UCLA | An Optimality Theoretic Analysis of Vowel Harmony in Kazan Tatar
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TAKEAWAY

- *New findings* regarding the **lack of** previously attested **rounding harmony** in Kazan Tatar.
- **Backness harmony and exceptionality** handled well by current OT framework.

Introduction

- *Kazan Tatar* is a Turkic language of the Kipchak branch spoken in Tatarstan in the Russian Federation
- **5.2 million speakers** worldwide, 4.28 mil w/in Russia. Largest ethnolinguistic minority there.
- This research investigates and analyzes the present phonological behaviors of **Tatar's vowel system**

Background

- Based on transcribed speech data from two adult female native speakers, 37 and 62 y/o
- Elicitation set was a pre-determined word list consisting of nouns
- Wordlist from Comrie 1997 and supplemented by additional words

Kazan Tatar Phonetics

- Tatar has 25 consonant and **10 vowel phonemes**

Vowel Inventory

	Front		Back	
	Unrounded	Rounded	Unrounded	Rounded
High	i	y	ɯ	u
Mid	e	ø	ɣ	o
Low	æ	--	ɑ	--

Vowel Harmony in Kazan Tatar

Tatar does not allow word-internal disharmony in native words.

Domain: *prosodic word* (PWd); feature sensitivity: *backness*

	[-back]		[+back]	
SG	әби /ebi/		йолдыз /joldɯz/	
	'grandma'		*'star'*	
PL	әбиләр /ebilær/		йолдызлар /joldɯzlɑr/	
	'grandma-PL'		*'star-PL'*	

Compound words are **phonologically separate**

	[-back]		[+back]	
SG	туган көн /tuɣankøn/		билбау /bilbaw/	
	'birthday		*'belt'*	
PL	туган көннәр /tuɣankønnær/		билбаулар /bilbawlɑr/	
	'birthday-PL'		*'belt-PL'*	

Loanwords are permitted to be disharmonic, but are not always.

/e/ and /i/ are handled as transparent to allow this

	[-back]		[+back]	
SG	кәгазь /kæɣæz/		совет /savjet/	
	'paper'		*'soviet'*	
PL	кәгазьләр /kæɣæzlær/		советлар /savjetlɑr/	
	'paper-PL'		*'soviet-PL'*	

Rounding harmony not found in my data:

	[-back]		[+back]	
NOM. SG	өй /øj/		авыз /awɯz/	
	'home'		*'mouth'*	
NOM. PL	өйләр /øjlær/		авызлар /awɯzlɑr/	
	'home-PL'		*'mouth-PL'*	
2nd.PL. GEN	өйегез /øjegez/		авызогоз /awɯzoɣoz/	
	'home-2ND.PL.GEN'		*'mouth-2ND.PL.GEN'*	

Lack of Rounding Harmony

- RH *attested* as weak/gradient in mid vowels but **not found in data** (2, not 4 allomorphs).
- Proven using **phonetic data analysis** and statistics (Conklin 2015).
- Evaluated the **second person plural genitive** forms for rounding harmony (Comrie 1997)
- RH in decay across Turkic langs. (McCollum 2016) suggesting it is a **less salient** process.

OT Analysis

SPREAD([back], PWord)	If a token of [back] is linked to any segment in a PWord, it is linked to all segments
IDENT-IO([back])	Corresponding segments in the input and output have identical values for the feature [back]
*SKIP-σ	Penalty assigned when feature spreading skips an intervening syllable
MAX-V	all UL vowels must have a correspondent in the output
LOANWORD CORRESPONDENCE	**CORR-LW:** Every segment in the input must be in output for loanwords (Tsuchida 1995)
IDENT-Sσ_1-A ([back])	Source affix feature value information for [back] from the first syllable in the stem

SPREAD as harmony-driving constraint and **IDENT-IO** (Walker 2012, Turkish)

joldɯz	SPREAD([back],PWord)	IDENT-IO(back)
☞ joldɯz		
jøldɯz	*!	*
joldyz	*!	*
jøldyz		*!

joldɯz + lVr	SPREAD([back],PWord)	IDENT-IO(back)
☞ joldɯzlar		
Joldɯzlær	*!	
jøldyzlær		*!

Rules are sensitive to PWd, so boundaries make it work for compounds too!

[tuɣan]$_{PWd}$[køn]$_{PWd}$	SPREAD	IDENT-IO(back)
☞ tuɣankøn		
tuɣankon		*!
tyɣænkøn		*!

[tuɣan]$_{PWd}$[køn]$_{PWd}$ + nVr	SPREAD	IDENT-IO(back)
☞ tuɣankønnær		
tuɣankønnar	*!	
tuɣankonnar		*!

To allow disharmony, ***SKIP-σ** ranked below HDC in loanword strata (also Walker 2012)

[savjet]$_{LW}$ + lAr	MAX-V	CORR-LW	IDENT-Sσ_1-A	SPREAD	IDENT-IO	*SKIP-σ
☞ savjetlar				*		*
savjetlær			*!	**		**
sævjetlær		*!			*	
savjtlar	*!					
svjetlær	*!					