt**, Robert L. 1988. The floating accent of Kashaya. In William Shipley (ed), *In Honor of Mary Haas*. Mouton de Gruyter, Berlin, pp. 611-621.