

Conversational entrainment: A novel framework for modeling communication interactions in motor speech disorders.

Stephanie A. Borrie<sup>1</sup>  
Julie M. Liss<sup>1</sup>  
Visar Berisha<sup>1</sup>

<sup>1</sup>Department of Speech and Hearing Science, Arizona State University, Box 870102, Tempe, Arizona 85257-0102

Conversational entrainment—a pervasive communication phenomenon that describes the temporal alignment of rhythmic behaviors between two people engaged in conversation—supports a number of social, emotional, and cognitive functions, critical to successful human interaction. The capacity to entrain is dependent upon the ability to produce rhythmic behavior, to detect rhythmic behavior, and to modify rhythmic behavior according. As such, it is likely that disruptions in entrainment are a common feature of interactions involving individuals with motor speech disorders. Such disruptions can have deleterious consequences on quality of life in an interpersonal sense, and they may exist as an integral component of the communication disorder itself. Despite the centrality of human interaction in daily life, entrainment in communication disorders is largely unexplored. The goal of this presentation is to (i) introduce the concept of conversational entrainment and explore its relevance to the study of motor speech disorders; (ii) present a novel paradigm—via translational methodology from engineering—for examining entrainment; and (iii) present pilot data, in which interactions involving individuals with dysarthria and their spouses are captured within a modelling paradigm. Investigating conversational entrainment within the context of communication disorders is innovative, and potentially constitutes a new avenue for theoretically-driven, clinically-relevant research.