It doesn't matter what you are! Comparing interacting with an autonomous virtual person with interacting with a virtually represented human

Astrid von der Pütten, Jonathan Gratch, Sinhwa Kang, Nicole Krämer

According to the *Threshold Model of Social Influence* (Blascovich et al., 2002) the social influence of real persons will always be high, whereas the influence of an artificial entity depends on the realism of its behavior. Contrariwise, the *Ethopeia concept* (Nass & Moon, 2000) predicts that automatic social reactions are triggered by situations as soon as they include social cues. The presented study evaluates whether the participants' belief in interacting with either an avatar (a virtual representation of a human) or an agent (autonomous virtual person) lead to different social effects.

We used a 2x2 design with two levels of agency (*Agent* or *Avatar*) and two levels of behavioral realism (showing (feedback) behavior versus showing no behavior). Subjects were asked three personal questions of increasing intimacy by the animated character. As dependent variables we used the emotional state (PANAS) after the interaction, person perception, social presence, self-reported rapport, total number of words, percentage of pause-fillers and interrupted words. We also did a qualitative analysis of the degree of self-disclosure.

We identified merely one main effect for agency: Participants who thought to interact with an artificial agent experienced more negative feelings with *Low Dominance* (scared, ashamed) than those in the *Avatar condition*. With regard to the variation of behavior, however, four significant differences emerged: Concerning the person perception participants rated the animated character higher on *Negative Low-Dominance* (weak, dishonest, naïve, shy) when it showed feedback behavior. Also the Mutual Awareness (Social Presence) is higher when there was feedback behavior. Additionally, the total amount of words was almost double as high when there was feedback behavior compared to no behavior. However, there were also more interrupted words in this condition. In sum, results suggest that for almost all dependent variables it does not make a difference whether people believe to interact with another person or an artificial person. The behavior, on the other hand, significantly influenced participant' subjective experience as well as actual behavior.