Title

How are interaction between human and an autonomous agent affected by embodiments and voice?: Investigation with age groups comparison.

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 37(0)

Authors

Harada, Etsuko T
Hasegawa, Riko
Kayano, Wataru
et al.

Publication Date

2015

Peer reviewed

How are interaction between human and an autonomous agent affected by embodiments and voice?: Investigation with age groups comparison.

Etsuko, T. Harada
Faculty of Human Sciences, University of Tsukuba

Riko Hasegawa
Universtity of Tsukuba

Wataru Kayano
Universtity of Tsukuba

Hirotaka Osawa
Faculty of Engineering, Information and Systems, Universtity of Tsukuba

Abstract: Although many information system are employing autonomous agents for the purpose of user-friendly interface, cognitive mechanisms of their effects are not clear yet. In this study, we compared three types of UI, an embodied agent system equipped with a direct anthropomorphization robot, an only voice agent, and without agent system condition, of a microwave oven. Thirty-six older (65 years or above) and 36 younger adults (undergraduate students) participated in the usability testing experiment with one of the three agent conditions. Analysis of interaction between a participant and the oven, through participants' utterance and the personal-space data, showed large differences between two age groups; younger adults entertained the interaction both the voice and the embodiment agent conditions, while older adults evaluated higher only with the embodiment agent condition. Differences in mental models of older- and younger adults, and reasons of those aging effects will be discussed.