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Acceptability of Variation in Modern Hebrew Spirantization

Michal Temkin Martinez

Boise State University
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Michal Temkin Martínez
University of Southern California
mtmartin@usc.edu

Modern Hebrew Spirantization

Regular Alternation
In Modern Hebrew, the stops /b/, /p/, and /k/ are prohibited. The fricatives /f/, /s/, and /v/ occur in allophonic distribution.

(1) Sporantization Distribution in Modern Hebrew
post-vocalically, and the stops surface elsewhere.

(2) Exceptions to Modern Hebrew Spirantization
Post-vocalically, /b/, /p/, and /k/ occurring non-post-vocally.

(3) Hybrids in Modern Hebrew Spirantization
Word-initial fricatives with cases of

(4) Variation in Modern Hebrew Spirantization

Variation
Variation in spirantization occurs in colloquial speech (Adam 2002) and in a pilot study in Temkin Martínez (2008), an acceptability rating task was designed.

Acceptability Rating Task

Predictions
I. Variation is acceptable in cases of regular alternation. Based on Adam (2002) and in the pilot study in Temkin Martínez (2008), we predict that variant forms will be deemed acceptable by some participants, but will receive a lower rating than their expected counterparts.

II. In exceptional cases, variation is less acceptable. Adam (2002) finds that the stops will vary post-vocally. All segments are predicted to vary word-initially and post-consonantally. The pilot results from Temkin Martínez (2008) show that variation is at least somewhat acceptable in all positions, and is most acceptable in post-vocalic positions.

Methods
204 stimuli sentences were recorded as spoken by a 33-year-old native speaker, with regular and exceptional segments occurring in word initial, post-vocalic, and post-consonantal positions.

(5) Sample Carrier Sentence for Target Words

(a) [likvor] ‘to bury’ /b/ ‘to bury’
(b) [likwerk] ‘to freeze’ /v/ ‘to freeze’
(c) [likbor] ‘to sabotage’ /p/ ‘to sabotage’
(d) [likamal] ‘to freeze’ /k/ ‘to freeze’

Results
The results of a repeated-measures ANOVA for type (regularly alternating vs. exceptional) and allophone (variant vs. expected form) reveal a significant main effect of allophone (F(1, 17) = 156.01, p < .001), showing that, as hypothesized, tokens with the target segment in the expected form were rated more natural than tokens with the target segment in the variant form.

(6) Acceptable Variation in Regularly Alternating Segments

(7) Acceptable Variation in Exceptional Segments

Analysis: Regular Alternation

(8) Regularly Alternating vs. Exceptional Segments

The results indicate that while variation in exceptional segments is somewhat acceptable, it is significantly less so than variation in regularly alternating segments.

Analysis: Exceptions and Variation

Exceptionality
Exceptional segments and regularly alternating segments are members of distinct sets. To account for this, we propose expanding the set-based approach (Pater 2003) to the segregation of the distinction between the two sets of segments, and stochastic rankings of the relevant constraints based on acceptability in the rating task, to allow for variation.