

Perceptual salience of Blackfoot syllabic /s/

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Main Claims

Long /s/ is perceptually similar to vowels in that it is syllabic.

- Syllabic /s/ has a longer duration than non-syllabic /s/ (Derrick, 2006b).
- Not all long /s/ are syllabic (Derrick, 2006a); specifically, only those followed by consonants are syllabic.

Historical Account

According to Frantz (1997), syllabic /s/ may arise from historical sequences of /ix/. Thus, the fact that /s/ can be a nucleus is explained by virtue of it historically containing a vowel.

Experiment

The consultant was asked to tap along to the rhythm of an utterance.

- With normal speed recordings of target utterances.
- With artificially slowed recording of target utterances.
- While producing target utterances.

Hypotheses

Tapping is correlated to syllabification. Syllable nuclei are tap targets.

- Long vowels will always be tapped.
- Long /s/ followed by a consonant will be tapped.

Results

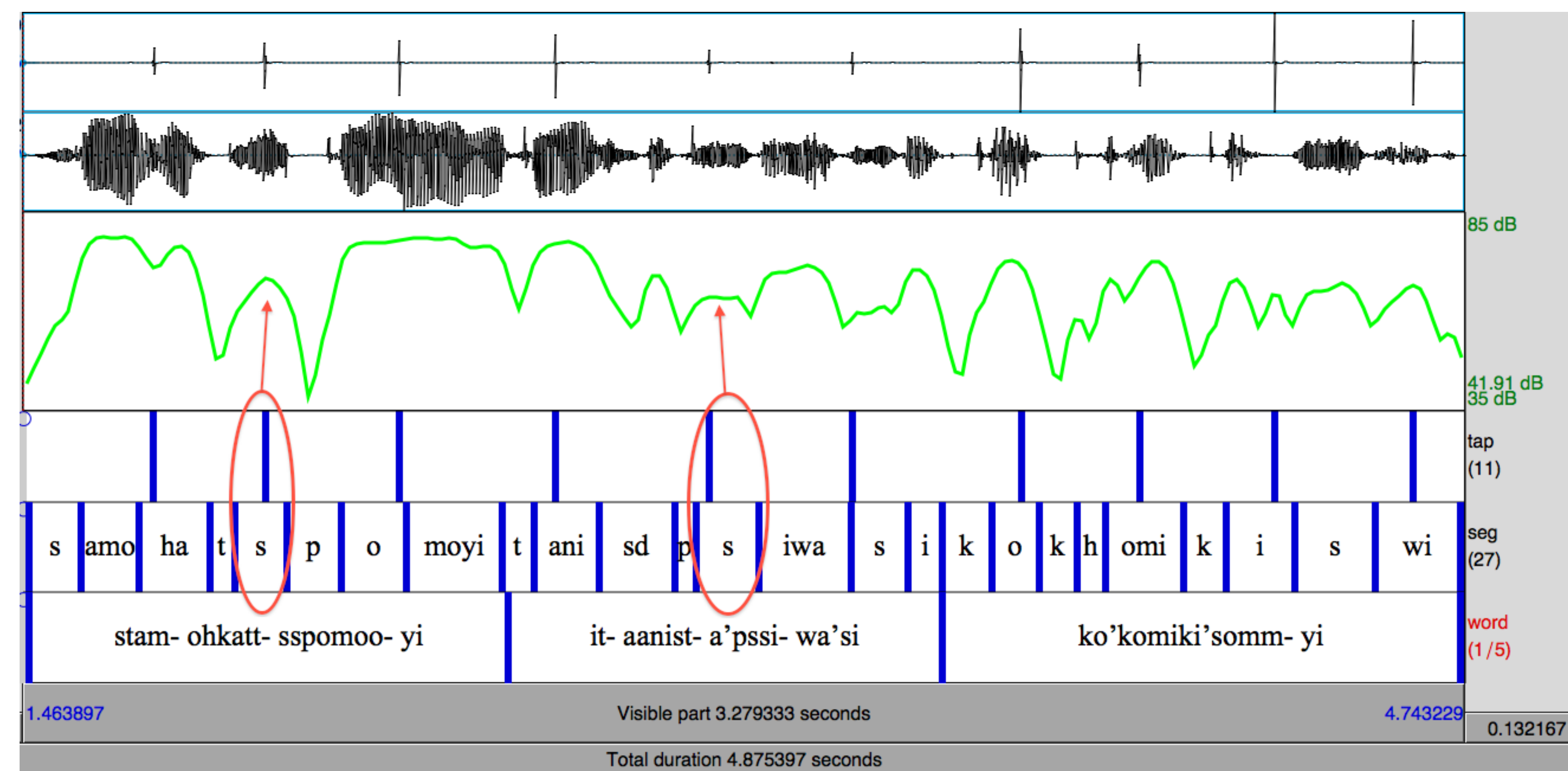


Figure 1: Waveform, intensity and segmentation of (1)

