







## THE INFLUENCE OF SOCIAL PRESENCE ON EMPATHY

In recent years, an increasing number of social interactions at work, school and with our friends and family have moved to online channels.

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Also psychotherapeutic and medical counselling rely more frequently on digital media, which emphasizes the importance of studying how online communication affects our ability to empathize with the other. In our research, we want to investigate if and how different levels of social presence affect the behavioral and neural signatures of empathy. We define social presence for the current project as the degree to which the other is present, i.e., the degree to which verbal and non-verbal cues about the other's mental state are available and to which social interaction is possible. In a first EEG study, we investigated the impact of social presence on the behavioral, neural and physiological aspects of empathy for pain. Thirty human participants observed one of 5 targets undergoing painful electric stimulation, once in a direct interaction and once in a live. video-mediated interaction. We found that observers were as accurate in judging

others' pain and showed as much affective empathy via video as in a direct encounter. While mu suppression, a common neural marker of empathy, was not sensitive to others' pain, theta responses to others' pain as well as skin conductance coupling between participants were reduced in the video-mediated condition.

We conclude that physical proximity with its rich social cues is important for nuanced physiological resonance with the other's experience. More studies are warranted to confirm these results and to understand their behavioral significance for remote social interactions. This research is relevant from a basic psychological and neuroscientific point of view and expands recent methodological and theoretical debates in social neuroscience by highlighting the degree of presence of another person as a hitherto largely neglected aspect of social interactions.



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