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# “Interrupted/frozen” sound change in a vanishing language: challenges for description, codification, and typology

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- Ingrian is a minor Finnic language located in Russia (in the historical province of Ingria, near St. Petersburg).
- It is moribund: two dialects out of four are still spoken, each by <10 people over 80 years old; this study is about the Soikkola Ingrian dialect.





- **Study 1:** segmental durations in 22 trisyllabic structures (3812 tokens) in 5 female speakers of north Soikkola Ingrian: AG (b.1936), AL (1933), ST (1924), EI (1929), and LM (1930).
- **Study 2:** the four shortest trisyllables in AG, AL, ST (383 tok.) were compared to four disyllables (429 tok.) with the same “foot nucleus” (=sequence from the 1<sup>st</sup> throughout the 2<sup>nd</sup> syllable vowel).

Table 1: Studied 22 trisyllables and 4 disyllables (example words with their foot nucleus types indicated below them; in case of Study 2, also the number of syllables in the word is indicated in parentheses near the foot nucleus)

Study 2		Study 1			
tapa (2).VCV	lakata (3.)VCV	vīkate V:C·V	leikata V1V2CV	harkata VRCV	vāntelō VRCV
		vōttava V:C·V	voitteli V1V2C·V	murkkina VRC·V	vāntteli VRC·V
tappā (2).VC·V:	maittäla (3.)VC·V:	sūttīma V:C·V:	hoittäma V1V2C·V:	kerkkīmä VRC·V:	vānttīmā VRC·V:
natta (2).VC:V	kattila (3.)VC:V	ōttele V:C:V	voitteli V1V2C:V	markkoja VRC:V	
tappā (2).VC:V:	kattīma (3.)VC:V:	mūttīma V:C:V:	toittäma V1V2C:V:	harkkāma VRC:V:	



- **Trisyllables:** shortening of long 2<sup>nd</sup> syllable vowels (V<sub>2</sub>) which leads to (near-)merge of the contrast of long and short vowels in the 2<sup>nd</sup> syllable.
- **Disyllables:** the contrast of long and short V<sub>2</sub> is preserved.

Table 2. New quantity patterns in the nuclei of studied di- and trisyllabic feet. Durationally long V<sub>2</sub> are in bold, “CV” refers to one of the C<sub>2</sub> + V<sub>2</sub> length class combinations in the next three columns.

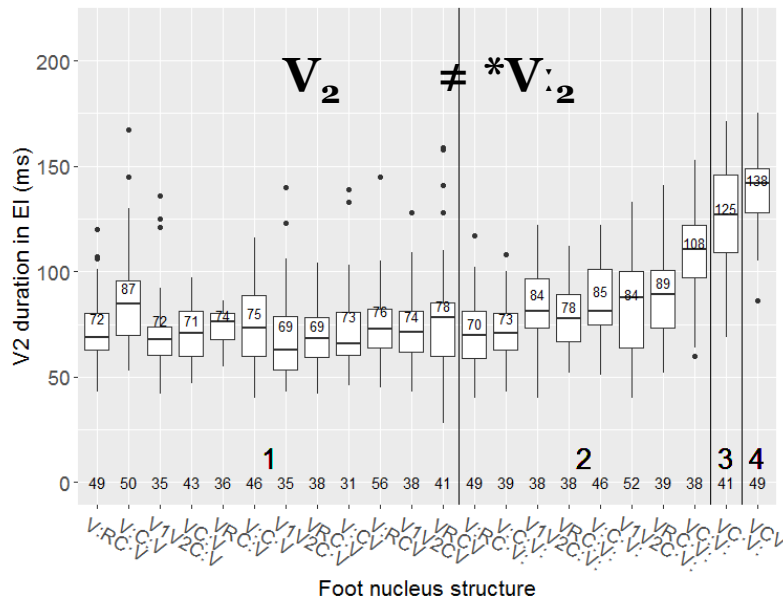
Syllable number	Foot nucleus	Singleton C <sub>2</sub> + V <sub>2</sub>	Secondary geminate C <sub>2</sub> + V <sub>2</sub>		Primary geminate C <sub>2</sub> + V <sub>2</sub>	
		C + V	C· + *V	C: + *V	C: + *V:	C· + *V:
2 syllables	<u>VCV</u>	tapa ['taβa:]	taḗppā		natta ≠ tappā	
3 syllables	<u>VCV</u>	lakata ['laḡa:ða]	maḗttāla		kattila = *kattīma	
	V: <u>CV</u>	vīkate	vūḗttava = *sūḗttīma		ūttele = *mūḗttīma	
	V <sub>1</sub> V <sub>2</sub> <u>CV</u>	leikata	voitteli = *hoittīma		voitteli = *toittīma	
	<u>VRCV</u>	harkata	murḗkkina = *kerḗkkīmā		markkoja = *harkkāma	
	V: <u>RCV</u>	kērsimā	vāḗntteli = *vāḗnttīmā			



