



# The development of vowel harmony in Turkic: Phonologization and analogy



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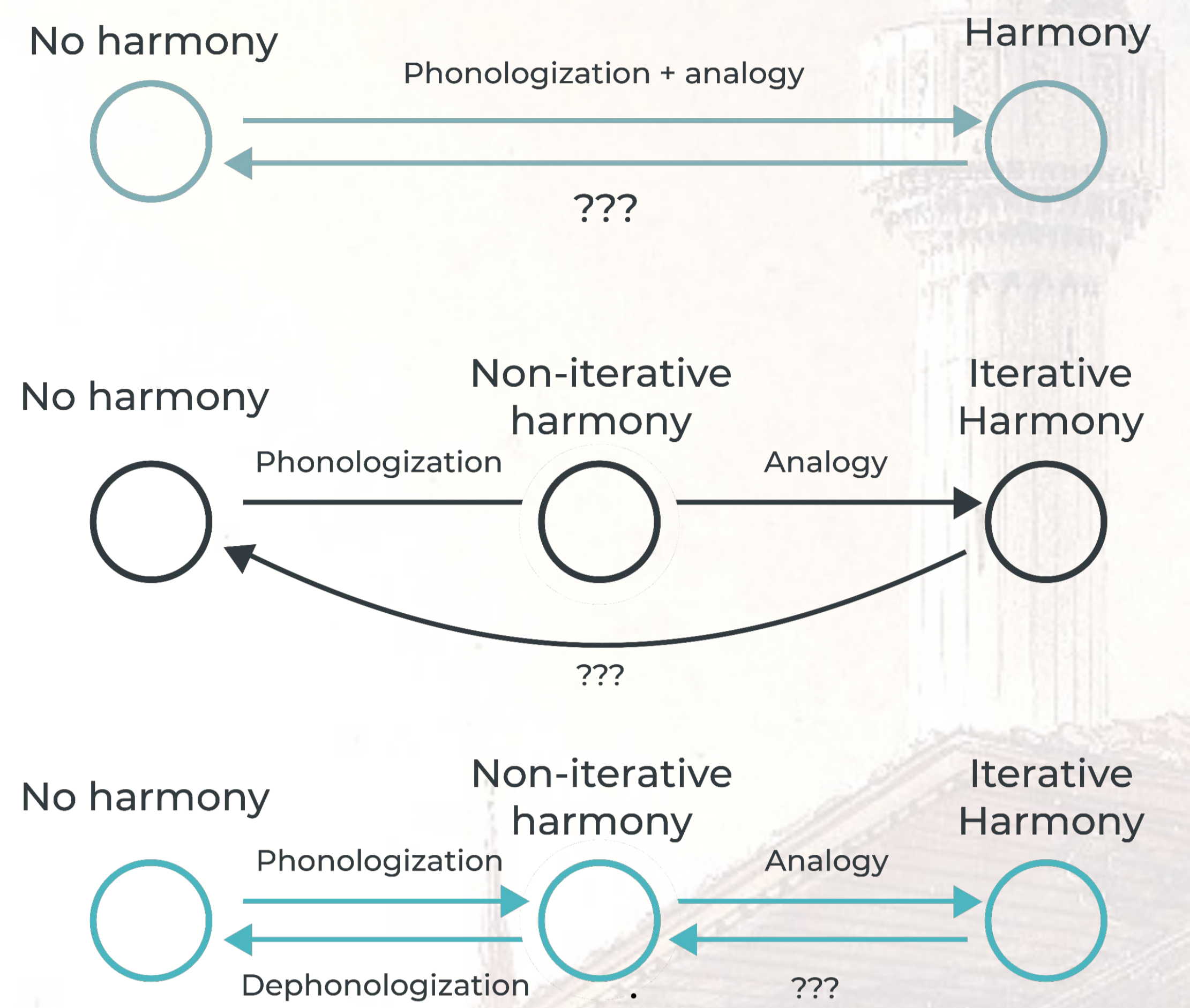
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## Introduction

