# How your own speech rate can change how you listen to others

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In conversation, our own speech and that of others follow each other in rapid succession. However, how the acoustic and indexical properties of self-produced speech interact with speech perception is unknown. This study investigated context effects induced by our own voice through three experiments targeting rate normalization (i.e., perceiving phonetic segments relative to surrounding speech rate).

Experiment 1 revealed that hearing fast and slow context sentences (produced by someone else) alters the perception of subsequent target words, replicating earlier work. Experiment 2 demonstrated that producing fast and slow context sentences *oneself* also alters the perception of subsequent target words (produced by someone else), indicating contextual effects of our own speech rate. Nevertheless, the effect of self-produced speech rate (Experiment 2) was reduced compared to that of perceived speech rate (Experiment 1). This may be due to indexical properties of our own speech (i.e., talker-incongruency between context and target) or due to the additional task of speech production. Therefore, in Experiment 3, the same participants from Experiment 2 passively listened to their own self-produced context sentences. The effect of contextual speech rate in Experiment 3 was *not* reduced compared to Experiment 1. This suggests that it is *not* the indexical properties of self-produced speech, but rather the additional task of speech production that attenuated the effect of contextual speech rate in Experiment 2, potentially through speaking-induced suppression.

Taken together, this study finds that variation in speech production may induce variation in speech perception, thus carrying implications for our understanding of conversation.