

When Exceptions are Encoded at the Segmental Level

This paper demonstrates the need for a treatment of exceptions at the segmental level, rather than the lexical level, using a case of exceptions to spirantization in Modern Hebrew.

In Modern Hebrew, due to degemination and some historical mergers, spirantization affects only [b], [p], and [k]. These stops alternate with their fricative counterparts in allophonic distribution, with fricatives occurring in postvocalic position and stops occurring elsewhere (Prince 1975, Malone 1993, Adam 2002). This is shown in (1).

However, there are some cases of underapplication where stops occur in postvocalic position, as in (2a). There are also cases of apparent overapplication of spirantization, where fricatives occur in word-initial position, as in (2b). This work focuses on the implications of instances of overapplication and underapplication for the theoretical treatment of exceptions.

The words in (3) contain both regularly-alternating and non-alternating segments. These data reveal that exceptionality is not necessarily a characteristic of all segments in the word, unlike the predictions made by analyses that treat exceptions as rankings or properties associated with entire words (Itô and Mester 1999, Pater 2000, among others). The account proposed in this paper therefore encodes exceptionality at the segmental level.

This paper proposes an Optimality Theoretic account for paradigms in which spirantization underapplies and overapplies in Modern Hebrew, including both non-alternating fricatives and stops.

Following Idsardi (1997) and building on Inkelas, Orgun, and Zoll (1997), I propose that in inputs, each segment can be either prespecified or unspecified for a feature (in this case [+cont], [-cont], or [øcont]), a possibility predicted by Richness of the Base (Prince and Smolensky 1993). With IDENT-IO[cont] (McCarthy and Prince, 1995) dominating markedness, non-alternating segments will be prevented from alternating by prespecifying them as either [+cont] or [-cont] in the input. Unspecified segments, on the other hand, incur equal violations of faithfulness whether they are instantiated as a stop or a fricative in the output. That is, specifying these segments as [+cont] or [-cont] will each incur a violation of IDENT-IO[cont]. This allows the lower ranked markedness constraints to decide the realization of the unspecified segments.

A contextual markedness constraint prohibiting post-vocalic stops, *V-STOP (Benua 1997), is ranked lower than faithfulness so as to not prohibit the fully faithful, prespecified segment from incurring a fatal violation. The context free constraint, *SPIRANT (Benua 1997, cf Kirchner 1998 and González 2003 for other lenition-related constraints), prevents the more marked fricatives from being selected. The constraint ranking is illustrated in the Tableau 1.

Word-level analyses, such as those proposed by Itô and Mester (1999), fail to account for forms such as those in (3) by dealing with exceptions as whole-word phenomena. Analyzing such words using word-based analyses would predict the wrong output, since the status of the word as an exception, achieved through a highly-ranked faithfulness constraint for a lexical stratum containing the exception word, would not allow for alternation of *any* segment in the word.

- (1) Regularly alternating stop ~ spirant pairs in MH

	<u>root</u>	<u>3rd person sing. past</u>	→	<u>infinitive</u>	
[p] → [f]	/prs/	[paras]	→	[lifros]	‘to spread’
[b] → [v]	/bnh/	[bana]	→	[livnot]	‘to build’
[k] → [χ]	/ktb/	[katav]	→	[liχtov]	‘to write’

(2) Non-alternation stops and spirants in MH

	<u>Segment</u>	<u>Word-initial</u>		<u>Word-medial</u>	
a. Non-alternating stops	[k] (<*q),	[kavar]	‘buried’	[likbor]	‘to bury’
	singleton stops	[pasak]	‘stopped’	[hipasek]	‘stop!’ (imp.)
	{[p], [b], [k]} (from historical geminates)	[baχan]	‘examined’	[hibaxen]	‘be examined!’ (imp.)
b. Non-alternating fricatives	[f] (borrowed),	[faʃla]	‘mistake’	[lefaʃel]	‘to make a mistake’
	[v] (<*w),	[viter]	‘conceded’	[levater]	‘to concede’
	[χ] (<*h)	[χalam]	‘dreamt’	[laχlom]	‘to dream’

(3) Words containing both alternating and non-alternating segments in MH

/kbr/	[kavar]	‘buried’	[likbor]	‘to bury’
/bχr/	[baχar]	‘elected’	[livχor]	‘to elect’
/kpr/	[kipur]	‘atonement’	[lexaper]	‘to atone’

Tableau 1 – word containing both alternating and non-alternating segments

/kBr/ + inf. [-cont] ‘to bury’	IDENT[cont]	*V-STOP	*SPIRANT
a. likbor	*	*	
b. lixbor	**!		*
c. lixvor	**!		**
d. likvor	*	*	*!

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