

OVERVIEW

In this paper we provide an OT analysis of consonant deletion patterns and apparent OCP-driven intermorphemic phonological changes in St. Lawrence Island/Central Siberian Yupik (Eskimo-Aleut; ISO 639-3 es; here ‘Yupik’), an endangered polysynthetic language of the Bering Strait region. We propose a preliminary series of critically ordered constraints for the language that conspire to yield the Yupik grammar, including crucial OCP (McCarthy 1986) violations, and describe a pilot study with elicited data from native speakers. This work contributes to our understanding of phonological typology from an under-studied language.

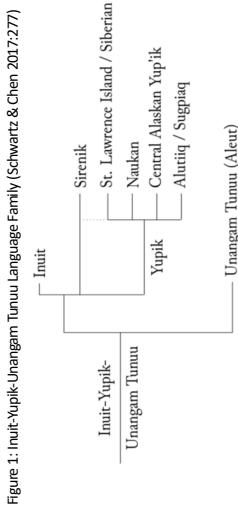


Figure 1: Inuit-Yupik-Ungangam Tunuu Language Family (Schwartz & Chen 2017:277)

QUESTION

Yupik employs a great deal of morphophonological change at morpheme boundaries, and this behavior is underdescribed.

Surface forms:

- No tautosyllabic consonant clusters
- Very few heterosyllabic adjacent fricatives
- Varied behavior in adjacent fricative-nonfricative pairs
- What constraints and rankings are required to account for the strategies that Yupik employs to resolve its surface forms in these cases?

TAKE-AWAY

The ranking OCP_f >> DFP >> MAX, with
 *COMPLEX also outranking MAX,
 accounts for Yupik’s resolution of
 tautosyllabic clusters and sequences of
 adjacent fricatives; further study is
 required to account for violations of OCP_f
 and other patterns

THE LANGUAGE

- St. Lawrence Island / Central Siberian Yupik (*Yupigestun, Akuzipik, Sivugaghmisiut, Yuit*; ISO:639-3)
- Spoken primarily on St. Lawrence Island (500–700 speakers out of 1300) and the Chukotka Peninsula of Russia (<200 speakers out of 800 Yupiget).
- Revitalization efforts underway
- Ergative-absolutive, polysynthetic
- Largely free word order
- 600+ derivational suffixes, ~500 particles
- Extensive system of demonstratives
- Phonemic inventory: 31-32 consonants, 4 vowels + vowel length phonemic for /i, o, u/ = 7 phonemes
- Voice contrast in nasals
- Labilization contrast in velars and uvulars
- Syllable structure (CV(V)C) (Krauss 1975; Jacobson 2003; de Reuse 1994)

Figure 2: St. Lawrence Island Yupik Consonants

	Bilabial	Abdorsomedial	Dorsal	Alveolar	Postalveolar	Velar	Palatal	Pharyngeal	Glottal
Positive	p		t			k	ts		
Nasal	m		n			ŋ	tʃ		
Till									
Tap or Flap			v	s	z				
Fricative	f					x	χ		
Affricate						χ̚	χ̚		
Lateral Fricative						h			
Approximant							j		
Lateral approximant									

Figure 2: St. Lawrence Island Yupik Consonants

FURTHER DATA

- Deletion and epenthesis are both used to resolve fricative-fricative sequences, but deletion seems more common in existing data.
 - How common is epenthesis? Do forms surface that violate OCP_f?
- We asked native speakers to create complex words out of root + derivational suffix combinations to yield the environments of interest
 - Almost all noun and verb roots (in their underlying forms) end in either /y/ or /ɪ/ (de Reuse 1994) (a phonotactic effect; these are not morphemes)
 - Two roots from each lexical class (N/V) were chosen, one with each coda
 - 27 suffixes were combined with four lexical roots for a total of 54 pairs.
- Of the 45 forms elicited successfully:
 - One shows epenthesis, 32 show fricative deletion, 12 show no deletion.
 - Of the 32 cases of deletion:
 - 26 cases of fricative-fricative; 6 cases of fricative-/p/ or fricative-N.
 - 25 cases of base-final coda deletion; 6 cases of suffix-initial onset deletion; (/ɪ/ + /ɪ/ ; difficult to determine)
- These findings show a clear preference for deletion of the first segment in a pair of adjacent fricatives.
- Note that in some cases an optimal candidate may include the sequence CC, or .CC. Thus while *COMPLEX is never violated in surface forms, oCP_f can be.

CONCLUSION AND FUTURE WORK

- This preliminary study establishes an initial ranking for several key constraints at work in St. Lawrence Island Yupik phonology by considering the behavior of heteromorphemic consonants in adjacency
 - Future work will determine further rankings to account for factors such as:
 - Occurrences where F.F. surfaces : requires another markedness constraint to outrank oCP_f, or another explanation (variation?)
 - Fricative deletion before non-fricatives: requires another markedness constraint to outrank oCP_f
 - Violable preference for deletion of first of two adjacent consonants
 - Cases where epenthesis wins
 - Coalescence-type patterns as seen in e.g. (7)

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