

## **First Impression and Speaker Role Influence VOT Convergence during Conversation**

Jordana Heller (jordana@u.northwestern.edu, Northwestern University)

Jennifer S. Pardo (pardoj@mail.montclair.edu, Montclair State University)

Social-communicative factors can be strong drivers of behavioral change over the course of social interaction: an individual's speech, posture, and gesture may be adapted to those of an interlocutor even during a single interaction (see Chartrand et al., 2005, for a recent review). The type and extent of adaptation is context-dependent, however. For example, Pardo et al. (2008) showed that in a direction-giving task during which pairs of speakers alternated having the role of direction giver, convergence on supralinguistic factors such as speech rate and pause type was not only influenced by the speaker's current role (direction giver or receiver), but also the speaker's original role (direction-giver first or direction-receiver first). The current study investigates effects of speaker role on a finer-grained, phonetic aspect of convergence—voice-onset-time, or VOT. Results indicate that both participant role at any point during the interaction and first impression of interlocutor role play important parts in influencing phonetic convergence of interlocutors.

Twelve speakers (3 male and 3 female same-sex pairs) participated. Participants gave and received directions over the course of six maps. Each map contained a set of landmarks; the direction-giver's map also contained a path around these landmarks that needed to be verbally communicated to the direction-receiver, whose map had no path. In order to examine the effects of role switching, Participant A had the path marked on his or her maps numbered 1, 3, and 5, while Participant B had the path on maps 2, 4, and 6.

VOTs from 376 word-initial voiceless stops were analyzed using a linear mixed-effects regression model. Fixed-effects included participant sex, current role (giver/receiver), original role, time of the utterance over the course of the interaction (early, middle, or late), place of articulation, and log articulation rate, as well as the interactions of role types and of role and time, and a three way interaction of original and current role with time. Random factors included an intercept for participant and a slope for current and original role and time per pair, to allow for both convergence and divergence by pair.

Results showed a significant two-way interaction of current and original role; pairs' VOT was more similar when in non-original roles ( $p = 0.005$ ). Furthermore, differences in VOT became stronger over the course of the task for trials in which speakers were in their original roles. Conversely, speakers converged over time during trials where their roles were switched. This pattern is supported by a significant three-way interaction of original role, current role, and timing ( $p = 0.016$ ).

Taken together, the results support both a role for current power dynamic and first impression. These factors interact complexly with the overall tendency for speakers' fine-grained phonetic characteristics to converge over the course of an interaction but to diverge based on situational, role-driven forces. This supports the hypothesis that convergence during interaction is influenced by situational factors, rather than being unilateral and monotonic.

Chartrand, T. L., Maddux, W. W., & Lakin, J. L. (2005). Beyond the perception-behavior link: The ubiquitous utility and motivational moderators of nonconscious mimicry. In R. R. Hassin, J. S. Uleman, & J. A. Bargh (Eds.). *The new unconscious* (pp. 334-361). New York, NY: Oxford University Press.

Pardo, J. S., Cajori Jay, I., Hoshino, R., Sowemimo-Coker, C., & Krauss, R. M. (2008, October). *First impressions matter: The influence of role switching on conversational speech*. Presented at the 49<sup>th</sup> Annual Meeting of the Psychonomic Society, Chicago, IL.

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