Human interactions are complex and varied. One can communicate volumes through a gesture or a smile, or very little through dialog. The subtleties of what makes an interaction rich are difficult to define. There are events that occur in an interaction that might make us shut down and refuse to engage such as a sense that someone isn't listening or that they can't understand. While we may never understand the full complexity of the human interchange, there is value in building on the existing research into how we react via different communication modalities and how we react to virtual characters that are either fully automated or controlled by a human. This understanding will inform future investments in virtual characters by helping us understand factors that cause us to disengage.

In order to explore the cognitive cues of social interactions, biometric correlates of social interaction will be used to test the theory that there are significant biometric variations between different types of interactions: from human to human, human to agent and human to avatar, as well as via video teleconference and via text. The theory predicts that humans will disengage at different levels with virtual agents and avatars if they do not meet a threshold level of perceived agency or realism. Survey data will explore user's perception of each social interaction and what factors, if any, cause disengagement from the interaction. This is a concurrent, convergent, mixed-methods design. In this design, qualitative and quantitative data are gathered, analyzed separately, then the results are compared. This serves to validate both the qualitative and quantitative findings (if the results from two methods agree), or to generate insights into the need of further research (if the results from two methods disagree). This will be a Quant-Qual study where the quantitative data is primary and is supplemented or validated using the qualitative findings.

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Approved for distribution by Patricia Bockelman, Committee Chair, on March 3, 2020.

The public is welcome to attend.