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Assessing the effect of persuasive robots interactive social cues on users' psychological reactance, liking, trusting beliefs and compliance

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Abstract

Research in the field of social robotics suggests that enhancing social cues in robots can elicit more social responses in users. It is however not clear how users respond socially to persuasive social robots and whether such reactions will be more pronounced when the robots feature more interactive social cues. In the current research, we examine social responses towards persuasive attempts provided by a robot featuring different numbers of interactive social cues. A laboratory experiment assessed participants' psychological reactance, liking, trusting beliefs and compliance toward a persuasive robot that either presented users with: no interactive social cues (random head movements and random social praises), low number of interactive social cues (head mimicry), or high number of interactive social cues (head mimicry and proper timing for social praise). Results show that a persuasive robot with the highest number of interactive social cues invoked lower reactance and was liked more than the robots in the other two conditions. Furthermore, results suggest that trusting beliefs towards persuasive robots can be enhanced by utilizing praise as presented by social robots in no interactive social cues and high number of interactive social cues conditions. However, interactive social cues did not contribute to higher compliance.

Keywords

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