

## Challenges of Cushitic reduplication for Generalized Template Theory

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In a number of ways, Cushitic reduplication is of interest to our understanding of the phenomenon of reduplication. From an extensive typological investigation of reduplication phenomena in Cushitic languages (Mous 2008), we learn that the typical patterns are CVC initial reduplication (1) and C final reduplication (2):

- (1) CVC-: Somali plural of adjective (Saeed 1999:49) and Banti (1988:213)
- |                       |                    |              |
|-----------------------|--------------------|--------------|
| <i>xarxardh-an</i>    | <i>xardh-an</i>    | ‘decorated’  |
| <i>kulkulul</i>       | <i>kulul</i>       | ‘hot’        |
| <i>fiicfiicán</i>     | <i>fiicán</i>      | ‘good, fine’ |
| <i>dheerdhèer</i>     | <i>dhèer</i>       | ‘tall’       |
| <i>’ad’adag</i>       | <i>’adag</i>       | ‘hard’       |
| <i>xirxir-an</i>      | <i>xir-an</i>      | ‘tied up’    |
| <i>dildillaacs-an</i> | <i>dillaacs-an</i> | ‘burst open’ |
| <i>taagtaag-an</i>    | <i>taag-an</i>     | ‘stand’      |
- (2) -C: The Burunge plural suffix *-aC<sub>1</sub>-a* Kiessling (1994:50-51, 58)
- |                      |                    |            |
|----------------------|--------------------|------------|
| <i>hatlatla</i> (f)  | <i>hatli</i> (m)   | ‘savannah’ |
| <i>korara</i> (f)    | <i>kori</i> (m)    | ‘year’     |
| <i>murungaga</i> (f) | <i>murungu</i> (m) | ‘navel’    |
| <i>maysasa</i> (f)   | <i>maysu</i> (m)   | ‘pestle’   |
| <i>duudada</i> (f)   | <i>duudu</i> (m)   | ‘river’    |

Work on reduplication in Optimality Theory (OT) – notably, McCarthy & Prince (1995), Urbanczyk (2006), Downing (2006) – has argued that the fixed shapes (like CV or CVC) of reduplicants should follow from the interaction of general constraints. For example, CV reduplicants are optimal if other affixes in the language are no larger than a syllable and if CV is the least marked syllable. The constraints defining the CV shape of the reduplicant (RED) in this so-called generalized template (GTT) approach should, further, be incorporated into a single, general constraint ranking for the language, which optimizes less marked structure in the RED than in non-reduplicative contexts: Non-reduplicative constraints >> Markedness constraints >> reduplicative constraints.

We show in this talk that reduplication in Cushitic languages presents challenges for the GTT approach. First, the CVC and C-final reduplicants cannot be characterized as the typical unmarked syllables of Somali. Further, the vowels in the C-final pattern are not the unmarked vowels. Our proposal: we adopt the theoretical approach argued for in Downing (2006) and propose that reduplication in the nominal domain shows complex templatic patterns with insertion of specific vowels, which we relate to canonical inflected root or root compounding structures. This approach also accounts for why, in languages like Kambaata, for example, C<sub>1</sub>V<sub>1</sub>C<sub>1</sub>- reduplication is used not only for distributed numerals but also for plural of adjectives: e.g. *qáq-qacú(-ta)* from *qacú(-ta)* ‘thin’; *qáq-qahú(-ta)* from *qahú(-ta)* ‘small’ (Treis 2008: 289). It is expected in this approach that more than one reduplication pattern could involve compounding and target the typical root shape.

A second challenge is that there seems to be a distinction between  $C_1V_1C_1$  and  $C_1V_1C_2$  reduplication. While the latter uncontroversially suggests a root shape, the former is problematic as it alternates with CV and is not immediately connected to the canonical prefix shape. For example Rendille has  $C_1V_1C_1$ - reduplication for distributed numerals, and this surfaces as  $C_1V_1$  reduplication in the case of reduplication of (ʔ)afár ‘four’ yielding (ʔ)aʔafár because the glottal stop does not occur as a geminate. Moreover, in Kambaata distributive numerals,  $C_1V_1$ - reduplication is a phonologically conditioned variant of  $C_1V_1C_1$ - reduplication that occurs when the second radical of the numeral contains a cluster (Treis 2008: 311). In GTT, one must be able to categorize different reduplicants as either CVC Roots or CV Affixes in order to account for their fixed shape in a uniform constraint ranking, yet a  $C_1V_1C_1 \sim CV$  reduplicative form has both root-like and affix-like properties. Our proposal: all reduplications with CVC variants are roots, and the CV alternants are optimal in some contexts due to high-ranking phonological constraints.

A final, related challenge is that the same morphological meaning may be realized with more than one reduplicative shape. For example, in Kambaata CVC- is generally used to form the plural of adjectives (e.g., qáq-qacú(-ta) from qacú(-ta) ‘thin’), but deverbal adjectives in -m geminate this final m – a variant of -C final reduplication – to form the plural: wiim-m-áta full-PL1-F.ACC from wiim-áta full-F.ACC, (Treis 2008: 265). Our proposal: reduplicative morphemes, like other morphemes, can have lexically specified allomorphs. Each allomorph has a different output shape, as each is associated with a distinct morpheme-construction-specific constraint ranking (e.g., co-phonology; Inkelas & Zoll 2005).

## References

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