香港中文大學 CUHK | 語言學及現代語言系 Department of Linguistics and Modern Languages

Influences of ASD on Speech Production vs Speech Perception: Examining Prosody, Coarticulation and EEG Neural Response Differences

Prof. Daniel PAPE
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Time: 4:30pm - 6:15pm (Hong Kong Time, UTC +8)
Venue: Room 101, Leung Kau Kui Building, The Chinese University of Hong Kong

Abstract

To examine the high-level differences, we conducted a combined speech production-perception study with Canadian students sampled from all academic disciplines varying on the ASD spectrum according to Baron-Cohen et al. (2001), and examined how they produce and perceive (prosodic) focus differences, for example in the sentence: "Who gave Mary the cake? *John* gave Mary the cake". We wanted to examine how autistic trait differences would mediate the weighting of the different available prosodic cues *fundamental frequency* (i.e. pitch range), *duration* and *intensity*, and whether we would observe structural differences of ASD scores when comparing speech production to speech perception of our speakers/listeners.

With respect to low-level perception differences (on speech sound level), we conducted behavioural combined with EEG experiments to examine how coarticulation effects (i.e. the influence of neighbouring segments) would influence English sibilant perception of our listeners with respect to their ASD scores.

Both experiments will shed light to the classic question whether and how persons with higher vs lower ASD scores classify speech sounds based on either superior cue integration (i.e. integrating different acoustic cues for a better overall perceptual concept) or rather by relying more on acoustic differences within speech segments (i.e. focusing on local acoustic details and thus more relying on low-level perceptual processing).

Speaker

Dr. Daniel Pape is an Associate Professor in the Department of Linguistics and Languages at McMaster University in Hamilton, Canada. His research focuses on experimental phonetics, the link between speech production and speech perception, how individual and group differences change this link (e.g. accented speech and clinical constraints), and the relationship between phonetics and neurolinguistics. Another area of research is the use and interplay of different acoustic cues for speech production and perception versus articulatory and biomechanical constraints. Dr. Pape received his Ph.D. from the Humboldt University of Berlin (Germany) in the area of Phonetics (research topic: intrinsic pitch and microprosody). He then pursued post-doctoral research at Gipsa-Labs in Grenoble in France where he researched biomechanical and articulatory synthesis for speech perception, and a postdoctoral position in Aveiro in Portugal where he examined in a cross-linguistic comparison different acoustic and perceptual cues for the languages European Portuguese, Italian and German.

All Are Welcome

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