- Vowel harmony is often viewed as arising from phonologization of vowel-to-vowel coarticulation (e.g., Ohala 1994).
- Phonetic coarticulation becomes phonological harmony via phonologization and analogy.
- Predictions based on previous work**
  - Two kinds of languages (Ohala 1994)
    - coarticulation (precursor to or remnant of harmony)
    - harmony
    - Problem:** During the development of iterative rounding harmony in Ottoman Turkish, Viguier (1790:287) reports two distinct registers that differ by iterativity, e.g., *olduđi içün* 'because' (literary; non-iterative) vs. *olduđu için* (colloquial; iterative; see also Duman 1999; cf. Johanson 1978-79).
  - Three kinds of languages (Barnes 2006)
    - coarticulation (precursor to or remnant of harmony)
    - non-iterative harmony
    - iterative harmony
    - Problem:** Cases of non-iterative harmony are attested during the emergence and decline of rounding harmony in several Turkic languages. We focus on the decay of harmony in Crimean Tatar over the last 150 years.

Phonologization and analogy must be treated as two separate aspects of both the emergence and decay of vowel harmony.

## Proposal



## Crimean Tatar: Radlov (1896)

### 1. Ўчкундур.

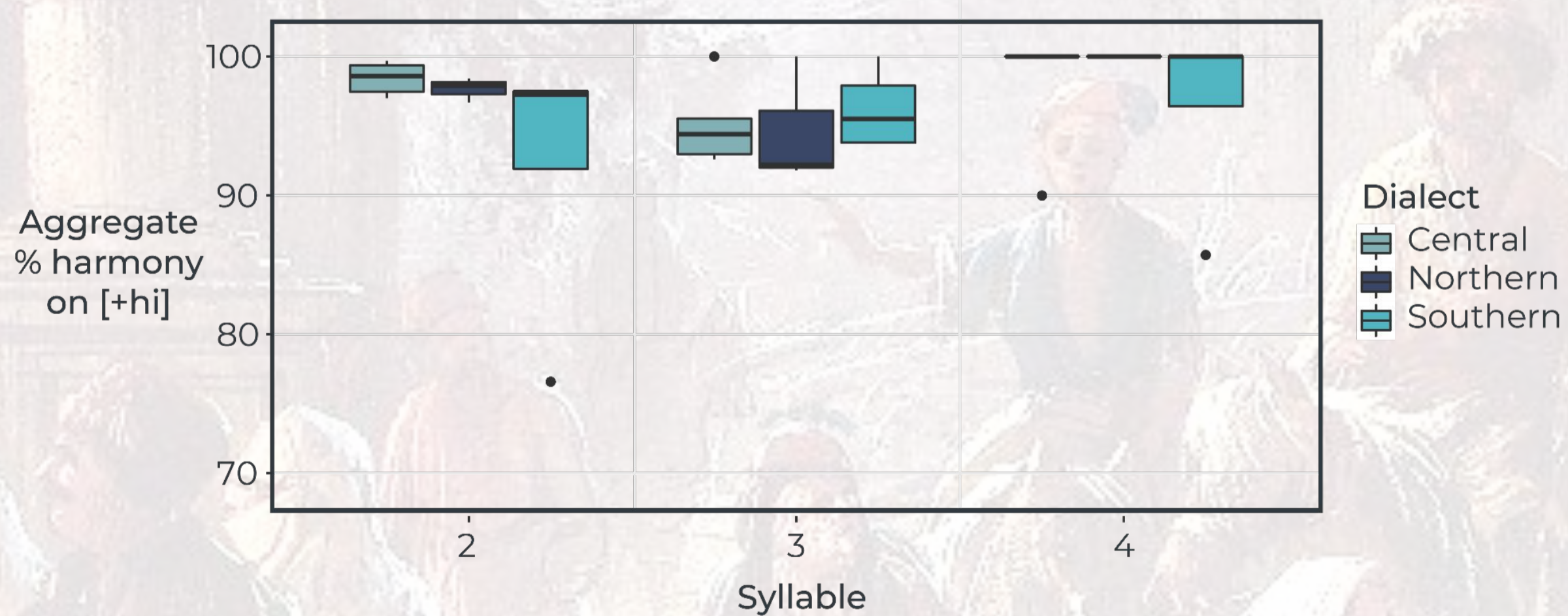
Бір жашның ады Ўчкундур. Бу жаш җара аҗлаһа. Бунуц бар дыр бір бужук казан, бір да уфак казан. Хатына дәи-ки: бугун бір аш пішір! ді, Хатын аш пішірәдәк, бужук казанға на-кадар туз коҗадак білмәи. Хатыны ді: амаа сор! ді; бужук казанға

