

Foreign Accents in German: Romanian

Contrastive Phonetics: German vs. East-European languages

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1. Introduction

Forensic casework has become more complex due to the fact that forensic phoneticians not solely deal with dialects of languages that are familiar to them but are asked to determine the language background of L2-learners of the familiar language. Motivated by a recent speaker-profiling case involving German speech samples which exhibited a foreign accent, the aim of this study is to investigate the Romanian language and its interference when learning German. The following research questions will be addressed:

1. In which way do German and Romanian differ in terms of the sound systems?
2. Which features are transferred to the German L2 by native Romanian speakers?

2. Method

Speech materials

- text „Nordwind und Sonne“
- words including German long vowels
- sentences with sounds and sound clusters possibly problematic for German learners
- spontaneous speech produced using a map reading task

Speakers

- 8 Romanian subjects (4 male, 4 female)
- German as L2 (different levels)
- Age: 33 - 51
- Male and female reference speakers

3. Results

The articulation of /l/: F1-F2 comparison native German versus Romanian

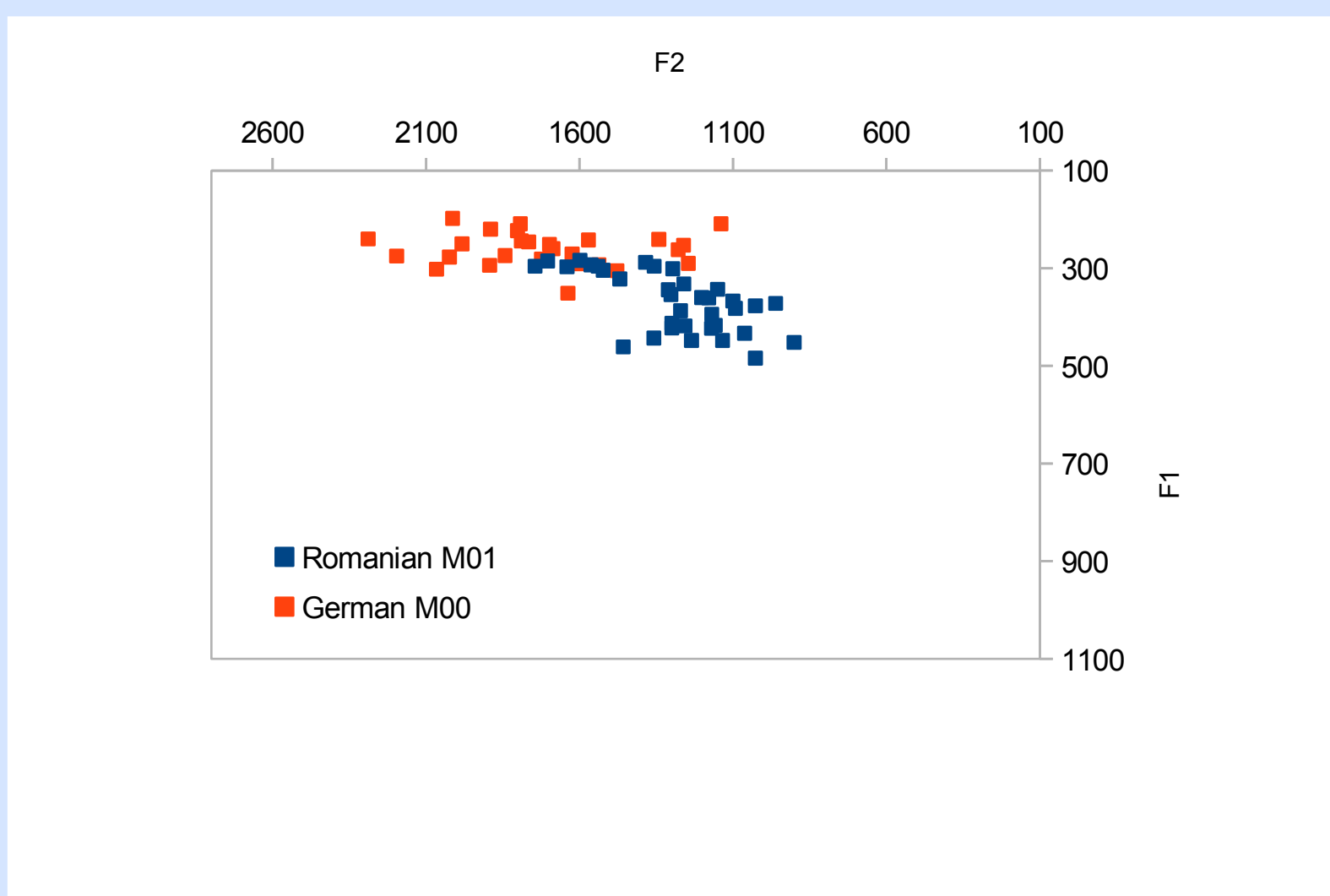


Figure 1: // F1-F2 formant distribution comparing a male native speaker of German and a non-native Romanian speaker of German reading a list of sentences in German. The // appeared in 35 items in a variety of phonetic contexts, e.g. pre- and post-vocalic. For the Romanian speaker it shows a clear tendency towards a velarized realisation of //.

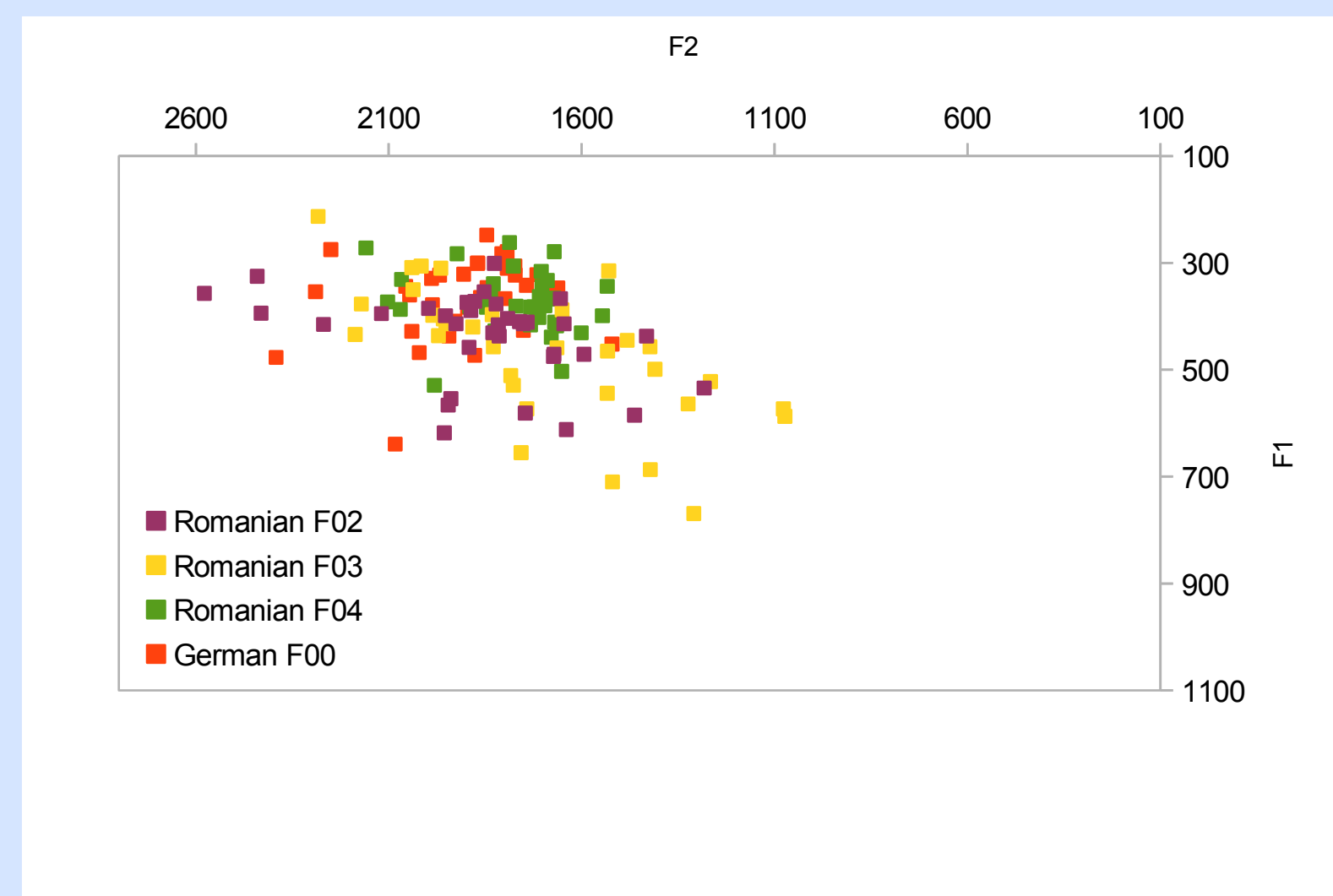


Figure 2: // F1-F2 formant distribution comparing a female native speaker of German and non-native Romanian speakers of German reading a list of sentences in German. The // appeared in 35 items in a variety of phonetic contexts, e.g. pre- and post-vocalic. For some Romanian speakers it shows a clear tendency towards a velarized realisation of // in post-vocalic contexts.