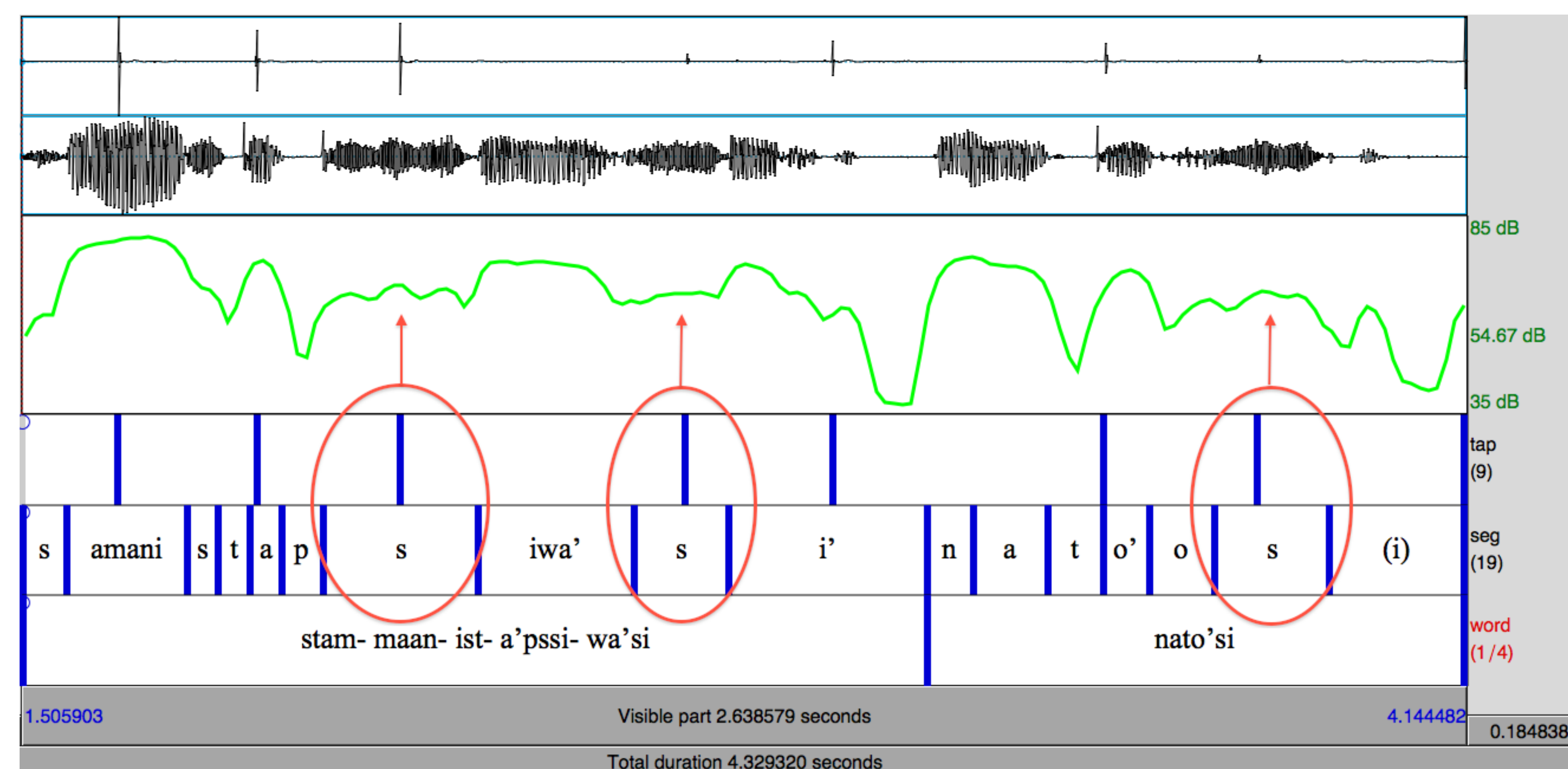


Figure 2: Waveform, intensity and segmentation of (2)

Target Utterances

Utterances were chosen from a recording of a creation story (Bullshields et al., 2008). Utterances include long and short vowels and long and short /s/.

- (1) *stam- ohkatt- sspomoo- yi it- aanist- a'pssi- wa'si ko'komiki'somm- yi*
just- also- go.to.heaven.AI- OBV LOC- MANNER- be.AI- become.AI moon- OBV
'The woman went up into the heavens and she became the moon.'
- (2) *stam- maan- ist- a'pssi- wa'si naató'si*
just- new- MANNER- be.AI- become.AI sun
'He became the sun'

Discussion

Figure 1 illustrates a long /s/ followed by a consonant which is aligned with a tap. This exemplifies the case which Derrick (2006b) claimed to be syllabic. Compare this to the /s/ in Figure 2, which is followed by a vowel. This suggests that syllabicity of /s/ is not solely derivable from context. Note that the final /s/ in the second utterance is followed by a voiceless vowel.

Slowed speech & Production

- When tapping to slowed recordings, the patterns remained largely the same.
- When tapping while producing the utterance, taps were more frequent (ie. every vowel was tapped) but no taps were removed.

Conclusion

- Long vowels are usually tapped, but not unambiguously.
- Long /s/ followed by consonants was tapped, but so were *some* long /s/ followed by vowels, both realized vowels and voiceless vowels.

References

- Thank you to our consultant Beatrice Bullsields and to Gunnar Ólafur Hansson for advising.
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- Derrick, D. (2006b). Duration of Blackfoot /s/. a comparison of assibilant, affricate, singleton, geminate and syllabic /s/ in blackfoot. In *Proceedings of WSCLA 11, UBC Working Papers in Linguistics*, Vancouver, BC. UBC.
- Frantz, D. (1997). *Blackfoot Grammar*. University of Toronto Press, Toronto.