Radlov's (1896) corpora indicate pervasive iterative rounding harmony on following high vowels.

Table 1: Counts of harmony and disharmony aggregated over all Crimean Tatar corpora in Radlov (1896)

	Syllable 2	Syllable 3	Syllable 4	Total
<b>Harmony</b>	4,559	946	105	5,610
<b>Disharmony</b>	134	54	6	194
<b>Total</b>	4,693	1,000	111	5,804
<b>Percent harmony</b>	97.1	94.6	94.6	96.7

Figure 1: Box plot of harmony means by dialect and syllable aggregated over all Crimean Tatar corpora in Radlov (1896)



## Contemporary Crimean Tatar: Domain

### In Southern CT, iterative harmony is maintained

bojun	'neck'	tuzluḡ-um	'salt shaker-1S.POSS'
dost-um	'friend-1S.POSS'	syrgyn-lyk	'deportation-ADJ.SUF'
burun	'nose'	tykyr-yn-mek	'spit-PASS-INF'
dost-lar-um	'friend-pl-1S.POSS'		

### In Central CT, harmony is non-iterative

dost-um	'friend-1S.POSS'	tuz-luy-um	'salt shaker-1S.POSS'	(cf. southern [tuz-luy-um])
qul-um	'servant-1S.POSS'	burun-um	'nose-1S.POSS'	(cf. southern [burun-um])
kyz-lyk	'autumn-ADJ.SUF'	syrgyn-lik	'deportation-ADJ.SUF'	(cf. southern [syrgyn-lyk])
köz-lyk	'eye-ADJ.SUF'	tykyr-in-mek	'spit-PASS-INF'	(cf. southern [tykyr-yn-mek])

### In Northern CT, harmony has been lost. Initial high vowels are optionally unrounded.

bojun	'neck'	burun ~ burun	'nose'
dost-um	'friend-1S.POSS'	bulamuḡ ~ bulamuq	'a type of cereal'

## Contemporary Crimean Tatar: Lexical effects

### In Radlov's texts, ACC and GEN undergo harmony. In contemporary CT, they do not.

	Radlov	Contemporary CT		
ACC	o-nu	'3S-ACC' (Keŋe, p. 134)	o-nw	'3S-ACC'
	su-nu	'water-ACC' (Suliman paigambar, p. 191)	suv-nw	'water-ACC'
	söz-ny	'word-ACC' (Qarasu bazar, p. 166)	söz-ni	'word-ACC'
GEN	dost-nuḡ	'friend-GEN' (Közleve, p. 235)	dost-nuḡ	'friend-GEN'
	su-nuḡ	'water-GEN' (Çorba batır, p. 127)	suv-nuḡ	'water-GEN'
	kyn-nyḡ	'sun-GEN' (Çora batır, p. 174)	kyn-niḡ	'sun-GEN'

## Discussion and conclusion

- In both emergence and decay, non-iterativity appears to be an intermediate stage between no harmony and iterative harmony.
- Thus, the transition from or to phonetic coarticulation represents only a single step in a more complex pattern of change that may involve both phonologization and analogical extension (Barnes 2006).
- If harmony may develop and decline along these lines, one expects to find many harmony patterns in these intermediate states.
- Typological research in tandem with experimental research and formal analysis should provide a fuller understanding of the life cycle of iterative phonological patterns.

## Question

If iterative harmony is the byproduct of phonologization + analogy, how does it decay to non-iterativity?

## References

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