Voice assimilation

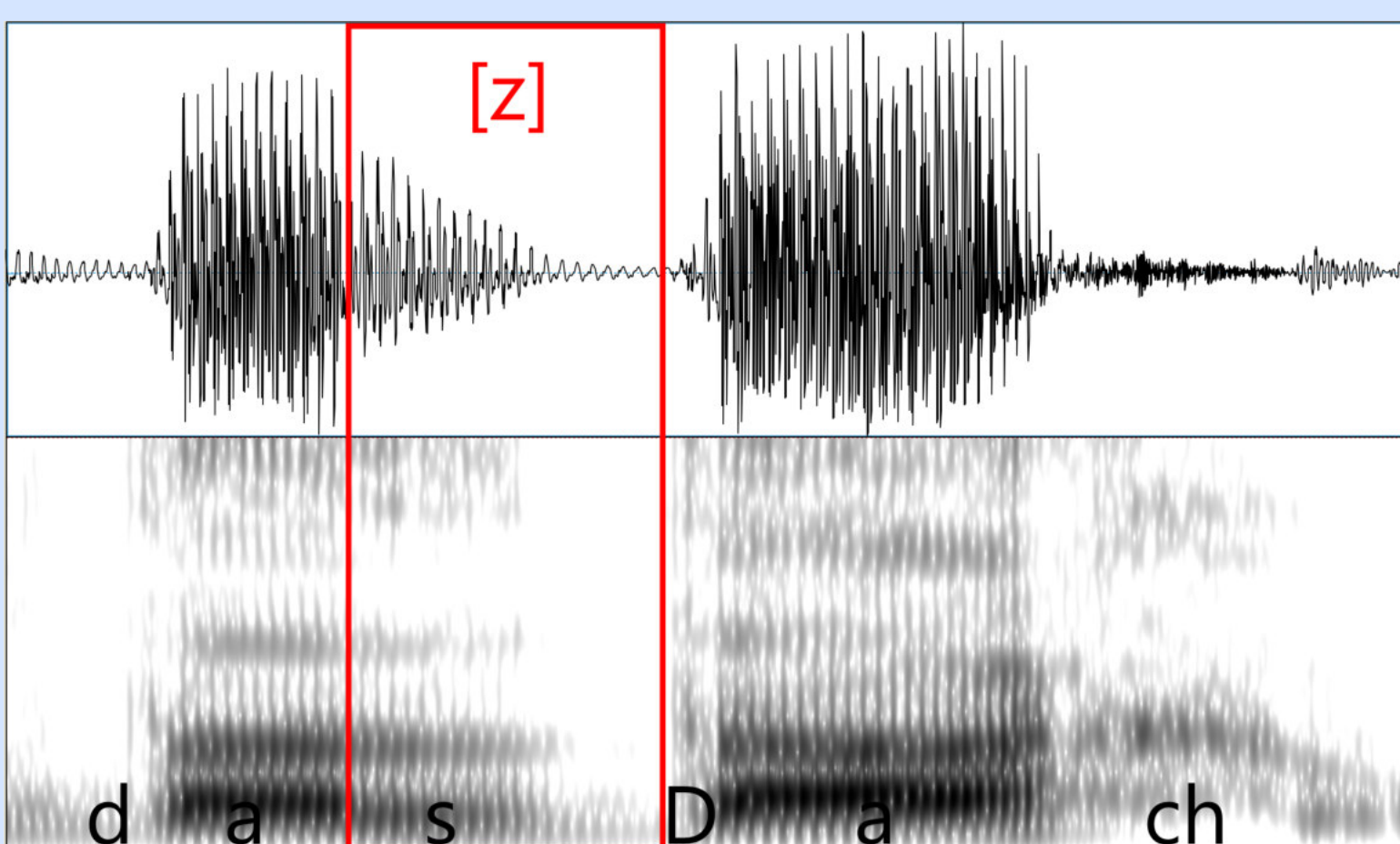


Figure 3: The voiced fricative shown here in red indicates that the Romanian speaker (M01) has transferred the (Romanian) regressive voice into L2-German.

