

Conflicting trigger effects in Uyghur backness harmony

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Introduction. Many suffixes in Uyghur (SE Turkic: China, Kazakhstan, Uzbekistan) harmonize for backness with stems. Classic descriptions of this phenomenon (e.g., Lindblad 1990, Hahn 1991) report that suffixes agree in backness with the final front (/æ ø y/) or back (/u o a/) stem vowel (e.g., *køz-dæ/*da* ‘in/on an eye’; *at-ta/*tæ* ‘in/on a horse’). The vowels /i e/, though phonetically front, are transparent to harmony (e.g., *qoichi-da/*dæ*). If no harmonizing vowel is present in the stem, the suffix will agree with the final front (/k g/) or back (/q ʁ/) dorsal (e.g., *ki-fi-dæ/*da* ‘in/on a person’; *qiz-da/*dæ* ‘in/on a girl’). In stems with both a harmonizing vowel and a conflicting harmonizing dorsal that intervenes between the vowel and the suffix, the vowel takes precedence (e.g., *rak-ta/*tæ* ‘in/on shrimp’). In the absence of harmonizers, stem backness is specified lexically, with a preference for back suffixes (e.g., *biz-dæ/*da* ‘in/on us’; *it-ta/*tæ* ‘in/on a dog’; though see McCollum (2019), which suggests a distinction between /i/ and /u/ in such forms). The goal of the present study is to explore the effects and productivity of conflicting vowel and dorsal backness triggers by comparing wug and real words elicited from Uyghur speakers. This allows us to explore the phonological pattern of backness harmony while taking into account lexical effects. We show that, although such an interaction between triggers exists, it is more complex than previously described. Real words pattern similarly to the description above, with the harmonizing vowel taking precedence, while conflicting triggers in wug words skew responses to be more likely to agree with the dorsal sound. However, this effect only occurs in wug words with a conflicting uvular trigger: conflicting velar triggers behave like real words. In addition to providing a more detailed empirical description of Uyghur backness harmony, these results bear on theories of lexically-specific phonology, as well as learning biases in phonotactic acquisition.

Methodology. We generated a set of Uyghur wug words containing a single harmonizing vowel and a conflicting dorsal consonant: either a front vowel followed by a velar consonant (notated as FK; $n=12$) or a back vowel followed by a uvular consonant (notated as BQ; $n=12$). We varied the distance between the vowel and suffix by inserting syllables with transparent vowels. The distance between the harmonizing vowel and suffix ranged from 1 to 3 syllables. The dorsal always occurred word-finally. Words were vetted by a native Uyghur speaker for phonotactic plausibility. A set of real words (FK: $n=7$; BQ: $n=8$) with similar structures was generated by scraping a corpus of Uyghur Radio Free Asia transcripts. The distance between the harmonizing vowel and suffix also ranged from 1 to 3 syllables. The dorsal occurred word-finally in about 50% of the words, occurring in the onset of the final syllable in the remaining 50%, with a roughly even distribution across FK and BQ words. We presented unsuffixed forms of each word to 23 native Uyghur speakers living in Kazakhstan and asked them to attach the locative suffix, which has front ([-dæ], [-tæ]) and back ([-da], [-ta]) allomorphs. Wugs were embedded in short, naturalistic paragraphs, while real words were embedded in a simple carrier phrase. We coded which form of the suffix was used for each word, and calculated the proportion of back suffixes produced across speakers for each word.

Results. The proportion of back responses produced for each word template is shown in Fig. 1. Chi-square tests show no significant difference in proportion of back responses between wug and real

words with the form BK ($\chi^2=0.026$, $df=1$, $p=0.87$), but a significant difference for words of the form FQ ($\chi^2=72.13$, $df=1$, $p<0.001$).

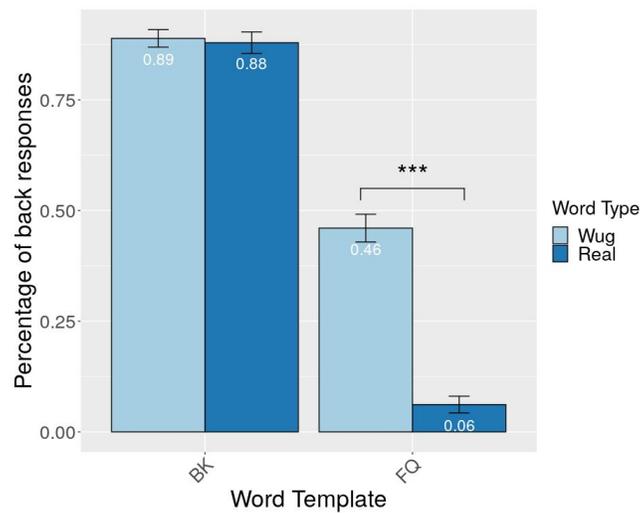


Fig 1. Proportion of backness responses by word type and template.

Discussion. Wug and real words exhibit different degrees of influence from conflicting triggers: the presence of a uvular consonant between the final harmonizing front vowel and the suffix skews suffix choice towards back forms, but only in wug words. Conflicting velars showed no such effect in either case. We propose that this pattern may be modeled using lexical strata (e.g., Mohanan 1982), where the constraint mandating agreement between uvulars and suffixes receives lower weight in the strata containing real words. We do not present such an analysis here for reasons of space. Uvular consonants have been shown to exert a backing effect on nearby vowels (e.g., Gallagher 2016). This suggests a phonetic basis for the tendency for uvulars to predict back suffix forms. The results presented above suggest that Uyghur speakers fail to frequency match observed data (e.g., Zuraw 2000), and instead make recourse to phonetic knowledge when predicting unattested forms, even though this knowledge does not appear to be a significant predictor for real words (see, e.g., Zhang and Lai (2010) for another case of phonetic knowledge exerting a stronger influence in wug forms). That is, phonetic knowledge may override statistical generalizations from observed language data.

References

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