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Voice discrimination by cochlear implant users

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The voice of an individual is an important attribute. Vocal characteristics contribute to differences that help to distinguish one speaker from another. The fundamental frequency (F0), which corresponds to perceived voice pitch, and the vocal tract (VT), which can be described in terms of formant frequencies, are two important measures for voice classification.
A very basic separation of different voices is reflected by the recognition of the speaker gender. Normal-hearing (NH) persons are usually able to identify the speaker gender. In contrast, cochlear implant (CI) patients do not typically have access to the rich spectral and temporal information available to NH listeners and might thus have difficulties to make a decision about the voice gender.
In order to examine the underlying cues F0 and the length of VT respectively were manipulated and it was tested which changes can be recognized. Manipulations were performed using 'Praat' (Boersma et al. 1996) according to a paradigm given in Darwin et al. 2003.
The poster describes the methods used and gives preliminary results for voice gender identification and discrimination for both, CI recipients and normal hearing subjects.

Literatur:

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