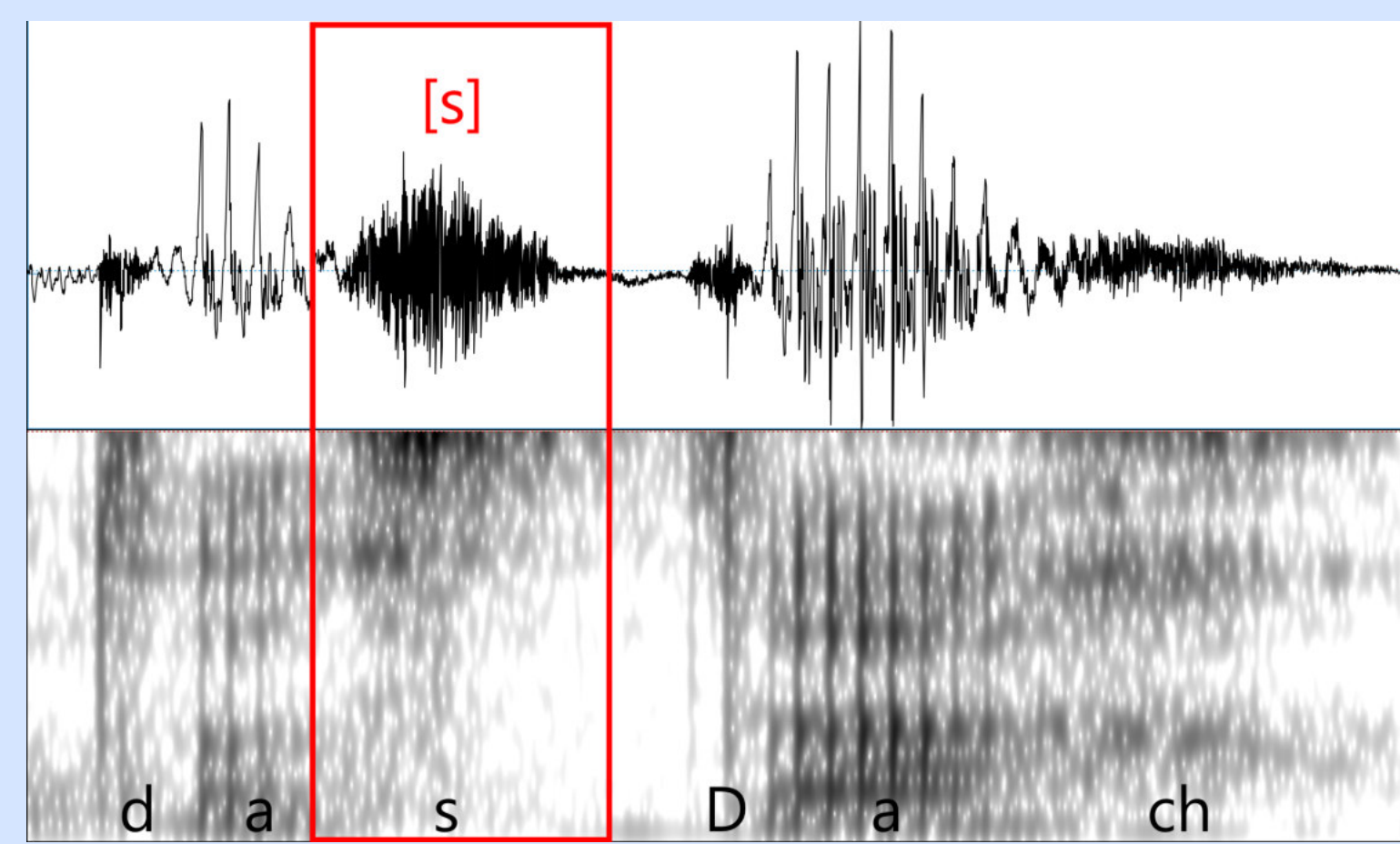


Figure 4: The voiceless fricative produced by the German speaker shows that regressive Assimilation is not employed by native German speakers.

Regressive Assimilation	German speaker female	German speaker male	F03	F04	M01	F02
„das beste“ (the best)	no	no	no	no	complete	partial
„das Bärchen“ (the small bear)	no	no	no	complete	no	partial
„das Boot“ (the boat)	no	no	no	no	complete	no
„das Bremlicht“ (the brake light)	no	no	no	no	no	no
„das Dach“ (the roof)	no	no	no	no	complete	complete
„das Geld“ (the money)	no	no	no	partial	no	complete
„das Signal“ (the signal)	no	no	no	complete	complete	no

← Increasing amount of time spent in Germany

- Green: Voice assimilation applied according to German phonotactics: not regressive
- Red: The shades of red express the degree of regressive assimilation

Figure 5: The table shows the occurrence of regressive voice assimilation comparing native German speakers with Romanian speakers. Subjects are listed in order of increasing number of years spent in Germany, as this may affect the type of voice assimilation exhibited.

