



# The impact of anxiety on the neural signature of Theory of Mind

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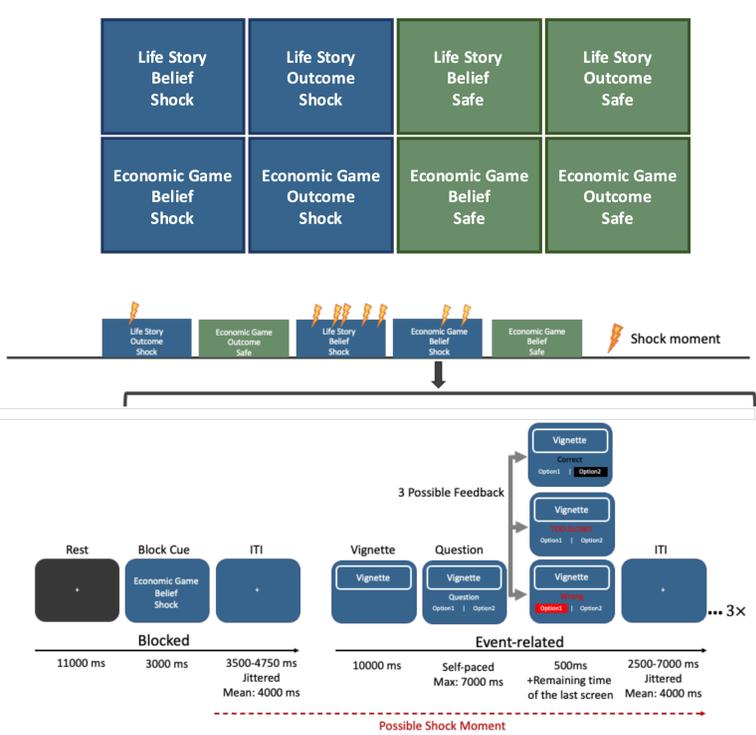
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## Introduction

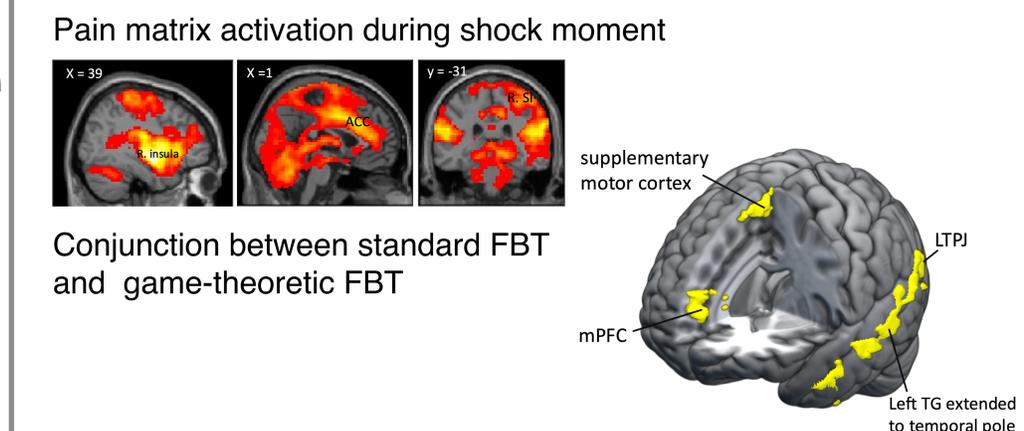
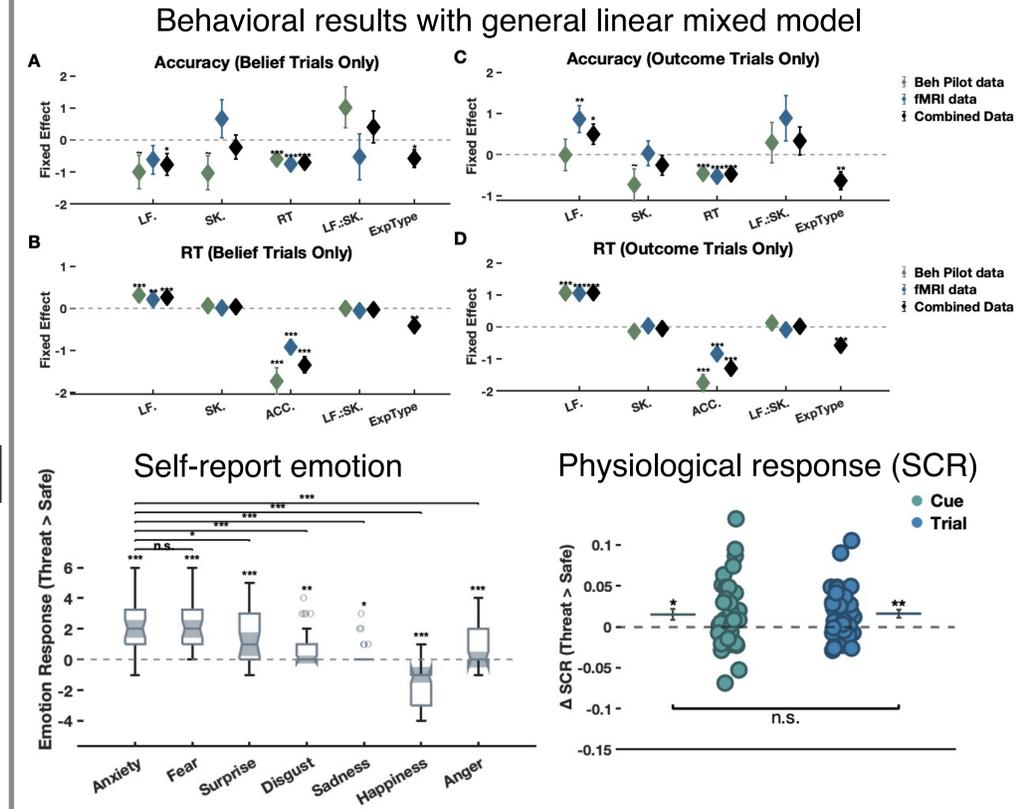
- Social Neuroscience has identified a network that is commonly implicated in theory of mind and mentalizing.
- How this network is affected by stress and anxiety is an open question to date.
- A recent study demonstrated a suppression of social cognition regions under anxiety, which was also associated with reduced trust.
- The current study aims to fill the gap in the literature by assessing the integrity of the social cognition network under threat of shock.