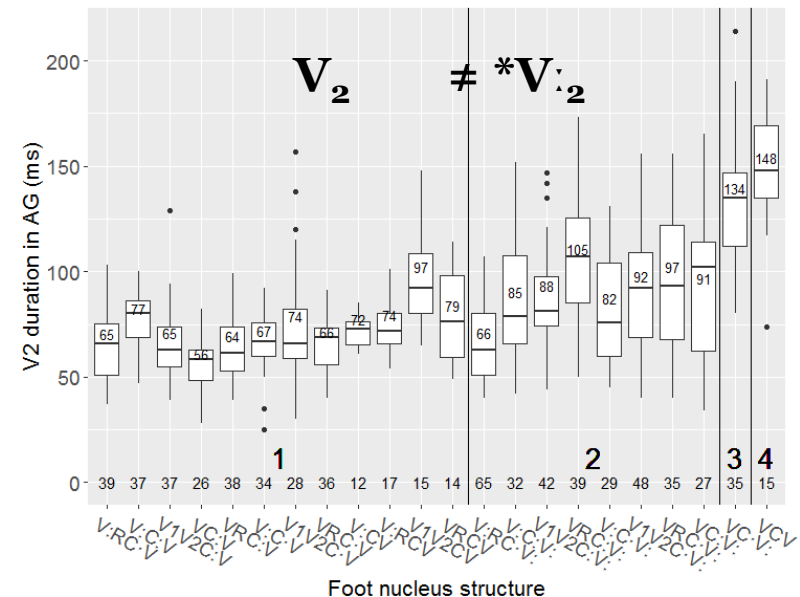


- 2 speakers are “laggers” and represent more or less neat “compensatory shortening” trend: the longer is the structure of the foot nucleus, the shorter is the originally long V2. In some structures it is completely shortened, in others not yet.

## EI



## AG





- The language is nearly extinct, and we hypothesise that this condition might influence the curve of the sound change.
- Speakers do not communicate in Ingrian any longer, and the language evolution has stopped: no progress towards the completion of V2 shortening happened in the last 15 years. Speakers do not adjust to each other's speech behaviour.
- When the language was vital, this sound change was actively developing: (1) not yet attested in the 19<sup>th</sup> century (Porkka 1885); (2) at the initial stage in the 1940s (Sovijärvi 1944); (3) now more advanced in younger than in older speakers.
- The current picture might represent an “interrupted” sound change, different from cases of incomplete neutralisation (e.g. Roettger et al. 2014). The latter can be preserved in several generations of active speakers even in big vital languages.



- It is hard to choose the most frequent V2 length variant for transcription and orthography, because there is simply no such variant: length correlates with a particular word structure and a particular speaker.
- It is difficult to consider any of the speakers as an outlier in a statistical sense when there are so few of them and the interspeaker variability is so huge.
- It is unclear how to transcribe data from individual speakers e.g. in phrasal examples audio-recorded for a dictionary.
- The unfinished V2 reduction adds new length alternations in paradigms to an already extremely complex system.

