

New Tools for Assessing Individual Differences in Voice Perception

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Auditory morphing can be used to control sensory information in voices (e.g., by interpolating between an average and a specific identity or expression, or by caricaturing). I first introduce current concepts and research using parameter-specific morphing (PSM) technology, by which we can selectively manipulate acoustic parameters (e.g., fundamental frequency (F0), or timbre), thus permitting more objective assessments of their relative roles for perceiving specific signals. I then present selected examples for how PSM can be used to assess voice perception with cochlear implants (CIs), which tend to be optimized for speech perception, with less attention to socio-emotional signals. Although CI users' voice gender perception seems exclusively based on F0, they make more efficient use of timbre in the context of age or emotion perception. Importantly, subjective quality of life with a CI is related to nonverbal voice perception skills. Overall, PSM is a promising new approach to objectively assess profiles of abilities to perceive socio-emotional vocal signals, and can inform perceptual training interventions which generated promising initial results. Finally, I briefly discuss the Jena Voice Learning and Memory Test (JVLMT) as a new and freely available standardized tool for assessing voice learning and recognition skills with pseudospeech utterances with speech-like phonetic variability.

References

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