



Voices inside my head

Deaf people report ‘hearing’ voice-hallucinations but how can research find out what they experience? By **Dr Joanna Atkinson**

There is nothing more counterintuitive than the notion that a person born profoundly deaf might experience true auditory hallucinations. How can it be that deaf people hear ‘voices’?

Earlier research suggested that deaf people experience genuinely auditory hallucinations. But the collection and interpretation of data in these studies was done by non-fluent signers or hearing researchers using sign language interpreters.

Part of the problem is that a ‘voice’ to a hearing and a deaf person may be entirely different concepts. To a hearing person, a voice is an auditory phenomenon but to a deaf person, the signs used to describe their voices means someone communicating in their mind, but it is not necessarily auditory.

I am deaf and my research at the ESRC-funded Deafness, Cognition, and Language (DCAL) Research Centre at UCL aimed to elucidate the variety of voice hallucinations perceived by deaf people. Particular attention was paid to deconstructing concepts that might be misconstrued as truly auditory by those unfamiliar with the subtleties of British Sign Language and deaf conceptualisations of sound-based phenomena.

Deaf people frequently use signs such as hear, shout, voices and talk without necessarily conceptualising the auditory qualities of the corresponding English words. LOUD may be understood as referring to something highly intrusive and difficult to ignore rather than as high auditory volume. Therefore, it was imperative that questions about auditory phenomena were designed to distinguish true audition from deaf interpretations of auditory concepts.

A card sort task was used to create a more accurate picture of voice hallucinations and by developing more ecologically valid methodology it has been possible to confirm that true auditory hallucinations are confined to deaf individuals who had at some point in their lives experienced hearing.

The research found that those born profoundly deaf do not usually report hearing any sound but instead that hallucinations take the form of sign language or visual speech (lipreading). Moving images of the articulators – lips or hands – are experienced when the voices are present – these are not truly visual phenomena but rather perceived only in the mind’s eye.

The research’s new approach showed that hallucinations closely mirrored the person’s experience of language and sound. Born-deaf people who had rudimentary awareness of speech

through hearing aids – but also relied on lipreading – were often confused about what they could hear. They said they could hear something, but couldn’t describe the pitch, tone or volume.

Convincing accounts of auditory voices were only reported by those who had lost their hearing or had partial hearing. Individuals with severe language deprivation and incomplete mastery of either speech or sign stood out because their ‘voices’ carried a vague sense of someone getting at them but with neither sound nor imagery of voice articulation. This suggests that language acquisition within a critical period in early childhood may be necessary for voice-hallucinations to be organised in terms of how spoken or signed utterances are articulated.

“ Voice hallucinations closely mirrored the person’s experience of language and sound ”

Voice hallucinations are widely understood as being the inner thoughts or speech of the person experiencing them, which are not recognised as originating internally, because of faulty source monitoring in the brain. If this is true, then the study sheds light on how deaf people organise their thoughts and what form these mental representations may take.

It is possible to think in spoken English even if you cannot hear sound, since speech articulations both of oneself and others may be imagined. In a similar way, deaf signers can think in sign language. Given that educators and scientists are interested in how children develop an inner dialogue and how this shapes the ability to perform complex cognitive tasks, the study of deaf people with different early language experiences and ways of communication, is particularly fertile ground for new discoveries.

The finding that deaf people are diverse in the way that they hallucinate ‘voices’ will affect mental health assessments and dispel bizarre notions of deaf people hallucinating sounds that they have never heard. The research also raises the possibility that people with normal hearing may show a greater variety of hallucinatory experiences than is routinely assumed by mainstream psychiatry. ■



Contact Dr Joanna Atkinson, Deafness, Cognition and Language (DCAL) Research Centre, University College London
Email joanna.atkinson@ucl.ac.uk
Web www.ucl.ac.uk/dcal