

Root and pattern effects in the processing of spoken nonwords in Arabic

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Keywords: Arabic; Morphological processing; roots; word patterns; nonwords

Words in Arabic are formed by mapping roots into patterns. Whereas the root determines the semantic meaning of the word, the pattern creates the phonological structure of the word and specifies its morphosyntactic properties. Conducting a series of priming experiments, Boudelaa & Marslen-Wilson (2015) have concluded that “root and word pattern morphemes function as abstract cognitive entities, operating independently of semantic factors and dissociable from possible phonological confounds” (Boudelaa & Marslen-Wilson, 2015, p. 955). We test the plausibility of this conclusion by investigating native Arabic speakers’ sensitivity to the presence of roots and patterns when processing spoken nonwords in Arabic. 50 native Arabic speakers were given a 7-point word-likeness rating task. In this task, participants were asked to rate the word-likeness of 132 auditorily presented nonwords in Arabic. 88 of these nonwords were created by using real Arabic roots (e.g. /mlk/) that varied in their type and token frequencies. Each root was then mapped into two different types of patterns. This resulted in nonword pairs in Arabic (e.g. /tamalkak/ and /tamalkuk/). The other 44 stimuli were nonwords with no real Arabic roots. Other phonological and lexical variables for the stimuli were also computed. Results have shown that native Arabic speakers are sensitive to the presence of roots in the nonwords. Specifically, root type frequency had the strongest effect on subjects’ ratings of the nonwords in both types of patterns. Implications of these findings to theories of the Arabic mental lexicon will be discussed.

References

Boudelaa, S., & Marslen-Wilson, W. D. (2015). Structure, form, and meaning in the mental lexicon: evidence from Arabic. *Language, Cognition and Neuroscience*, 30(8), 955–992.
<https://doi.org/10.1080/23273798.2015.1048258>