

‘Minimal’ template satisfaction — a prosodic analysis of ‘initial gemination’

Toyomi Takahashi
Surugadai University

A great deal of cross-linguistic investigation couched in Prosodic Morphology has given significant insights into the understanding of reduplication (cf. McCarthy & Prince 2001, and references therein). The assumption that the well-formedness of reduplicants is prosodically constrained seems to have been well borne out by a body of empirical evidence.

However, an apparent challenge to this assumption is raised by ‘initial gemination’ commonly observed in Micronesian languages such as Marshallese (cf. Moravcsik 1978), in which reduplication reportedly involves a non-prosodic reduplicative prefix comprising a single consonant: e.g. *l-liw* ‘angry’. If reduplicative templates are allowed to directly refer to melodic units, any arbitrary string can be stipulated as a reduplicant, and this leads to a severe loss of restrictiveness. In this regard, Harrison (1973) makes an instructive observation that two dialects of Marshallese differ in the way they phonetically break up initial geminate consonants into two separate syllables by inserting an excrescent vowel: for example, *bbək* ‘swollen’ is described to be interpreted as [ɛb.bək] in the Ratic dialect and as [bʌ.bək] in the Ratak dialect.

In this paper, I will argue that initial gemination involves a syllable-size reduplicant that is satisfied **minimally**: that is, the process copies barely enough melodies of the base to establish the structural identity of the reduplicant. Given this argument, I will further propose that the difference between the two dialects described above should stem from the different weight specifications of the templates: the reduplicant in Ratic is a heavy syllable ($\sigma_{\mu\mu}$), while it is a light syllable in Ratak (σ_{μ}). Demonstrating that the structural identity of a heavy syllable is minimally ensured by the presence of a ‘coda’ consonant, I will claim that, in descriptive terms, the reduplicative templates in the two dialects, Ratic and Ratak, are respectively defined as /@C/ and /C@/, in which ‘@’ and ‘C’ stand for a nucleus with no melodic content and a consonant copied from the base, respectively. The example word *bbək* is thus represented as /@b.bək/ in Ratic and as /b@.bək/ in Ratak; I assume that the reported excrescent vowels (the prosthetic vowel [ɛ] in Ratic and the epenthetic vowel [ʌ] in Ratak) should reflect the structural difference between these representations.

I will formalise the notion of ‘minimal’ template satisfaction by integrating assumptions from two theoretical frameworks. On the one hand, the reduplicative templates containing a nucleus with no melodic content, or an **empty nucleus**, will be couched in the syllable theory developed by Kaye et al. (1990). On the other hand, resorting to the Optimality Theoretic notion of constraint interaction (Prince & Smolensky 1993), I will argue that the process of copying barely sufficient melodies results from the constraint *STRUC crucially dominating Max-BR. The permutation of this constraint ranking gives rise to the notion of ‘maximal’ template satisfaction, and I will demonstrate that such a ranking, with the same reduplicative

templates ($\sigma_{\mu\mu}$ and σ_{μ}), accounts for the comparative formation (e.g. *dák-dakkél*) and the plural formation (e.g. *da-dakkél*) in Ilokano (cf. Bernabe et al. 1971; Hayes & Abad 1989).

References

- Bernabe, E. J. F., V. Lapid & B. Sibayan (1971). Ilokano lessons. Honolulu: The University Press of Hawaii.
- Harrison, S. P. (1973). Reduplication in Macronesian languages. *Oceanic Linguistics* 12, 407-454.
- Hayes, B. & M. Abad (1989). Reduplication and syllabification in Ilokano. *Lingua* 77, 331-374.
- Kaye, J. D., J. Lowenstamm & J.-R. Vergnaud (1990). Constituent structure and government in phonology. *Phonology* 7, 193-232.
- McCarthy, J. J. & A. S. Prince (2001). *Prosodic Morphology (ROA version)*. University of Massachusetts, Amherst & Rutgers University.
- Moravcsik, E. A. (1978). Reduplicative constructions. In Greenberg, J. H., C. A. Ferguson & E. A. Moravcsik (eds.) *Universals of human language (vol.3): word structure*. Stanford, California: Stanford University Press, 297-334.
- Prince, A. S. & P. Smolensky (1993). *Optimality Theory: Constraint Interaction in Generative Grammar*. Rutgers University & The Johns Hopkins University.