

Token Identity Vs. Type Identity

Idsardi and Raimy 2000 (I&R) propose that the representations posited by a learner are constrained by economy considerations. If a child hears a string like the Temiar continuative [sglɔg], two possibilities are available while building the underlying representation of the string. Either the two segments [g] perceived in the string correspond to different tokens of the same type, or they correspond to the same token in the input representation. The analysis of Temiar proposed by I&R leads to the conclusion that repetition of the same token could be the answer in this case, assuming that the child receives no contradictory input—there would be just one underlying /g/ in this form. They further propose that if this type of hypothesis is available, then it must be possible for the learner to represent words with a common sub-sequence as instances of reduplication, even in a language that does not make use of reduplication for morphological purposes. The English word *banana* is given as an example where its possible underlying representation is as in (1).

Here the link from the last instance of <a> corresponds to a loop of the type used for reduplication. I&R suggest that other considerations such as metrical information (stress assignment in the given example) would influence the learner in his learning strategy.

Such a proposal makes predictions about languages that show overapplication and underapplication of phonological processes in reduplicated forms. Take for instance the following hypothetical surface forms: [imat], [itat]. The representation of the first poses no problem to the learner in regards to the identity of the segments. In the case of the second, the form [itat] could contain two instantiations of the same token or two different tokens of the same type [t]. If a form like this undergoes full reduplication, then the output either instantiates four tokens of a single underlying /t/, or else two pairs of tokens, each of two different underlying /t/s. This distinction will be relevant in cases of overapplication, since full economy of representation predicts that all four surface [t]s could be affected by the same rule, even if only one of them appears in the correct environment.

Suppose a language L has total reduplication as well as an overapplying rule that assibilates $t > t^s$ before i ; then the reduplicated form /itatitat/ would be predicted to surface in L as [itat^sitat^s], if the two root /t/s are different, but as [it^sat^sit^sat^s] if the four surface [t]s are underlyingly the same segment (token identical).

Our reading of the literature is that overapplication is understood to affect only correspondent segments in the base and reduplicant, and thus L could have only the form [itat^sitat^s]. This interpretation, as well as our preliminary survey of the literature, suggests that full economy of representation is not utilized in setting up representations.

Furthermore, notice that the form [it^sat^sit^sat^s] derived from an underlying representation that contains a single token of /t/ would not actually surface as such according to the *completeness* principle (Fitzpatrick 2006b), but as [it^sit^sat^s] as can be seen in (2).

We adduce a further argument against economy of representation based on problems that arise in linearizing reduplicated forms with regards to the completeness principle and the formalization of the procedure. Some empirical arguments in favour of economy of representation could be found in Fitzpatrick (to appear). If the evidence turns out right, the impact on the linearization procedures is non-negligible. We tackle problems of this type and discuss their impact on the linearization algorithm.

Examples

(1) START \rightarrow b \rightarrow a \rightarrow n \rightarrow a \rightarrow END

(2) START \rightarrow i \rightarrow t \rightarrow a END

Here the dotted arrow represents the reduplication link added by the morphology and would thus be preferred over the *t to a* link according to either completeness or recency.

References

Chomsky, Noam and Morris Halle 1968. The Sound Pattern of English. New York: Harper & Row.

Fitzpatrick, Justin and Andrew Nevins 2006a. Phonological Occurrences: Relations and Copying. To appear.

Fitzpatrick, Justin. A Concatenative Theory of Possible Affix Types. To appear in A. Salanova (ed.), *Papers from EVELIN I*, MIT Working Papers in Linguistics.

Fitzpatrick, Justin 2006b. Sources of Multiple Reduplication in Salish and Beyond. In Shannon T. Bischoff, Lynnika Butler, Peter Norquest, and Daniel Siddiqi (eds.), *Studies in Salishan*, MIT Working Papers on Endangered and Less-familiar Languages 7, 211-240.

Gillon, Brendan 2006. Sets, Orders and Lattices, to appear.

Hale, Mark and Charles Reiss 2000a. Phonology as Cognition. In *Phonological Knowledge: Conceptual and Empirical Foundations*, N. Burton-Roberts, P. Carr & G. Docherty (eds.) Oxford University Press. 161-184.

Hale, Mark and Charles Reiss 1998. Formal and Empirical Arguments Concerning Phonological Acquisition. *Linguistics Inquiry*, Volume 29, Number 4: 656-683.

Idsardi, William and Eric Raimy 2000. Reduplicative Economy. Ms. University of Delaware.

McCawley, James D. 1979. On the Role of Notation in Generative Phonology. in *Adverbs, Vowels, and Other Objects of Wonder*. University of Chicago Press.

Raimy, Eric 2000a. The Phonology and Morphology of Reduplication. Berlin: Mouton de Gruyter.

Raimy, Eric 2000b. Remarks on Backcopying. *Linguistics Inquiry* 31: 541-552