Length of the central vowel Schwa /ə/

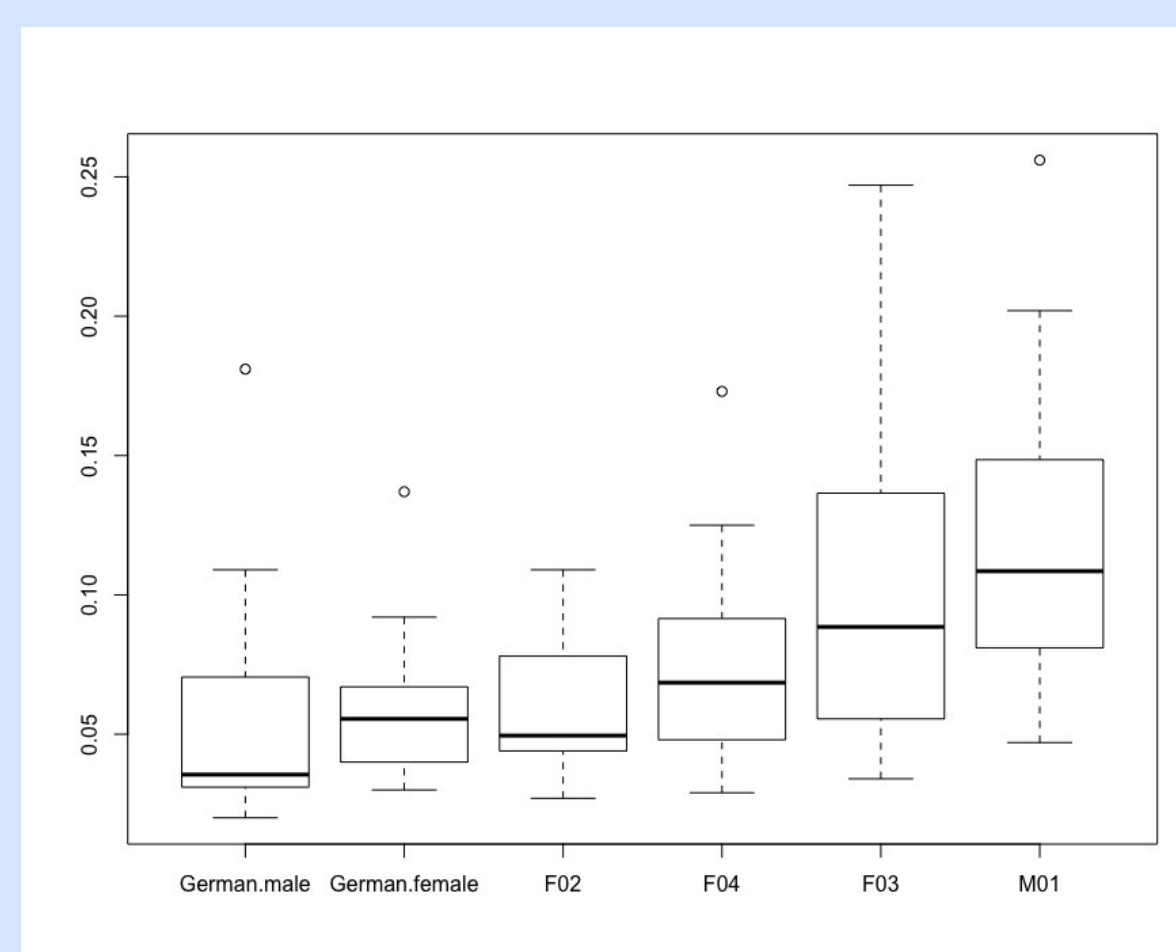


Figure 6: This boxplot visualises the differences in length of the central vowel Schwa /ə/. There is a clear correlation of length and level of German which suggests that the native Romanian vowel tends to be longer.