Cf. a change in a fragment of a verbal paradigm ‘squeeze\_oneself\_in’, where new alternations of long and short V<sub>2</sub> as a function of the number of syllables in the foot (2 vs. 3) evolved:

(old system) \**mättī-n* 1SG, \**mättī-d* 2SG, \**mättī-mmä* 1PL, \**mättī-ttä* 2PL >

(new system) *mättī-n*, *mättī-d*, but *mättī-(m̃)mä*, *mättī-ttä*.

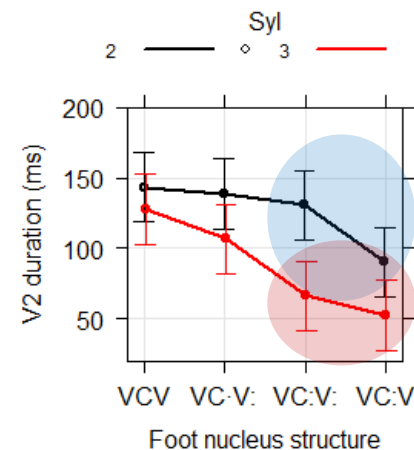
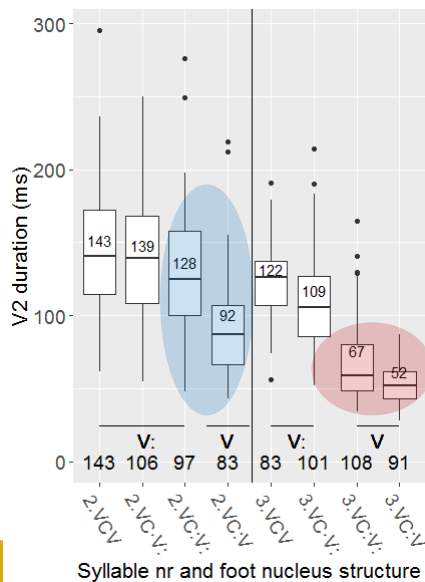




- Due to the unfinished long V2 shortening, Soikkola Ingrian presents typologically the “purest” case of a rare ternary quantity contrast of consonants (C2) out of all known cases (attested only in Finno-Saami languages; cf. Kuznetsova 2015).
- In other such languages, the duration of V2 and/or of V1 is in the reverse relation to the length of C2. Cf. V2 duration in Estonian, which completely lost the phonological contrast of long and short V2: lina ['lina:] ‘linen’ (Q1) — linna ['lin·a(·)] ‘city:GEN’ (Q2) — linna ['lin:ǎ] ‘city:PART’ (Q3).
- Soikkola Ingrian is on the way to the same correlation, but the entire language system has just not arrived there yet. Trisyllables already (nearly) lost the phonological contrast of long and short V2 and disyllables, being shorter structures, still maintain it (cf. Table 2 on slide 4).



- Cf. the aggregated results of V2 duration in Study 2:
  - 2.VCV vs. 3.VCV – ['sad<sub>ə</sub>:] vs. ['jäd<sub>ä</sub>:mä]
  - 2.VC·V: vs. 3.VC·V: – ['sat·a:] vs. ['mat·a:la]
  - 2.VC:V: vs. \*3.VC:V: – ['rät:i:] vs. \*['kat:i:ma]
  - 2.VC:V vs. 3.VC:V – ['rät:i] vs. ['kat:ila]
- The contrast of long and short V2 in 2.VC:V: vs. 2.VC:V is preserved and in 3.VC:V: vs. 3.VC:V is (nearly) lost:





- It is unclear how such a system with an unfinished “interrupted” sound change should be classified typologically.
  - The unfinished V2 shortening in question might have been just a brief transitional period in the life of a big vital language (cf. the same process in the history of Estonian).
  - But exactly this stage happened to be documented in the idiolects of the last speakers of vanishing Soikkola Ingrian.
  - Not just a mere phonological fact in itself becomes important, but also the sociolinguistic conditions in which it was documented and the period of its survival in a language.
  - The factor of language death *per se* might also contribute to the reasons of the concentration of rare features, noticed for endangered languages but not yet sufficiently explained (Himmelman 2000, Mansfield & Stanford 2017, Bird & Kell 2017, Jäger 2019, Whalen & McDonough 2019).