## Experimental design

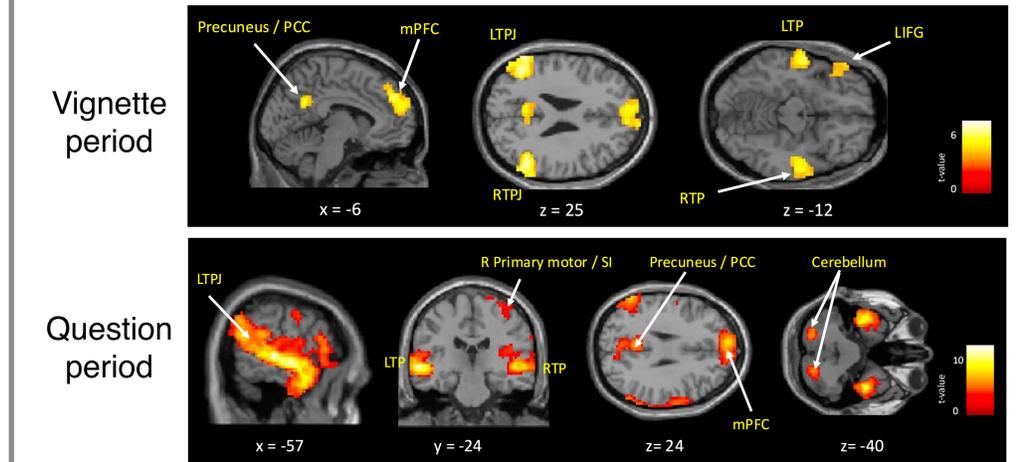


- Our Hybrid-fMRI task combined a standard and economic false-belief task with threat of shock. Autonomic reactions were assessed using real-time SCR recording.
- 2 (FB vs. Out) x 2 (Life vs. Econ) x 2 (Threat vs. Safe) within-subject design was used (N = 38 in behavioral pilot; N = 39 in fMRI experiment).
- In the Econ-Outcome condition, subjects were asked to calculate payoffs of the economic game. In the Econ-Belief condition, subjects were required to infer the (false) beliefs of the interaction partner during trust and ultimatum games.