The /r/ phoneme

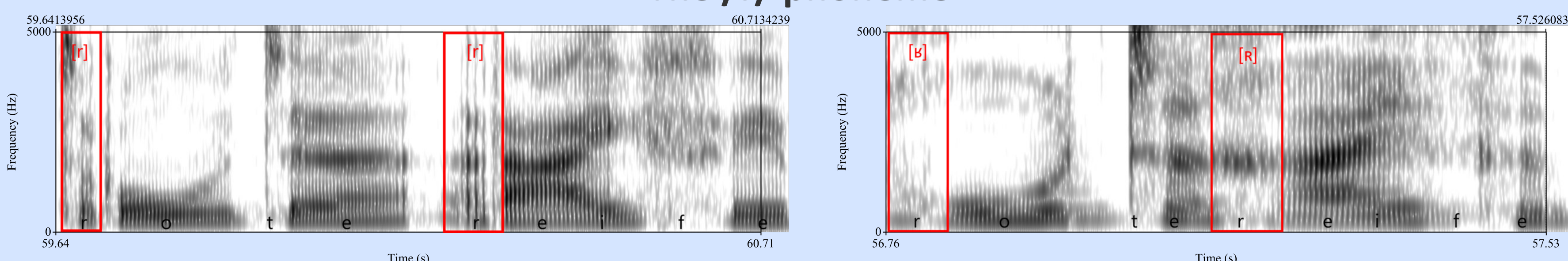


Figure 7: The spectrogram shows the /r/ phoneme that occurs in the Romanian language and which is transferred to the L2-language frequently: the alveolar trill [r].

4. Conclusion

So far, it has been shown that Romanian speakers transfer some of the characteristics of their native language into the L2. The existence of two /l/ phonemes, which occur in different contexts (pre- or postvocalic) is applied while speaking German as well as the regressive voice assimilation. While the velarisation of /l/ is a more consistent feature, voice assimilation seems to be subject to high variance which may be due to dialectal influences or the individual L2-language experience. Other persistent sounds are the alveolar tap and trill [r r̥] which are variants of the /r/ phoneme that are frequently used instead of the German fricative [ʁ]. As the central vowel /ə/ holds the status of a full vowel, a length difference could be revealed between German and Romanian speakers which is also influenced by the proficiency of the German learner. Additional investigations of the two vowel systems will be undertaken hereafter.

	German	Romanian	Development
Distinction between long and short vowels	yes	no	The difference in quality may not be mastered by a speaker with limited German experience but can be acquired with increasing language skill.
Rounded vowels	yes	no	The short rounded front vowels /y œ/ seem to pose a greater difficulty than the corresponding long vowels /y œ/ which vary in quality to a minimal degree.
Glottal vowel onset	yes	no	The absence of this feature is consistent across various levels of German as an L2-language.
Velarisation of /l/	no	yes	The velarisation of the phoneme /l/ seems to occur in postvocalic position while a 'clear' /l/ is used prevocalically. Even with extended knowledge of German this feature remains prominent.
Dorsal fricatives	yes	no	Because of the absence of /ç x/ difficulties with the production of these speech sounds may occur. They are frequently substituted with the post-alveolar fricative or the target sound is only approximated.
Aspiration	yes	no	The aspiration of voiceless plosives in German is a prominent feature that is rarely adopted by L2 speakers of German (Moise & Snagoveanu-Spiegelberg n.d.).
Final devoicing	yes	no	In German, no voiced obstruents appear in the coda of a syllable in contrast to the Romanian language. The subjects frequently pronounce the voiced variant, according to orthography which should be devoiced in standard German (König & Gast 2007).
Syllable reduction	yes	no	Syllable reduction could rarely be observed in the speech material which suggests that Romanians do not reduce syllables in their native language. This is evidence for Romanian being a syllable-timed language like other Romance languages (Moise & Snagoveanu-Spiegelberg n.d.).
Voice assimilation	progressive	regressive	The utilisation of regressive voice assimilation by the Romanian subjects varies significantly which suggests that learners of German are able to adapt the foreign assimilation pattern. The level of German, the contact to natives and the region where the subject learned the L2 may all influence this feature.
/r/ phoneme	velar/uvular fricative /r̥ r̥/	alveolar tap/trill /r r̥/	The place of articulation of the /r/ phoneme differs significantly in the standard language in the two languages. The Romanian variant is employed regularly while speaking German.
Vocalisation of postvocalic /r/	yes	no	As the vocalisation of the phoneme /r/ is a completely foreign concept to Romanian speakers, the subjects rarely employ this rule. Even with increasing German level, the feature is not employed.
Consonant gemination	no	no	The existence of this feature may exclude Romanian as a native language.

Moise & Snagoveanu-Spiegelberg n.d.; Wiese 1996

5. References

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