

The scientific talk: quantifying and modeling the nonverbal interaction

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Understanding the inner state of speakers or listeners and assessing the quality of a conversation is at the core of social intelligence. How does one disclose one's inner state and reflect qualities of the conversation by body movement social cues? Here we set out to study social signals on a *microanalytic* level, recording dyads of scientists while being engaged in a scientific conversation. By using Kinect camera as primary source of data acquisition we adopt a novel view of the dyadic scientific interaction which enables pinpointing formerly invisible rules of the motoric interaction. In addition, we evaluate empathy and attachment style via questionnaires. We aim to model and interpret nonverbal dyad interaction and study the correlation between the overt motion and the psychological state of the subjects. We hypothesize that aspects of quality of dyad interaction can be understood from a few degrees of freedom per interlocutor such as the absolute value of center of mass velocity. By this study we hope to tap into the mechanisms of social meaning making of humans during discourse. Among various applications, such models may benefit human-computer interaction, as well as the study of underlying neural correlates capable of manifesting our models.

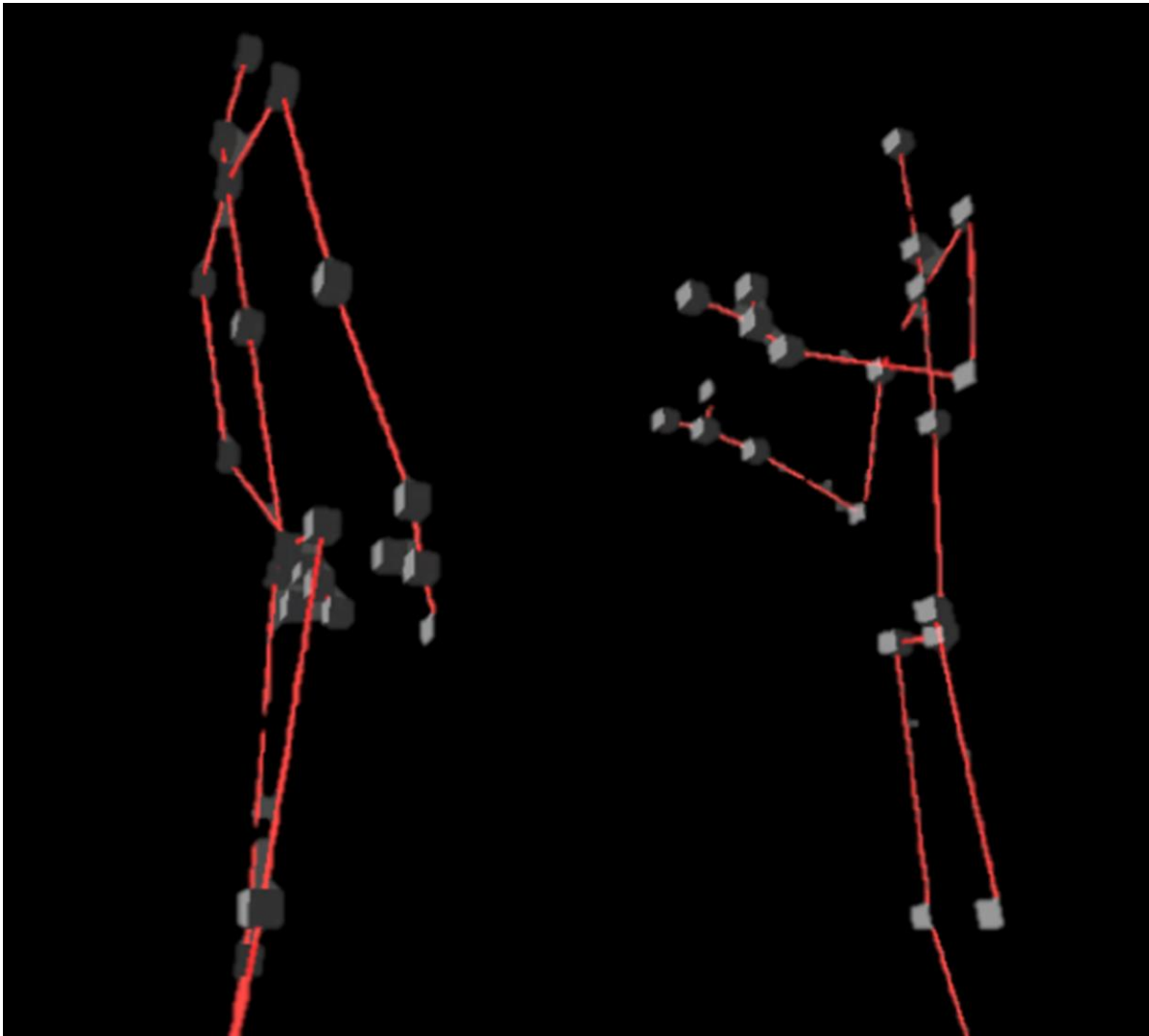


Figure 1. Kinect-based motion capturing allows for a bona-fide skeleton extraction (above), and space-time synchronization allows quantification and analyses of the mutual movement (below).

Literature

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