

## Reduplication with phonological fixed segmentism – the emergence of the unmarked tone in Cantonese

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When a reduplicative morpheme (*a.k.a.* reduplicant, abbreviated RED) contains invariant segments (or tones or features) besides copying phonological make-up from the base, this phenomenon is known as fixed segmentism (Alderete, Beckman, Benua, Gnanadesikan, McCarthy, Urbanczyk, 1999). Following Alderete *et al.* (1999) and the literature reviewed there, phonological fixed segmentism can be analyzed under the OT rubric of The Emergence of The Unmarked (TETU) (McCarthy & Prince, 1994).

In Cantonese, the attenuative reduplication construction comprising a morphosyntactic form [Base +RED + *tei*2] exhibits a complementary phenomenon of either tonal identity between the Base and RED, or a mismatch of tone between the segmentally identical Base and RED. These phenomena are exemplified in Table (1):

(1)

| Reduplication construction that features tonal identity between base and RED | Reduplication construction that features tonal mismatch between base and RED |
|--|--|
| a. sik1 <u>sik</u> 1 <i>tei</i> 2 ‘kind of know’                             | *sik1 <u>sik</u> 2 <i>tei</i> 2 ‘kind of know’                               |
| b. pɛu2 <u>pɛu</u> 2 <i>tei</i> 2 ‘slightly full’                            | pɛu2 <u>pɛu</u> 2 <i>tei</i> 2 ‘slightly full’                               |
| c. duŋ3 <u>duŋ</u> 3 <i>tei</i> 2 ‘slightly cold’                            | duŋ3 <u>duŋ</u> 2 <i>tei</i> 2 ‘slightly cold’                               |
| d. sɔ4 <u>sɔ</u> 4 <i>tei</i> 2 ‘slightly foolish’                           | sɔ4 sɔ2 <i>tei</i> 2 ‘slightly foolish’                                      |
| e. man6 <u>man</u> 6 <i>tei</i> 2 ‘slightly slowly’                          | man6 <u>man</u> 2 <i>tei</i> 2 ‘slightly slowly’                             |

The dissociation between segmental and suprasegmental phenomena in the right hand column in (1), more precisely described by Chan (2006) that there is total reduplication without tonal repetition, can be challenging to McCarthy and Prince’s (1995) phonologically-motivated Correspondence Theory. The tone change in (1), however, is predictable. RED will uniformly acquire the mid-rising contour tone, i.e. tone 2, thus an instance of phonological fixed segmentism in the tonal domain. Arguably, this asymmetrical distribution of tone in the reduplication construction indicates tone 2 is the consequence of the reduplicative TETU. In an OT framework, this paper addresses two important questions: 1) What is the constraint interaction among faithfulness and markedness constraints that favours tone 2 to be the default when there is tonal alternation, as exemplified in *Ib*, *Ic*, *Id* and *Ie*; and more importantly, 2) What prevents the high level tone, i.e. tone 1, to be neutralized to tone 2 in the RED of *Ia*? More perplexing to the discussion is that high tones tend to be typologically more marked (Maddieson, 1978; Hyman & Russell, 1974). Interpretations to the tonal phenomena in Cantonese reduplication may then suggest that Cantonese tonal phonology is typologically unusual, or they counter the theoretical predictions sanctioned by TETU. Implications for markedness theory, particularly the architecture of tonal representations and computations in theories of phonology and prosodic morphology will be discussed.

### References

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