

Implications of Micronesian reduplication for formal theories of phonology

This paper surveys a range of phonological phenomena in Micronesian languages, and offers a discussion of their implications for theories of phonological derivation, representation, and typology. I discuss reduplication in several Micronesian languages and its consequences for three aspects of phonological theory: templatic morphology, the Prosodic Hierarchy, and moraic representations.

The reduplicative systems of Pohnpeian (Rehg 1981), Mokilese (Harrison 1976), and Chuukese (Goodenough & Sugita 1980) motivate a reconsideration of theories of prosodic morphology. Whereas derivational templatic models (e.g. McCarthy & Prince 1986) are well-suited to the heavy-syllable prefixation of these languages, the template has proven especially troublesome for the Optimality-Theoretic model.

The Pohnpeian pattern of quantitative complementarity and Mokilese misalignment of reduplicants in vowel-initial forms provide empirical evidence against the use of templates in Optimality Theory. In Pohnpeian, monosyllabic stems create reduplicative prefixes with the opposite moraic weight: heavy-light, as in *paa-pa* ‘weave’, and light-heavy, as in *du-duup* ‘dive’. In Mokilese, vowel-initial stems create prefixes which extend across syllable boundaries, as in *an.d-an.dip* ‘spit’.

Neither subpattern works in an output-driven template model, since the prefix’s surface prosodic shape is not constant. Templatic theory also has nothing to say about the quantitative disparity between bimoraic prefixes and monomoraic suffixes in Pohnpeian, Mokilese, and Chuukese. In contrast, I show that the size of reduplicants in each language follows from the interaction of foot structure with general constraints like ALIGN-MORPHEME-FOOT. All affixes are single feet, and all suffixes are monomoraic because each language tolerates unary final feet.

The analysis of reduplication has interesting consequences for the Prosodic Hierarchy, echoing claims by Rehg (1993) and Blevins & Harrison (1999) about the distribution of stressed elements. In particular, the reduplication paradigms and stress patterns both suggest prosodic representations using strictly moraic feet. Indeed, there are instances where foot and syllable boundaries are not perfectly aligned. The Mokilese vowel-initial subpattern is one case; for example, the foot-sized prefix in *an.d-an.dip* spans two syllables. I therefore suggest that the Prosodic Hierarchy should be regarded as a robust tendency instead of an inviolable universal, and that Micronesian prosody offers a rare example of the violability of the principle.

A third implication of Micronesian reduplication is in the representation of moraic consonants. Notably, I discuss the one-root/two-root opposition of geminate structures in representational theories, and show how both are necessary. Indeed, both must be possible in the same language: in Chuukese, initial geminates (*ffɔt*, ‘plant’) must be single segments, while medial ones (*fiffini*, ‘choose’) must be two. In addition, I discuss the often stipulated claim of final-consonant extrametricality in Chuukese, Ponapean, and Mokilese, each of which allows any consonant word-finally, but is much more restrictive of medial codas. I show how extrametrical representations are driven by the prosodic systems of such languages.

I summarize by discussing typological implications. Although I argue for greater flexibility in the representation of prosody and geminates, which predicts a vast typology of possible languages, I argue that some typological gaps are predicted even in overgenerative formal theories.

References

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