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The relation between gaze and turn-taking in dyadic avatar-mediated conversations

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Abstract

Human communication comprises a complex and dynamic interplay of verbal and nonverbal communication channels. The investigation of these channels therefore represents a major methodological challenge.

Technical developments in interaction platforms using virtual characters provide tools for these investigations. Paradigms in which participants interact with algorithmically controlled agents have already enabled the investigation of individual nonverbal communication channels with the necessary experimental control. However, it is unclear how these results relate to human-human communication.

Here, we present a study with a new system for human-human interactions mediated by avatars. As a proof-of-concept, we tested the generalisability of gaze patterns during turn-taking in avatar-mediated conversations. Results show that given our Bayesian mixed effects model, priors and data, there is compelling evidence that gaze patterns are comparable to natural interactions. Exploratory analyses show that our system is suitable to shed light on variability in individual-specific gaze behaviour, which we plan to investigate further.