Specific Exceptions Driving Variation:
The role of orthography in Modern Hebrew spirantization

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Introduction

This paper reports results from a production experiment examining the role of orthography in conditioning the patterning of variation in morphophonemic alternations. Real and nonce verbs were used to elicit variation in a sentence completion task as a follow-up to a perceptual experiment (Temkin Martinez 2010) which found gradient variation due to the presence of exceptionality. Linking exceptions represented in the orthography can better explain gradient in variation.

Modern Hebrew Spirantization

[p], [b], and [k] alternate with their fricative counterparts [f], [v], and [ʃ], with fricatives generally occurring in post-vocalic position and stops occurring elsewhere.

Variation and exceptionality in a single phenomenon (Temkin Martinez 2010):

- Alternating segments were defined as segments that occurred in the means of the velars with those of the labials in alternating and non-alternating allophones.
- Exceptional segments were defined as those that occurred in the means of the velars with those of the labials in alternating and non-alternating allophones.

Orthographic representations correlate with alternation.

Methods

Fifty-eight native speakers of Modern Hebrew participated in a sentence-completion task. Stimuli contained 44 real verbs and 32 nonce verbs.

(4) Sample target sentence

<table>
<thead>
<tr>
<th>Infinitive</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>דאני elove</td>
<td>דני elove</td>
</tr>
</tbody>
</table>

Danu loves to NONCE things. Told to me that yesterday be _______

In both alternating and exceptional segments:

- Masts of both word position and allophones [p < .001]
- Significant interaction of word position and allophones [p < .001]

Discussion

Variation and exceptionality in a single phenomenon (Temkin Martinez 2010):

- Alternating or exceptional segments were defined as segments that occurred in the means of the velars with those of the labials in alternating and non-alternating allophones.
- Exceptional segments were defined as those that occurred in the means of the velars with those of the labials in alternating and non-alternating allophones.

Production of alternation and spelling choice

- Significant correlation between choice to alternate or not and the choice of grapheme to represent the segment:
  - When producing alternating segments, participants used the orthographic representation correlating with exceptionality, but also used that of the alternating segments.
  - No main effect of alternation (p > .05) – choice of alternation was random.
  - Main effect of increasing production with spelling (p < .001)
  - Main interaction of alternation and spelling matching (p < .001)

Future directions:

- Production experiments with pre-literacy children.
- Diachronic data – narrative directionality of variation.
- Corpus study (CoSHE) to determine occurrences of variation in natural speech.