Laryngeal contrast in L2 Russian of Forest Nenets speakers

There exist a lot of studies of laryngeal contrast in second language acquisition, which mainly focus on cases where both the native and the acquired language have this contrast at least in some positions (see Broselow 2018 for a literature review).

Acquisition of laryngeal contrast abides by several linguistic universals that are known to describe laryngeal contrasts in general (Eckman 1977 et seq.). First, the most marked position where voicing contrast can be found is the final position; if a language has contrastive voicing in final consonants, then the initial consonants will also have it. For instance, voicing contrast in final codas has been shown to be more difficult to master than in other positions for Korean speakers of English (Major & Faudree 1996). Then, in positions with no laryngeal contrast, the least marked segment type wrt. voicing is expected – the unvoiced, which is why we find devoicing in positions where learners fail to acquire a voicing contrast (Simon 2010, Schwartz 2012).

I aim to present a novel piece of data from the production of Russian by speakers of Forest Nenets (FN) – a language with no voicing contrast whatsoever. In the literature on voicing contrast in L2, such cases are underrepresented.

My study is based on the acoustic analysis of sociolinguistic interviews with two FN consultants, both of whom have learned Russian in a boarding school. As already mentioned, voicing is not contrastive in FN consonants. In L2 Russian of FN speakers (FN Russian), the voicing contrast is neutralized: both voiced and unvoiced stops have positive VOTs which fall within the distribution found by Ringen & Kulikov (2010) for Russian voiceless stops. Fricatives lack voicing as well. The only paired consonant that is not devoiced is /v/, which FN speakers pronounce as [w], which is present in the inventory of their native language. Russian /f/, as well as devoiced /v/, is pronounced as [f].

The universal about the implicational relationship between voicing contrast in final and non-final positions is not applicable here (Russian lacks this contrast word-finally) but the generalization about the segment type is. While the voicing contrast being neutralized in favor of unvoiced consonants is expected, since they are the less marked option, the distribution of allophones of /v/ in FN Russian is more puzzling. Why do FN speakers get the voicing of /v/ correctly, even though /w/, just like every other consonant in FN, does not have a counterpart wrt. voicing?

I hypothesize that FN speakers associate the voiced occurrences of /v/ with the glide /w/ from their native language, which they cannot do with voiced stops, because their representations are underlyingly unvoiced. For the [f] allophone of /v/ in Russian, they have to master a new segment, which actually helps (see Flege 1987 on dissimilarity between L1 and L2 affecting the accuracy of producing novel sounds).

Also, Russian /v/ can undergo devoicing (1) but does not trigger regressive voicing assimilation (2), which is characteristic of sonorants (3).

(1) *korov* [f]   'cow.GEN.PL'
     dorog [k]   'road.GEN.PL'
(2) *voroval – svoroval* [s]   'he was stealing' – 'he stole'

	delal – sdelal [z]	'he was doing' – 'he did'
(3)	*m'al – sm'al* [s]	'he was crumpling' – 'he crumpled'

It therefore makes more sense for learners to relate /w/, a sonorant in FN, to /v/, a semi-sonorant in Russian. Stops, on the other hand, are represented as unvoiced in FN and can only be transferred to FN Russian without voicing.

This investigation is by no means conclusive: apart from a list of elicited examples, it could benefit from a perception study, which would test the main consequence of my hypothesis: the /v/–/f/ contrast in Russian is expected to be more recognizable to FN speakers than the voicing contrast in stops. Nevertheless, it provides a glimpse at the data on the laryngeal contrast in FN Russian and a research proposal based on it.

The results of the project "Constituent structure and interpretation in the grammatical architecture of the languages of Russia", carried out within the framework of the Basic Research Program at the National Research University Higher School of Economics (HSE University) in 2023, are presented in this work.

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