Reduplicative Allomorphy and Language Prehistory in Uto-Aztecan

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Although Uto-Aztecan is one of the largest and most well-established language families of North America, the internal organization of sub-groups within Uto-Aztecan is still a matter of intense debate. At the center of this discussion is whether or not the geographical split of Uto-Aztecan into "Northern" and "Southern" branches can also be considered to be a genetic split. Also at issue is the legitimacy of various proposed sub-groups within these two larger branches. Following the call to find evidence beyond shared sound changes in the establishment of genetic relationships heralded by such scholars as Thomason and Kaufman (1989), Campbell (1997), and Dixon (1998), among many others, this paper looks at patterns of synchronic reduplicative allomorphy in an effort to identify shared allomorphy patterns, and thus genetic relationships, among the languages of Uto-Aztecan.

In the most well-articulated formulation of Uto-Aztecan (UA) comparative grammar to date, Langacker (1977:128) notes that "virtually every UA language displays verbal reduplication of some kind, and in some cases a variety of patterns", but he was unable at that time to suggest a definitive reconstruction for the Proto-Uto-Aztecan (PUA) reduplication pattern(s). In this paper I survey evidence which suggests that PUA must have had a rich system of reduplicative allomorphy, with at least four distinct patterns of reduplication. The primary evidence comes from Yaqui, a Southern Uto-Aztecan language, where three reduplication patterns surface for the expression of a single semantic "gram-type": habitual action. These allomorphs are syllable, foot, and bare mora (i.e. morphological gemination or consonant doubling), as shown in (1)a-c, respectively:

### Table 1: Allomorphs of Yaqui "habitual"

<table>
<thead>
<tr>
<th>Reduplication type</th>
<th>Base</th>
<th>Reduplicated form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. syllable:</td>
<td>vú.sa</td>
<td>Ævu.vú.sa</td>
<td>'awaken'</td>
</tr>
<tr>
<td></td>
<td>kórate</td>
<td>Æko.kórate</td>
<td>'build a fence'</td>
</tr>
<tr>
<td>b. foot:</td>
<td>kínakte</td>
<td>Ækina.kí.nak.te</td>
<td>'grimace'</td>
</tr>
<tr>
<td></td>
<td>kúpikte</td>
<td>Ækupi.ku.pík.te</td>
<td>'blink eyes'</td>
</tr>
<tr>
<td>c. mora-affixation:</td>
<td>máveta</td>
<td>Æmáv.ve.ta</td>
<td>'receive'</td>
</tr>
<tr>
<td></td>
<td>húha</td>
<td>Æhú.ha</td>
<td>'sting'</td>
</tr>
</tbody>
</table>

Since the tonal patterns of the unreduplicated forms kórate (1a), kínakte (1b), and máveta (1c) are identical, it cannot be the case that pitch-assignment is the sole determinant of the shape of these reduplicants. That is, in Yaqui, the shape of a reduplicant is largely unpredictable from the base's unreduplicated form.

Furthermore, Yaqui exhibits a variation on the syllable-size reduplicant, traditionally called "secondary" reduplication (Escalante 1985, Demers et al. 1999, etc.). In these cases, when a reduplicant is heavy it triggers non-habitual semantics (typically iterativity or a meaning idiosyncratic to a particular verb). The heavy syllable requirement is met via consonant gemination from base to reduplicant, as in (2):
In this paper I show that the three unpredictable allomorphs of Yaqui habitual reduplication (syllable reduplication, foot (or full stem) reduplication, and morphological gemination) each have cognates in various other Uto-Aztecan languages. Presumably, the original semantic functions of each different reduplication pattern from PUA have been generalized to one semantic function in Yaqui: the expression of habitual action. Further, there is comparative evidence that the pattern of so-called "secondary" reduplication in Yaqui also has cognates in other Uto-Aztecan languages. I argue that while these varying reduplication patterns would provide evidence for sub-groupings within the family if it could be demonstrated that certain patterns were limited only to certain languages, the actual distribution of the patterns in both the Northern and Southern branches does not allow for any particular sub-groupings. Thus, the lack of specific shared morphological characteristics in the domain of reduplication suggests that each of these patterns must have existed in PUA.

In addition to the relevance of the Uto-Aztecan reduplication patterns for comparative linguistics, the data surveyed in this paper are also relevant to theoretical approaches to reduplication. First, the divergent realizations of the reduplicative allomorphs in different Uto-Aztecan languages support a markedness approach to reduplication. For instance, "secondary" reduplication is variably realized by consonant gemination (Yaqui), vowel-lengthening (Tohono O'odham), or epenthesis of an unmarked consonant (Guarijío). This is what we would expect from an approach to reduplication based on constraint-ranking where a bare mora is realized according to independently-attested markedness constraints, but not from an approach which ignores prosody and insists necessarily upon direct mapping between specific consonants and vowels in different languages.

Secondly, the fact that three reduplicative morphemes realize a single gram-type (habitual) in Yaqui, at the same time that they realize different gram-types (depending upon the lexical item), argues against the claim of Bybee et al. (1994) that "reduplication can grammaticize more than once in the history of a language, and that . . . the form and meaning of each one identifies its age" (173, emphasis added). Rather than assuming a priori that, within a given language, smaller reduplicants have more general meanings than more full reduplicants, we must consider the language-specific trajectory of allomorphic reduplication patterns. As this paper shows, from a comparative perspective, different reduplicative morphemes (i.e. grams) can be maintained while their semantic functions can be merged into a single gram-type. While it is possible that this is a result of language obsolescence, the recognition of this process is important for theories of reduplication and language change.

Finally, the Uto-Aztecan evidence surveyed here is relevant to theories of morphology. I claim that the historical stability of the phonological forms of the various reduplicants within Uto-Aztecan supports the view that reduplicative morphemes themselves are morphological pieces, rather than mere phonological strings which result from some phonological operation, such as a re-write rule triggered by a null affix (cf. Raimy 2000).
References