

Mixed Obstruent Behaviour in Intervocalic Voicing in Innu-aimûn: Contrast and debuccalisation

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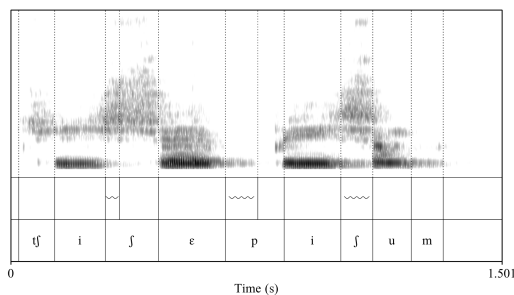
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Background: Innu-aimûn (I-A) is described as having intervocalic voicing of obstruents. In their description of Sheshatshiu I-A, Clarke & MacKenzie (2010:1-2) (C&M) tacitly refer to the voiced sounds [b, d, g, g^w, dʒ] as allophones of /p, t, k, k^w, tʃ/. The sound /ʃ/ also undergoes voicing in the Mushuau dialect (Scott 2000), and, as we will see, in Sheshatshiu dialect). The fricatives /s/ and /h/ are never voiced. This is a case of ‘mixed obstruent behaviour’ in phonological voicing processes. This is particularly interesting given the ‘contrast-only’ model of phonology, whereby phonological features are supposedly only ‘active’ if they are contrastive (Dresher 2009). I-A, typical of Algonquian (apart from Manitoba Michif (Rosen 2007:109)), does not contrast for [±voice]. In I-A, alternating stops are phonemically voiceless and, although the non-alternating /s/ and /h/ lack their voiced counterparts (* /z/, * /ʃ/), so does /ʃ/ (* /ʒ/), yet it alternates.

Empirical picture: We performed a preliminary acoustic phonetic study. The data come from the online dictionary: one male Sheshatshiu speaker and one female Mashuau speaker (Ambroise et al. 2023). A total of 66 tokens of high frequency words were selected and measured manually in Praat. Contrary to the symbols used to transcribe I-A, we found that ‘voicing’ of obstruents was not categorical. The results indicate partial voicing that is variable even within speakers: *tukuatshi-pishim*^u [tuḱwatʃi-piʃun] ‘November’.

(1) [tʃi:ʃe-piʃum] ‘January’ (Sheshatshiu)



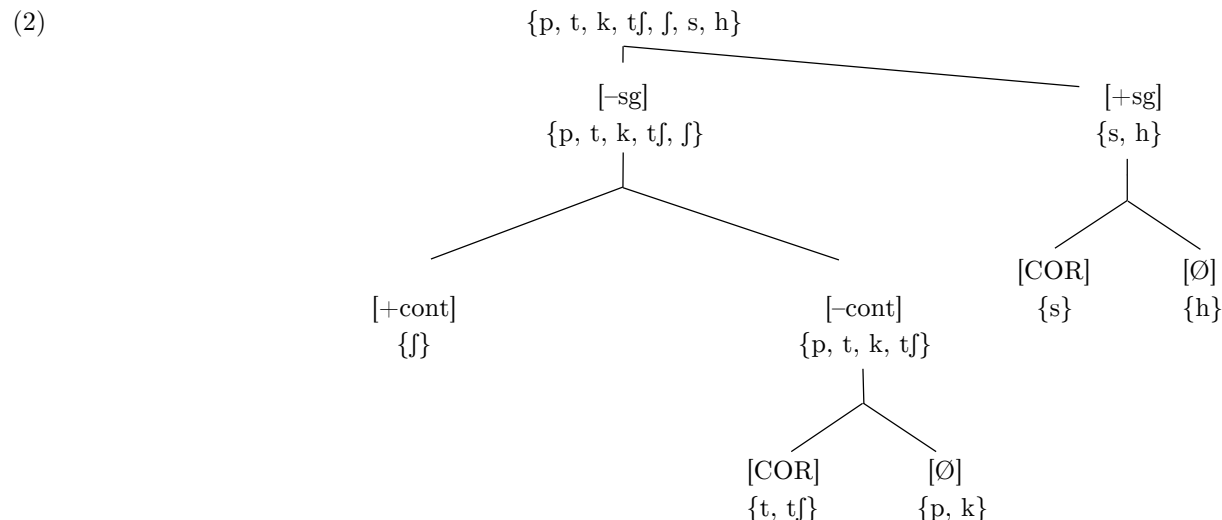
C&M are structurally correct. The sounds /s, h/ are categorically voiceless, except /h/ when pronounced very short (e.g. one token *uhu* ‘owl’)). The process shows phonological sensitivity. [tʃ] /tʃ+f/ (from syncope) is also categorically unvoiced: *mitshishu* [mitʃu] ‘eagle’.

