

USU-Led Research Team Aims to Crack the Code of Conversation for People with Parkinson's Disease

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Learning about conversations could improve social interactions for people with Parkinson's disease.

In her initial career as a speech pathologist, Dr. Stephanie Borrie provided treatment to adults with communication disorders. While she witnessed firsthand how conversations can connect people on a profound level, she also became deeply acquainted with the challenges encountered by people with Parkinson's disease, a neurodegenerative disorder that affects many aspects of human functioning—including the brain's ability to control movement, such as the movements used to produce speech.

Now an associate professor of Communicative Disorders and director of the Human Interaction Lab at Utah State, Borrie is embarking on a project to improve participation in conversations for people with Parkinson's disease. Supported by a multimillion-dollar, five-year grant from the National Institute on Deafness and other Communication Disorders, a branch of the National Institutes of Health, Borrie's work aims to help people with Parkinson's disease have better conversations and feel more involved and included in social interactions.

"Interestingly, despite the fact that conversation is challenging for people with Parkinson's disease, we really don't have a lot of research on what is going on and how to improve it," said Borrie. "We want to help people with Parkinson's disease feel more confident, heard, and engaged in their everyday interactions."



Dr. Stephanie Borrie

To help crack the code of great conversation for people with Parkinson's disease, Borrie's project brings together a team of talented researchers across speech science, signal processing, and computational modeling. The team, which includes Dr. Tyson Barrett (USU) and Drs. Julie Liss and Visar Berisha (Arizona State University), will study hundreds of conversations as individuals interact with their loved ones as well as people that they are meeting for the first time. Participants in the study will also have conversations with different goals, such as solving problems and developing relationships.

Borrie describes conversation as a dynamic and deeply cooperative joint activity. In order to identify what is causing a breakdown in a conversation, the researchers will examine the behaviors and patterns exhibited by the conversational partners in the study as well as the participants with Parkinson's disease. "Good conversation is co-created by both partners," Borrie said. "In order to effectively address conversation, we need to look at the system, not just the person with Parkinson's disease."

The team's end goals are to gain a deep understanding of the barriers and facilitators to successful interactions for people with Parkinson's disease and to develop evidence-based interventions to improve their ability to fully participate in conversations. "And who knows," Borrie added, "maybe we'll uncover some surprising insights about how we could all have better conversations along the way."