

## **Finding your inner voice - The motor imagery of speech**

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Speech can be deconstructed as a series of overtly executed motor movements. These complex movement chains are guided by motor movement trajectories, stored as well as generated at the cortical level, which result in the production of sound. The phenomenon of 'inner speech', often described as an 'inside voice', may be generated in a similar fashion. The covert generation of speech, using motor imagery rather than motor execution of speech motor plans, is thought to play a vital role in forward modelling of speech, and has important implications for those with auditory verbal hallucinations as well as those with speech disorders such as stuttering. In this talk I will discuss the theory and literature on the topic of motor imagery of speech at the cortical level, and I will discuss three studies I have completed as part of my doctoral work. I focus first on behavioural data, comparing speech imagery to the wider motor imagery literature, before delving into the cortical differences between motor imagery and motor execution of speech. The findings suggest differences as well as similarities within the neural substrates of both motor execution and motor imagery of speech, shedding new light onto theories of speech production.