

Natalie Lewandowski  
natalie.lewandowski@ims.uni-stuttgart.de  
University of Stuttgart  
Institute for Natural Language Processing  
Experimental Phonetics Group

## Phonetic Convergence as a paradigm of showing phonetic talent in foreign language acquisition

Research on the phenomenon of phonetic convergence has its origin in the Communication Accommodation Theory (CAT) that has been established in the 1970s, first under the term of “speech accommodation theory” (SAT, Giles 1973). CAT investigates the sets of alternatives which are available to conversational partners in a face-to-face situation. The sets are multiple, context-dependent, settled upon various levels and serve to achieve solidarity with or dissociation from the partner reciprocally and dynamically (Giles/Coupland/Coupland 1991). The accommodation can occur at several levels and can be analyzed in terms of macro- as well as microvariation of sociolinguistic context. The adaptation in conversational interaction can concern general appearance, verbal and nonverbal behavior. Communicative partners have as well a range of different strategies to choose from: maintenance, divergence and convergence. The first strategy allows maintaining one’s behavior without any contextual-dependent changes or adaptations towards or away from the partner. Divergent behavior results in a conscious or unconscious differentiation from the conversational partner’s features. Convergence on the other hand, as defined in the CAT, is a strategy “whereby individuals adapt to each other’s communicative behaviors in terms of a wide range of linguistic-prosodic-nonverbal features including speech rate, pausal phenomena and utterance length, phonological variants, smiling, gaze, and so on” (Giles/Coupland/Coupland 1991).

The notion of phonetic convergence covers all adaptations in articulatory and acoustic features towards those of a communicative partner, or in other terms an increase in segmental and suprasegmental similarity between them (Pardo 2006). Apart from the perceptual assessment of the outcome of convergence, many features like utterance and duration rate, amplitude, VOT and fundamental frequency have already been measured. Up until now most of the experiments were designed for monolingual dyads, with very few investigations of convergence in native-nonnative interaction in a foreign language learning environment.

Studies on individual differences in the process of second language acquisition have shown that variation in language aptitude, personality traits and attitudes (motivation) leads to

significant contrasts both in the rate of learning and in the eventually acquired proficiency. Some factors as openness, extraversion and empathy combined with a high aptitude are assumed to translate into better communicative skills and phonetic accuracy (due to a lower socio-affective filter, Krashen 1981). It has also been proved that the phonetic component of acquiring a foreign language runs fairly separately from learning the grammar and the vocabulary, hence the proficiency levels of a single speaker can show substantial discrepancies in the sub-skills. Also currently under investigation is the possible existence of a separate underlying neural substrate for phonetic aptitude. All those findings turn the phonetic subcomponent of L2 acquisition into an especially interesting area for research on convergence.

People converging in their pronunciation to their foreign language communication partner obviously have the skills to do so. This is even more significant when the accommodation takes place during a relatively short conversation since it rules out the possibility of underlying long-term learning processes concerning the accent (as it would be the case during longer stays in an English speaking country). Following those cues, I would like to investigate to what extent more talented learners exhibit a stronger tendency to converge in their pronunciation to their conversational partners and moreover which features are being adapted to most often and with the best outcome. On the other hand I would like to determine which features of the English accent are hardest to take up and how often the subjects fail to converge in those cases. The experimental results will be interpreted considering the socio-psychological background.

The study design for my dissertation builds upon the research carried out within the DFG supported project “Language talent and brain activity”. The German native speakers of English as an L2 taking part in the project will be classified into two groups of high and low phonetic-aptitude-speakers on the basis of their performance in various linguistic and psychological tests. The participants will be asked to perform a maptask in English together with a native speaker of English (presumably with a GA- and a RP-speaker according to their accent preferences). The maptask is intended to elicit spontaneous dialogues with the possibility to control for certain context effects and to ensure the presence of relevant linguistic data (in the form of landmarks on the maps). The control task will consist of reading a list of words, including amongst others the relevant landmarks from the maptask set. After the experimental session, performed in an anechoic chamber, the recordings will be analyzed using acoustic analysis software (e.g. *xwaves*, *Praat*). The results will be tested in order to ensure their statistical significance using the statistics software *R*.