Analysis: The ‘mixed behaviour’ of obstruents in phonological voicing processes has been ascribed to underlying featural differences generated by the *Variable Hierarchy* and the *Successive Division Algorithm* (Dresher 2009). For example, Russian and Turkish both have rules that manipulate voicing (Nevins 2015). Both Turkish and Russian have phonemic /s, z/, so in principle [±voice] could suffice to differentiate them. However, in Russian, the rules apply to all obstruents, whereas in Turkish, they only affect a subset of them. Turkish, unlike Russian, has non-alternating obstruents: /t^h, s/ that resist *Intervocalic Voicing*. Unlike Russian, Turkish unambiguously needs to contrast spread glottis [±sg]: {z, d, t, t^h, s}. This allows Turkish to cut its obstruents according to the hierarchy [±sg > ±voice > ±cont]; splitting off the non-alternating [+sg] consonants: {t^h, s}. Russian does not have this contrast, so its obstruents {z, d, t, s} are only cut according to: [±voice > ±cont], ergo all obstruents are equally implicated by [±voice] processes. In Turkish, the crucial [±voice] cut is ‘delayed’, it only applies to the [-sg] set (Nevins 2015).

This analysis can be successfully imported to I-A. Though there are no spread glottis stops, I-A does have /h/, that is unambiguously [+sg]. We therefore can propose the hierarchy [±sg > ±cont] making

the natural class {s, h} (cf. Vaux 1998), excluding /ʃ/ and other obstruents. Then, voicing is blocked in obstruent-clusters, geminates and [+sg] environments.

Convergent evidence: As we see in (2), the [\pm cont] cut is vacuous for the [\pm sg] set {s, h}. However, this set still needs a cut for Place: [\pm sg > \pm cont > Place] (we will only show COR). Interestingly though, on the [-sg] side, there is first a split for [\pm cont]. This cut already uniquely identifies /ʃ/, meaning that in I-A /ʃ/ does not require a phonological place specification.



This may seem improbable, however, Innu provides evidence for exactly this. Younger speakers of Sheshatshiu are undergoing a sound change whereby /ʃ/ debuccalises in weak positions (V_V & _#): /feʃatʃit/ [ʃehatʃit] ‘place name’ & /ʃiʃip/ [ʃihip] ‘duck’ (C&M 2010:8). This is particularly significant due to the phonetic unnaturality of the process. Whereas coda debuccalisation is cross-linguistically standard, the intervocalic environment generally retains place features very well (especially for a weak position). Cases of allophonic intervocalic spirantisation are rare (O’Brien 2012), and the existing cases (Central American Spanish, Southern British English, Central Tuscan Italian) are caveated. Furthermore, the *Diachronica* sound change database does not include a single example of a one-step intervocalic change from /ʃ/ to /h/. However, this relatively unusual happenstance receives a ready phonological explanation from the hierarchy proposed above. Not having explicit place specification makes I-A /ʃ/ particularly vulnerable to debuccalisation. The relationship between +SG and bipositionality is also discussed as a possible source for the inalterability of /s, h/. Dialectal variation will also be considered and presented, as well as the typological implications for the inventories of voiceless fricatives.

References

- Ambroise, J.; Junker, M.-O.; MacKenzie, M.; Mollen, Y. 2023. *Online Innu Dictionary*. <http://www.innu-aimun.ca/dictionary>. Clarke, S. & M. MacKenzie. 2010. *An Introduction to the Sheshatshiu Dialect*. MUN Press. Drescher, E. 2009. *The Contrastive Hierarchy in Phonology*. Cambridge University Press. Nevins, A. 2015. Triumphs and limits of the Contrastivity-Only Hypothesis. *Linguistic Variation*, 15(1):41-68. Rosen, N. 2007. *Domains in Michif Phonology*. PhD thesis. University of Toronto. O’Brien, J-P. 2012. *An experimental approach to debuccalization and supplementary gestures*. PhD thesis. UC-Santa Cruz. Vaux, B. 1998. The laryngeal specification of fricatives. *Linguistic Inquiry*, 29:497–511. Oxford, W. 2023. *Consonant inventories from Proto-Algonquian to the daughter languages*. [ms.], University of Manitoba.