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Influence of cognitive attributions on humans' recipient design in human-robot interaction

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Abstract

Recipient design, tailoring one's message to an interlocutor's relevant requirements, is a core pragmatic process in human communication. The knowledge shared among interlocutors influences the form and content of the speaker's utterances addressed to a recipient. In a computerized experiment, we investigated whether recipient design is different for robot- and human-recipients and whether it is sensitive to dynamic changes in attributed competence of the addressee. In a word-guessing game. participants described objects and abstract concepts to a robot- and human-recipient, who later guessed the word. The recipient gave incorrect answers in half of the trials. We coded participants' descriptions for linguistic complexity in robot- and human-recipient conditions as well as in trials immediately following correct and incorrect trials. We predicted linguistic complexity of the descriptions to differ by recipient and trial type. Our findings will be discussed in relation to cognitive attributions' influence on recipient design in HRI.

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