

# FAIC – Foreign Accent Imitation Corpus

*Sara Neuhauser*

*Institut für Germanistische Sprachwissenschaft, Universität Jena, Germany*

sara.neuhauser@uni-jena.de

The imitation of foreign accents is a possible form of voice disguise. The speaker pretends to be a non-native speaker of a language, e.g. German, with the alleged aim to conceal his own identity and to mislead the investigations. Experimental studies have focused on the ability of listeners to judge accent authenticity (Tate, 1979; Markham, 1999; Neuhauser&Simpson, 2007; Purschke, 2010) and on the ability of speakers to imitate foreign accents or different regional dialects (Torstensson et al., 2004; Neuhauser, 2008).

This paper presents FAIC [feɪk] (*Foreign Accent Imitation Corpus*) – a corpus collected within a project investigating foreign accent imitation from a production and a perception perspective within a German context (Neuhauser, 2011).

A preliminary study was carried out to determine which accents are claimed to be the most “easiest” to imitate as well as to acquire German subjects for the main investigation. A group of 121 and a control group of 70 native German speakers were asked to name the two accents they think would be the easiest to imitate. French (36 %) and English (34 %) were the accents named most often, followed by Russian (9 %) and Turkish (7 %).

The corpus consists of 35 native German speakers reading various texts and producing spontaneous material in undisguised German as well as attempting to imitate a foreign accent. Imitations of following accents were recorded: French (N = 22), American-English (N = 11), Russian (N = 2), and Turkish (N = 1). Additionally, 16 non-native German speakers were recorded producing various texts in German and their mother tongue. They are native speakers of the following languages: French (N = 4), American-English (N = 9), Russian (N = 1), Czech (N = 1), Italian (N = 1). They differ in their competence level in German as a foreign language, but all of them have a noticeable foreign accent in German.

Each participant attended two recording sessions with a time-lag of two weeks. This was designed for the investigation of the speakers' consistency during accent production. Approximately one week before the first recording the participants were given two texts. They were told that they could practice reading these texts as much as they wanted to, but no further guidance was given. The subjects were also asked to compose their own text which had to contain particular words and phrases occurring in the prepared texts. This task was designed to provide a basis for comparison between the texts. Immediately before the first recording the speakers were given a third text which was used in a previous preliminary experiment. For the recording of spontaneous speech material the subjects were asked to talk about themselves (CV, their studies, why they came to Germany) or to give directions between two prominent buildings within the town.

All audio files were recorded in a sound treated room directly to PC, digitizing at a

sampling rate of 16 kHz and an amplitude resolution of 16 bits. The speaking distance to the microphone placed off-axis to the lips was approximately 40 cm. The recording conditions and order of reading the texts were the same in both recording sessions. The speakers were informed about the forensic context immediately before the first recording session. Questionnaires were used to gather more information about the subjects' linguistic and medical background.

The main part of the speech data (484 of 512 signals) is annotated at the word level using *praat* (Boersma and Weenink, 2009) and *xassp* (IPDS, 1997). The annotations facilitate access to the data and some automatic signal processing. The annotation of the remaining audio files is close to completion.

FAIC is to be published over an internet platform which is currently under construction. The platform will provide examples of the recordings, all texts and detailed description of data acquisition, recording conditions and data processing. Full access to the speech signals and annotation data will be given upon request.

## References

- Boersma, P. and D. Weenink (2009). Praat: doing phonetics by computer (Vers. 5.1.20). <http://www.praat.org/>
- IPDS (1997). *xassp User's Manual* (Advanced Speech Signal Processor under the X Window System). Kiel: IPDS. (Vers. 1.2.15.)
- Markham, D. 1999. Listeners and disguised voices: the imitation and perception of dialectal accent. *Forensic Linguistics: The International Journal of Speech, Language and the Law* **6.2**, 289-299.
- Neuhauser, S. 2011. *Phonetische und linguistische Aspekte der Akzentimitation im forensischen Kontext. Produktion und Perzeption.* (PhD Thesis, University of Jena)
- Neuhauser, S. 2008. Voice disguise using a foreign accent – phonetic and linguistic variation. *The International Journal of Speech, Language and the Law* **15.2**, 131-159.
- Neuhauser, S., Simpson, A. P. 2007. Imitated or authentic? Listeners' judgements of foreign accents. *Proc. of the 16th ICPHS Saarbrücken*, 1805-1808.
- Purschke, C. 2010. Imitation und Hörerurteil – Kognitive Dialekt-Prototypen am Beispiel des Hessischen. In: Anders, C., Hundt, M., Lasch, A., (eds), *Perceptual Dialectology. Neue Wege der Dialektologie.* Berlin, New York: Walter de Gruyter, 151-178.
- Tate, D. A. 1979. Preliminary data on dialect in speech disguise. *Current issues in the phonetic sciences: Proc. of the IPS-77 Congress vol. 9.* Amsterdam: Benjamins, 847-850.
- Torstensson, N., Eriksson, E. J., Sullivan, K. P. H. 2004. Mimicked accents – Do speakers have similar cognitive prototypes? *Proc. of the 10th Australian International Conference on Speech Science & Technology Macquarie University, Sydney.* Australian Speech Science & Technology Association Inc., 271-276.