

Your flaws are my pain

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Today, there is increasing exposure of individuals to a public audience. Television shows and the internet provide platforms for this and, at times, allow observing others' flaws and norm transgressions. Regardless of whether the person observed realizes their flaw or not, observers in the audience experience vicarious embarrassment.

For the first time, such vicarious <u>embarrassment</u> experiences as well as their <u>neural basis</u> have been investigated in research published in the open-access, peer-reviewed journal <u>PLoS ONE</u>. The research was led by Sören Krach and Frieder M. Paulus from Philipps-University Marburg, Germany in collaboration with Christopher J. Cohrs from Queen's University Belfast, United Kingdom.

In two consecutive studies, using behavioral measures and functional magnetic resonance imaging (fMRI), the authors show that the experience of vicarious embarrassment is linked to empathy and neural activations in brain areas constituting the affective component of the pain matrix: the anterior cingulate cortex and the left anterior insula (Hein & Singer, 2008; Singer et al., 2004). The authors generated four kinds of everyday life situations eliciting vicarious embarrassment. Observing a protagonist who is aware about his or her inappropriate condition (e.g. tripping, as "America's Next Top Model") or unaware (e.g. wearing a T-shirt with an imprint that comments on one's sexual capabilities) resulted in comparable activations in core regions of the pain matrix. Moreover, the level of activation in these brain regions positively correlated with the degree to which the observers described themselves as empathic.



"We were fascinated about how frequent people report their vicarious embarrassment experiences in everyday life and how little empirical research on this topic exists. Apparently, there are many occasions one could experience this vicarious emotion for another currently not feeling anything." According to the researchers, their findings may be due to the fact that sharing another person's state is influenced by the additional information that is exclusively accessible to the observers in a social situation. The present results thus complement the conventional view on empathy and suggest a distinction of forms of empathy: one which is more or less a co-experience of another's feeling state, and another one which rather reflects the observer's own evaluation of the situation in the social context.

"Today, nearly any aspect of one's personal life may reach a broad audience. Any publicly exposed atypical, awkward, or flawed behaviour has the potential to evoke vicarious embarrassment in others. Lastly, it depends on the observers to conclude what is inappropriate in the specific social context or not. Among all these involved processes, however, we believe it is the tendency to represent another's situation that could mediate the embodied experience of the social emotion."

Although vicarious embarrassment has gained significant attention in the media, the investigation of its underlying mechanisms and its neural correspondence is only now starting to integrate social psychological with neurocognitive and affective research.

More information: Hein, G., & Singer, T. (2008). I feel how you feel but not always: the empathic brain and its modulation. Curr Opin Neurobiol, 18(2), 153-158. Singer, T., Seymour, B., O'Doherty, J., Kaube, H., Dolan, R. J., & Frith, C. D. (2004). Empathy for pain involves the affective but not sensory components of pain. *Science*, 303(5661), 1157-1162.



Krach S, Cohrs JC, de Echeverrı'a Loebell NC, Kircher T, Sommer J, et al. (2011) Your Flaws Are My Pain: Linking Empathy To Vicarious Embarrassment. PLoS ONE 6(4): e18675. doi:10.1371/journal.pone.0018675

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