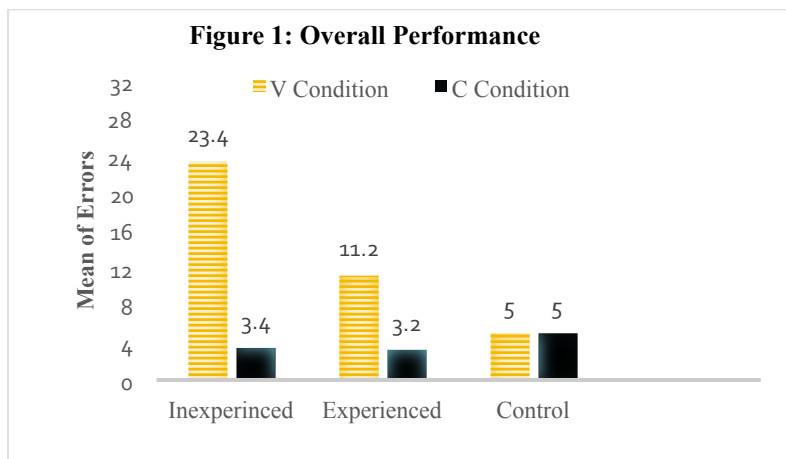


## The Role of Non-Concatenativeness vs. Concatenativeness Experience in Perception

Semitic languages such as Arabic and Hebrew exhibit a nonconcatenative morphological system, in which consonants and vowels each have a distinct status (Holes, 2002; McCarthy, 1981; Watson, 2007). The root, which consists of consonants such as /w.dʕ.ʕ/ “putting,” signals the semantic information, whereas vowels are intercalated to signal affix-like morphosyntactic information, such as voice, as in /wadʕaʕ/ “placed” vs. /wudʕiʕ/ “was placed,” and agentivization, as in /waadʕiʕ/ “placer.” The root is considered to be the fundamental unit of the mental lexicon, and listeners prioritize roots over affixes when processing auditory and written words (cf. Berent & Shirmon, 2002; Bick et al., 2011; Ravid & Schiff, 2009). Arabic also allows for other concatenative morphological processes, such as case assignment, as in /ʔal-waadʕiʕ-a/ “the-placer-accusative,” and mood indication, as in /ja-dʕaʕ-u/ “put-indicative,” which occur in a concatenative manner (Ryding, 2014).

Accordingly, I hypothesize that 1) Arabic speakers perceiving non-Arabic utterances have a bias to attend to consonants, and ignore vowels in all non-final positions; 2) that, if this biased perception is a native language effect, the insensitivity to vowels should decrease as exposure to other languages increases; and that 3) Arabic speakers will be sensitive to vowels in the extreme right position, which resembles the case and mood position, no matter how exposed to foreign languages the speaker is. Hypothesis 1 and 2 were examined by testing three groups of participants: inexperienced Arabic speakers who have had limited exposure to English, experienced Arabic speakers who have learned English for over one year, and control English speakers who speak no Semitic languages. The participants were presented with nonsense words recorded by an English–Arabic bilingual that differed by either a single consonant (sabinθujad–zabinθujad) or a single vowel (sabinθujad–subinθujad). Their task was to judge whether the words were identical or different. The location of the differing consonant or vowel varied across four possible word positions. An identity-distractor condition was included as a baseline, as was an unrelated-distractor condition.

The Arabic speakers were sensitive to consonants and successfully detected consonantal change, but were insensitive to vowel change. This effect was greatest for the inexperienced participants,  $F(18, 1) = 145.86$ ,  $p < 0.001$ ,  $\eta^2 = 0.89$  (89%), and contrasted with the results for the native English speakers, who showed balanced performance in both conditions,  $F(6,1) = 00$ ,  $p = 1$ ,  $\eta^2 = 0.00$  (0%), (Figure 1 below). That is, while the English speakers reported almost an equal number of *Identical* vs. *Different* responses in both conditions, the Arabic speakers reported more *Identical* responses in the vowel condition. This is taken as evidence that the Arabic speakers give perceptual priority to consonants over vowels, which is believed to be a consequence of the nonconcatenative system of Arabic. Hence, Hypotheses 1 and 2 have been confirmed.



To test hypothesis 3 about vowels attached via concatenative processes, the current nonsense words, with some modifications—as in (sabinθujad-i vs. sabinθujad-u)—will be used to generate the new stimuli. The future findings from this part will be left for the presentation at the conference.

**Subfield: Phonology-Phonetics**

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