Bi-directional interference in VOT production by late Russian English bilinguals: sociolinguistic factors

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Voice Onset Time (VOT) in Russian English bilinguals has been studied at either heritage Russian speakers or balanced bilinguals (Nagy & Kochetov 2013) or examined meticulously from the phonetic side, not tying it to any sociolinguistic reasons (Dmitrieva et al. 2020; Ringen & Kulikov 2012).

The study is aimed at the direction of closing the gap: at the first stage, the VOT is measured in English and Russian spontaneous speech produced by late bilinguals, then a correlation between certain sociolinguistic factors and L1→L2 and L2→L1 VOT interference in individuals is suggested. The factors can be divided into main groups: time factors (length of residence, age at onset of attrition); interactive L1 use (using L1 with a partner and in the working environment), and non-interactive exposure (songs, podcasts, videos, and books) (Schmid 2011).

The data is obtained from 26 online interviews in English and Russian of 13 Russian native speakers living in English-speaking countries. For every speaker, a set of 45 initial voiceless plosives VOT was measured, resulting in 90 tokens per speaker for both languages and 1170 overall tokens. Then the correlation of sociolinguistic factors and mean VOT scores was calculated using Pearson's linear correlation coefficient.

Comparing it to the evaluations of VOT in English (Rae 2018) and Russian (Ringen & Kulikov 2012) monolinguals it is confirmed that the influence of L2 to L1 is more prominent in /p/ and /t/, also, less pronounced but existing in /k/ in Russian speech as shown on Figure 1. Figure 2 illustrates that the interference in the opposite direction was also established in /t/ and /k/ where VOT was shorter than in monolingual English speech. The study of sociolinguistic factors finds out that the most prominent group of factors correlating with VOT influence are non-interactive exposure ones both for L1 and L2 shift, with time factors and interactive L1 use demonstrating weak or no correlation as seen on the heat maps in Figure 3 and. 4 It might be suggested that during the lockdown in recent years the importance of the work language that had been described to play an important role (Schmid & Dusseldorp 2010) has decreased while the speakers were more influenced by non-interactive exposure of their choice.

The current study attempts to establish correlation and start a discussion on how and why certain sociolinguistic parameters might affect VOT and if it is a mere correlation or an established connection.

References

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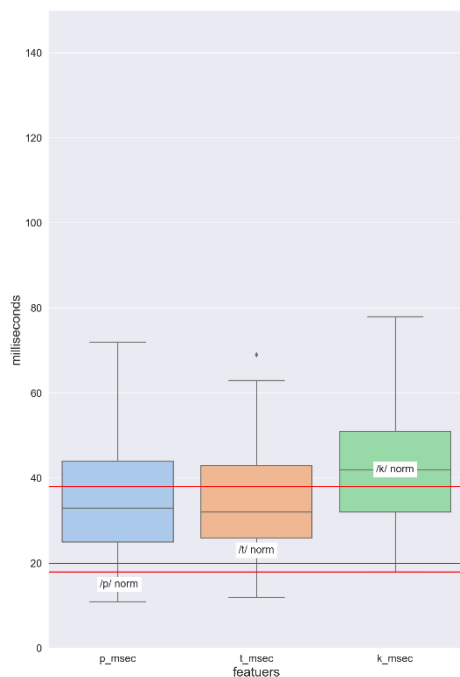
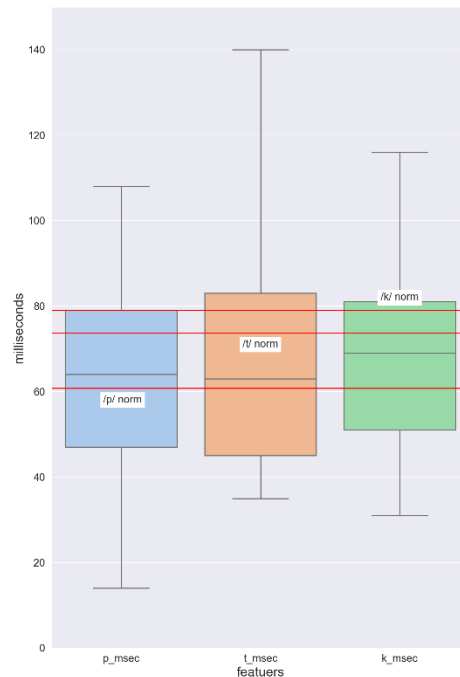Figure 1. VOT in Russian speech

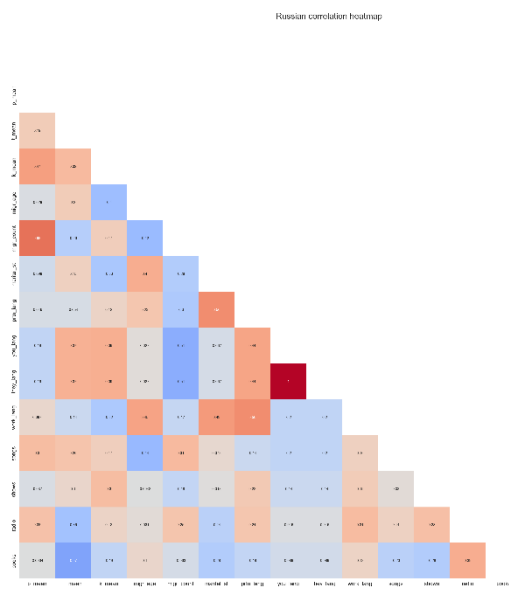Figure 2. VOT in English speech

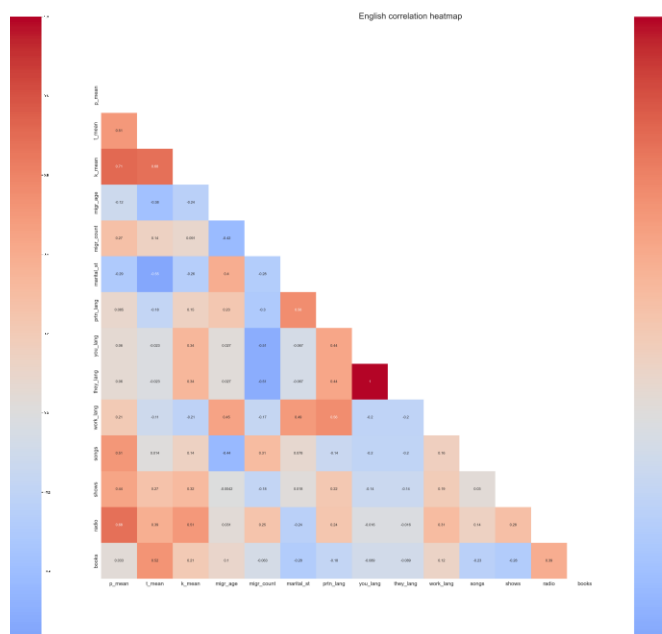Figure 3. Correlation between VOT in Russian speech and sociolinguistic factors

Figure 4. Correlation between VOT in English speech and sociolinguistic factors