"Hey Siri, you sound artificial to me" – variability and flexibility in the perception of synthetic voices

Research Project Summary

DAAD Postdoc-Programm - Kurzstipendium

Synthetic voices are invading our everyday life – via smart-home devices, navigation systems, or service hotlines. While these technological advances are undoubtedly exciting, little is known about our perception of and interaction with synthetic voices, and how this may shape our interaction in the future. A crucial acoustic feature in this context is the perceived naturalness of a voice, which is linked to perceived acceptability and trustworthiness of voices and therefore has a direct impact on communication quality. I want to understand how the impression of naturalness is formed for synthetic voices and how it is shaped through experience and exposure, i.e. due to daily contact with a smart-home-device. The present project comprises of two empirical studies which shed light on the variability and flexibility of synthetic voice perception from two different angles: Study 1 will focus on long-term effects by exploring individual differences in experience with synthetic voices. Study 2 will test whether synthetic voice perception is amenable to short-term perceptual manipulation. Together, they will provide unique and complementary insights into how rapid technological innovations such as synthetic voice implementation into everyday devices could shape our perceptual system, with potentially complex consequences for our interaction with machines, but also with other humans.

Keywords: voice perception, synthetic voices, naturalness, human-likeness

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