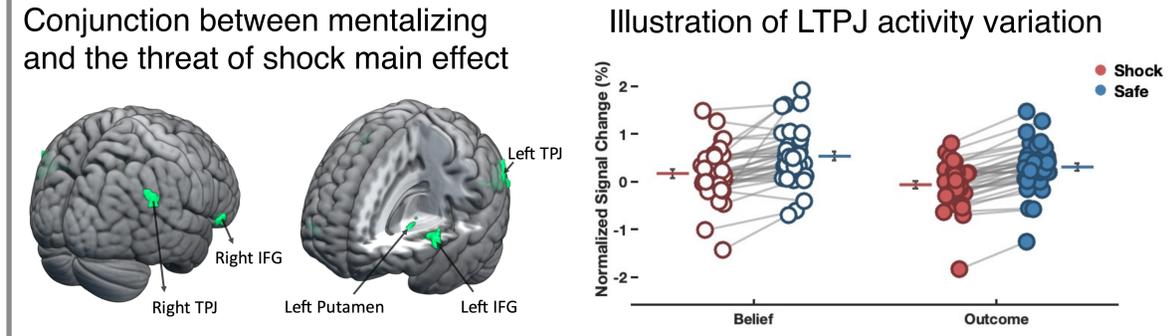
## Manipulation check



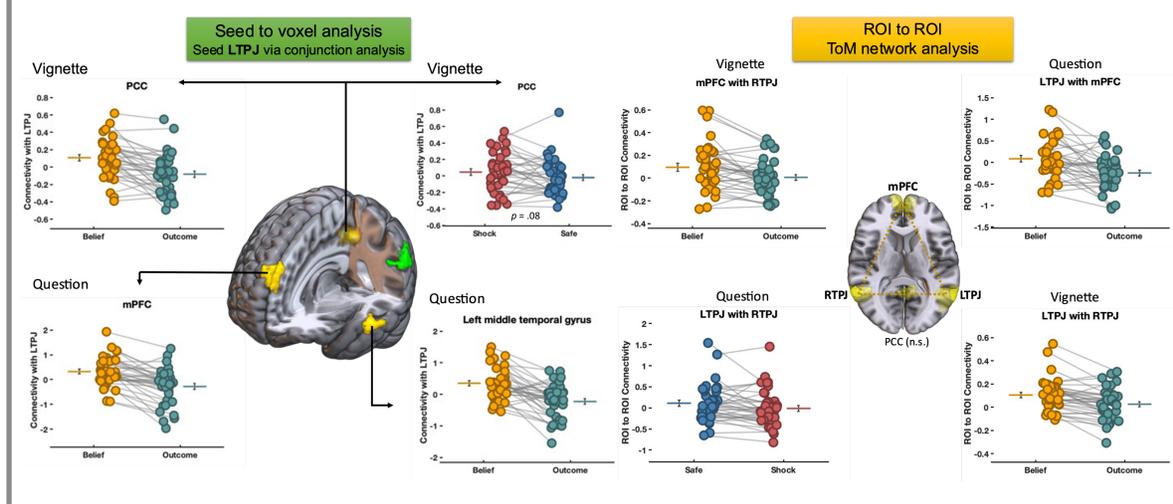
## FMRI results: mentalizing effect



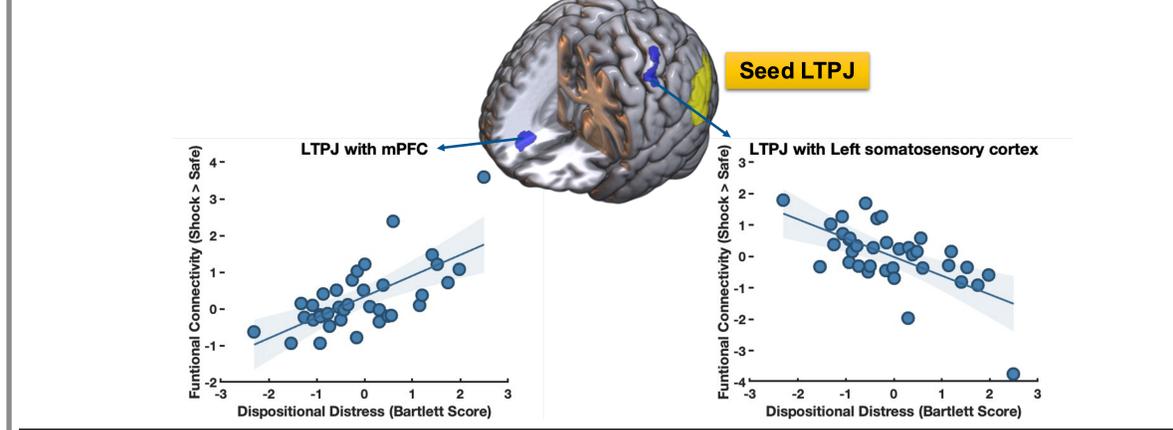
## FMRI results: anxiety effect



## Generalized Psychophysiological Interaction (PPI)



Interindividual differences of trait affect and social preference were measured. Exploratory factor analysis retained four main factors from: Distress, Prosociality, Impulsivity, and Fun-seeking.



## Reference

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- Saxe, R., & Kanwisher, N. (2003). People thinking about thinking people: the role of the temporo-parietal junction in "theory of mind". *Neuroimage*.

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