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Emily Yttri Yttri

University of Pittsburgh, emy21@pitt.edu

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Anthropomorphism of Digital Assistive Devices: Does Voice Matter?

Emily Yttri emy21@pitt.edu

Digital assistive devices (DADs) are quickly becoming ubiquitous, and an overwhelming majority of these devices embody a human (or human-like) voice. This humanization has a positive effect on the evaluation of digital assistants (Li & Sung, 2021). To date, this anthropomorphism has typically assumed the form of a feminine voice. While early claims asserted that feminine voices were easier to hear given their high pitch, more recent findings have argued otherwise (Zhang, 2015). Additionally, there is growing concern about the possibility of technology mirroring, automating, or even expanding pre-existing biases (Obermeyer & Lee, 2017).

In a recent study assessing language and voice in DADs, the gender of a DAD's voice did not have a significant effect on achieved performance, customer satisfaction, hedonic quality or pragmatic quality (Habler, Schwind, & Henze, 2019). Our first study is aligned with and builds on this work. We will measure four factors: trust, believability, likelihood of future utilization, and perceived task performance. This will be a simple A/B test wherein participants will be randomly assigned to either a male- or female-voiced DAD. They will interact with the DAD using a preselected list of questions and will subsequently complete a survey assessing the DAD on the four factors above (with participants' own gender as a covariate).

Since the view of DADs as female is already entrenched in society, we will explore how participants react to changes in voice in Study 2. A control group will experience the same gendered voice throughout the experiments while other participants will experience a change from either male to female or female to male voice. Participants will respond regarding the four factors from the first study at three different intervals: early in the study, immediately after the shock (for change conditions), and at the conclusion of the study.

Study results will serve to measure consumer preferences regarding the anthropomorphism of DADs and explore whether a change of voice from the current norm is advisable.

References

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