

Perception of Regional Spoken Arabic by Native Speakers

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Languages vary across regions, societal divisions, and even within individuals [1]. Arabic presents a particularly complex and interesting landscape of variation, including both diglossia between literary/formal and spoken forms and dramatic regional variation [2]. How do native speakers of Arabic accommodate different regional spoken varieties in comprehension? To what degree do they distinguish between regional spoken varieties? We examined Arabic speakers' behavior when they encountered regionally accented Arabic words and sentences.

Research in English, French, and Spanish has found that listeners adapt to phonological aspects of a speaker's variety, whether those are regional or idiosyncratic [3,4], but that they process familiar varieties more quickly and identify them more accurately than unfamiliar ones [5-7].

The current study asks how regional variation and language experience affect Arabic speakers' word recognition (Exp 1: Auditory Lexical Decision Task) and ability to distinguish between varieties (Exp 2: AX Discrimination Task). Both experiments explore how two groups of Arabic speakers: Najdi Arabic (NA) and Saudi Southern Arabic (SA), perceive and adapt to three regional varieties: NA, SA ('*own*' or '*nearby*' variety), and Egyptian Arabic (EA) ('*distant*' variety).

In Experiment 1, we examined participants' auditory word recognition in their '*own*', a '*nearby*', or a '*distant*' variety. NA and SA participants (N=20) were asked to make a lexical decision ('*word*' or '*nonword*') on sentence-final target items spoken by NA, SA, and EA speakers. Figure 1 shows participants' average response times in correct trials. A linear mixed effect model of response time showed reliable effects of trial type (*word/nonword*), '*own*' variety as compared to other varieties, and an interaction of participant accent and the '*own*-other' contrast. Responses to *words* were slightly faster than *nonwords*, responses to '*own*' variety were faster than '*nearby*' or '*distant*' varieties, and that the '*own*-other' difference was smaller for SA participants than for NA ones. This demonstrates how regional accents can affect word recognition and that responding to stimuli in one's '*own*' variety requires less time and effort.

In Experiment 2, we examined participants' ability to distinguish between regional varieties. A second set of NA and SA participants (N=17) heard pairs of sentences, one from each of two talkers, and were asked to determine whether the talkers were from the '*same*' or '*different*' regions. Figure 2 shows participants' average response times. A linear mixed effects model of response time showed a reliable effect of including a '*distant*' sentence, suggesting that participants found it harder to distinguish between '*own*' and '*nearby*' varieties. Trials with a '*distant*' sentence were reliably faster than '*own-own*', '*nearby-nearby*', or '*own-nearby*'.

These findings suggest an interesting interaction of familiarity and social knowledge. The results from Experiment 1 suggest an advantage for processing *words* in one's '*own*' variety, while the results from Experiment 2 suggest that the familiarity of both one's '*own*' and '*nearby*' varieties makes it more difficult to make an explicit judgment about whether talkers are from the '*same*' or '*different*' regions. The current research provides a better understanding of how native Arabic speakers handle the linguistic variation they encounter in their daily life and raises further questions about, for instance, the role of sociolinguistic knowledge and attitudes on real-time sentence comprehension.

References

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Figure 1. Participants' average lexical decision times (ms) from target onset, split by trial type, stimulus variety, and participant variety. Notice the 'own' advantage present in most clusters.

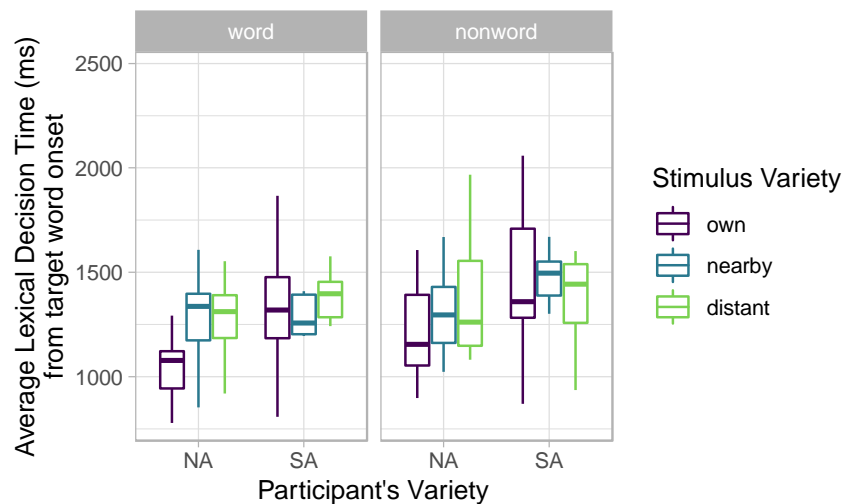


Figure 2. Participants' average discrimination time (ms) from second-sentence onset, split by trial type, stimulus pair type, and participant variety. Notice the 'distant' advantage: trials that include a 'distant' sample are faster than those containing only 'own' or 'nearby' samples.

