The double identity of doubling in phonology

Surface phonological forms such as banana are open to conflicting linguistic interpretations — either as products of morphological reduplication, such as panána ‘run’ vs. pána ‘chase’ in Manam (Lichtenberk 1983), or as exponents of coincidental phonological identity, as in the English banana case. These two representations, however, are each subject to distinct constraints. While phonological identity violates the OCP, and it can span across intermediate (noncontiguous) elements (e.g. nasalization in Kikongo: tu-nik-i → tuni-kini ‘we ground’ (Rose & Walker 2004)), morphological reduplication incurs no OCP violations. However, morphological reduplication (but not phonological identity) is constrained by CONTIGUITY (McCarthy & Prince 1995). For example, the Hebrew xala’ ‘weak’ gives rise to xala’la ‘weakly’, not xala’xa, as xa is not a contiguous part of xala’. Our research examines whether speakers enforce the CONTIGUITY constraint even when it is unattested in their language, and whether such applications are selective to the morphological level (Bat-El 2006).

As a first step, we examine the sensitivity to CONTIGUITY in Hebrew—a language in which morphological reduplication is prevalent. To determine whether Hebrew speakers enforce CONTIGUITY, we elicited rating of three types of novel words. One type had licit reduplication that satisfies CONTIGUITY (e.g. ploklok), a second reduplicated form violated CONTIGUITY (e.g. plokpok) whereas the control had no reduplication (e.g. plok-mot). Results showed that Hebrew speakers were sensitive to CONTIGUITY, as they favored licit reduplication to illicit- and no-reduplication controls.

To determine the origin of this restriction—whether it is solely due to linguistic experience, or to universal grammatical principles—we next probed for similar restrictions among speakers of English—a language that does not systematically use morphological reduplication. A series of rating experiments found no effects of CONTIGUITY. In addition, English speakers rated ploklok-type forms as less acceptable than controls, suggesting they viewed them as exponents of phonological identity.

The indifference of English speakers to CONTIGUITY could either suggest that (a) CONTIGUITY is language-particular, not universal; or (b) the enforcement of CONTIGUITY restrictions hinges on the analysis of reduplication as a morphological operation, and that people require experiential triggers to entertain a morphological analysis.

To distinguish between these possibilities, our final experiment presented the same materials in a morphological context. Participants first saw the base form (e.g. plok) along with a picture of a novel object. They were next presented with the same object in a smaller size, and asked to select its name (e.g. ploklok vs. plokpok). Results now showed significant preference for CONTIGUITY (i.e. ploklok > plokpok). In addition, the dislike of ploklok (found with bare phonological forms) has now disappeared.

Taken as a whole, our findings suggest that English speakers are sensitive to CONTIGUITY, but they selectively enforce it only at the morphological level. CONTIGUITY is thus broad (perhaps universal) in its application, yet narrow in scope (i.e. it is selective to the morphological, but not phonological level). The existence of universal, narrow constraints on the design of the language faculty is consistent with its view as a specialized biological system.
References