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Stereotypes or Golden Rules?:

Exploring Likable Voice Traits of Social Robots as Active Aging Companions for Tech-Savvy Baby Boomers in Taiwan

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Abstract

Social robots are foreseen to be a growing category of assistive devices for baby boomers in helping them live independently at home and in good health for longer. Artificial intelligence and speech recognition are making natural language user interfaces possible. Yet voices of social robots could influence users' preferences and perceptions in ways that have not been widely explored yet, let alone in Chinese-speaking context. A quantitative study was conducted to probe what voice characteristics of social robots baby boomers may prefer and what personality traits they would associate with various pitch, speech rate, and intonation in Mandarin. While the findings coincide with previous research in that female, extroverted voices were preferred by most participants, many individual differences remain, which could be attributed to differences in demographics, lifestyles, and personality traits. This study contributes to design decisions that would take individual differences into consideration. Social robots that could learn and adapt to people's preferences, perceptions, as well as the tasks at hand may fare better than a one-size-fits-all approach. We believe that voice user interfaces will play a key role in elderly people's initial acceptance and continuing engagement of social robots.

Keywords: social robots; baby boomers; human computer interface; voice user interface; voice personality; computers are social actors.

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