

Abstract of Contribution 469**Monday, 04/Sep/2017 10:20am - 10:40am****ID: 469 / a) WM1: 5**

Abstract Submissions

Talk

Topics: Reading and language*Keywords:* Speech error detection, speech error monitoring, working memory, language development**Is working memory involved in monitoring self and other people's speech?****John Richard Hanley¹, Nazbanou Nozari²**¹University of Essex, United Kingdom; ²Johns Hopkins University, USA; ghanley@essex.ac.uk

Background.

Neuropsychological, electrophysiological and neuroimaging data suggest distinct primary mechanisms for self- and others'-speech monitoring. However, there is also evidence that the processes involved in these two monitoring conditions may overlap. This study investigated whether working memory with or without inhibitory control is part of the shared mechanisms between self- and others'-speech monitoring.

Method.

Forty-two children aged between six and eleven years were asked to describe simple visual events involving nine highly familiar animals, and to repair any speech errors that they might detect (self-monitoring). They were also asked to listen to another child describing similar events and press a button when they detected an error (others'-detection) and correct the error (others'-correction). Children were also tested on working memory (forward digit span), and working memory + inhibitory control (backward digit span).

Results.

Measures of others'-detection and others'-correction were highly correlated, and both were moderately correlated with self-monitoring, pointing to some shared mechanisms in monitoring self- and others'-speech. However, while both forward and backward digit spans were reliably correlated with measures of monitoring other people's speech, they were not predictive of self-monitoring. In fact, there was a statistically-significant dissociation between the predictive effect of forward digit span on self-monitoring and others'-detection, a similar dissociation between the predictive effect of backward digit span on self-monitoring and others'-correction.

Discussion.

The findings support partially-overlapping monitoring mechanisms for self-and others'-speech. However, they suggest that working memory with or without inhibitory control has a much more prominent role in monitoring other people's speech than one's own speech.