

4. The Perceptual Characteristics of Voice-Hallucinations in Deaf People: Insights into the Nature of Subvocal Thought and Sensory Feedback Loops

Introduction. The study of voice-hallucinations in deaf individuals, who exploit the visual-manual rather than auditory/oral modality for communication, provides rare insight into the relationship between sensory experience and how "voices" are perceived. Relatively little is known about the perceptual characteristics of voice-hallucinations in congenitally deaf people who use lip-reading or sign language as their preferred means of communication. The existing literature on hallucinations in deaf people will be reviewed, alongside consideration of how such phenomena may fit into explanatory subvocal articulation hypotheses proposed for auditory verbal hallucinations in hearing people.

Methods. These hypotheses were tested using a statement-sorting task to generate data about perceptual characteristics of voice-hallucinations for exploratory factor analysis. The sample included 27 deaf participants with experience of voice hallucinations, and a range of hearing loss and language backgrounds.

Results. Perceptual characteristics of voice-hallucinations map closely onto individual auditory experience. People born profoundly deaf loaded onto nonauditory factors. Deaf people with experience of hearing speech, through residual hearing, hearing aids, or pre-deafness experience, reported auditory features or uncertainty about mode of perception.

Conclusions. This is the first study to systematically explore voice-hallucinations in deaf people and to advance a model of subvocal articulation to account for such counterintuitive phenomena. It is suggested that a failure in subvocal articulation processes may account for voice-hallucinations in both hearing and deaf people but that the distinct way in which hallucinations are experienced may be due to differences in a sensory feedback component, which is influenced by both auditory deprivation and language modality. Thus the study of deaf people may inform wider understanding of auditory verbal hallucinations and subvocal processes generally.