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# Mapping the flow of affective information between communicating brains

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## Abstract

When people interact, affective information is transmitted between their brains. We used information-based functional magnetic resonance imaging (fMRI) in a ‘pseudo-hyperscanning’ setting to map the flow of affective information between the brains of senders and perceivers engaged in ongoing facial communication of affect. We found that the level of neural activity within a distributed network of the perceiver’s brain can be successfully predicted from the neural activity in the same network in the sender’s brain, depending on the affect that is currently being communicated. Furthermore, there was a temporal succession in the flow of affective information from the sender’s brain to the perceiver’s brain, with information in the perceiver’s brain being significantly delayed relative to information in the sender’s brain. This delay decreased over time, possibly reflecting some ‘tuning in’ of the perceiver with the sender. I will show that these data support current theories of intersubjectivity by providing direct evidence that a ‘shared space’ of affect is successively built up between senders and perceivers of affective facial signals.

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