

## Revisiting the TBU in an ABC+Q approach to tone

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In this talk, we consider some of the consequences of the extension of ABC to tonal phenomena (e.g., Shih 2013/ms.; Inkelas & Shih 2013; Shih & Inkelas 2014). Applying a surface correspondence theory to tone offers a new angle on long-standing questions in the tonal domain: namely, what are tone-bearing units (TBU), and how are they defined for tonal interactions?

We argue here that an ABC approach to tone offers answers to these open questions. In particular, we advocate for the use of ABC enhanced with Q theory (ABC+Q), developed by Inkelas & Shih (2013, 2014). In Q theory, each segment  $Q$  is representationally subdivided into three temporally-ordered, quantized subsegments  $q$ , each capable of bearing its own distinctive features. Each  $q$  roughly correlates with phonetic onset ( $q^1$ ), target ( $q^2$ ), and release ( $q^3$ ) landmarks of a segment (cf. Gafos 2002:271).

(1) For each segment  $Q$ :  $Q \rightarrow Q(q^1 q^2 q^3)$

- |    |                                |  |  |
|----|--------------------------------|--|--|
| a. | Vowel with triple tone contour | $V(\grave{a}^1 \acute{a}^2 \grave{a}^3)$ | e.g., Mende $mb\grave{a}^{\wedge}$ ‘companion’ |
| b. | Prenasalized affricate         | $C(n^1 t^2 \int^3)$                      | e.g., $^n t\int$                               |
| c. | Aspirated affricate            | $C(t^1 \int^2 h^3)$                      | e.g., $t\int^h$                                |

Under the ABC+Q approach presented in this talk, we draw a distinction between two properties of TBU that have often been conflated in traditional tonal analyses: (1) the unit of tonal association, and (2) the set of units that participate in tone interactions. In ABC+Q, tone universally associates to the smallest unit of representation—subsegments ( $q$ )—, reflecting the presence or absence of pitch that afflicts every part of every segment. The relevant set of units that participate in tone interactions, then, is defined in ABC+Q for any given language by the same kind of proximity and shared featural and structural similarity properties that underlie surface correspondences for harmony processes in general. For tone, the relevant properties may include shared membership within a syllable or mora—as with traditional TBU. But the ABC approach also predicts that segments and subsegments—that is, non-traditional TBU—will interact in tone based on other types of similarity and proximity as well.

The talk presents a detailed case study from Dioula d’Odienné (Mande, Côte d’Ivoire; Braconnier 1982, 1983; Braconnier & Diaby 1982), exploring the catalyzing effect that (sub)segmental featural similarity can have on tone interaction. The Dioula d’Odienné case study, in which *onset* consonants and vowels interact together with tone, will demonstrate that the relevant set of units that participate in tone interactions in a given language must be defined on the grounds of similarity and proximity. We then return to the larger question of defining TBU from the perspective of ABC+Q, and motivate the argument that subsegmental units ( $q$ ) are the sites of tone association via evidence from contour tone formation processes.