**VoiceID**

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**Title:**

Naturalness of voices – from human to artificial agents

**Abstract** (Max. 250 words).

Perceived naturalness of a voice is a prominent feature which affects our interaction with both human and artificial agents. In humans, naturalness can be affected by voice distortion or transformation. In artificial agents, its tremendous importance has been acknowledged through multiple efforts to create and constantly improve synthetic voices to resemble human vocal expression. Yet, we are far away from a systematic understanding of voice naturalness. To address this issue, we first identify four key problems in current naturalness research: (a) conceptual underspecification, (b) inconsistent operationalization, (c) lack of exchange between research on humans and artificial agents and (d) insufficient anchoring in voice perception theory. Next, we formulate concrete suggestions to overcome these problems. Of crucial importance, we propose a concise conceptual framework for the definition of naturalness. In parallel, we illustrate how insights into voice naturalness will profit both from pooling evidence from a wide interdisciplinary background and from rooting naturalness in current voice perception models. We conclude with an outlook on core gaps in our current understanding of voice naturalness and discuss different approaches to promote a fuller understanding of the various dimensions of voice naturalness.

**Keywords**: naturalness, human-likeness, synthetic voices, voice distortion

**Presentation preference**: talk only (to be discussed)