

Neural synchrony is related to perceived authenticity in retelling stories

Kristin Shumaker, Matthew Brook O'Donnell, Ralf Schmälzle, Matthew D. Lieberman & Emily B. Falk

University of Pennsylvania, kristin.shumaker@asc.upenn.edu



Background

Does shared experience characterize the successful communication of personal stories?

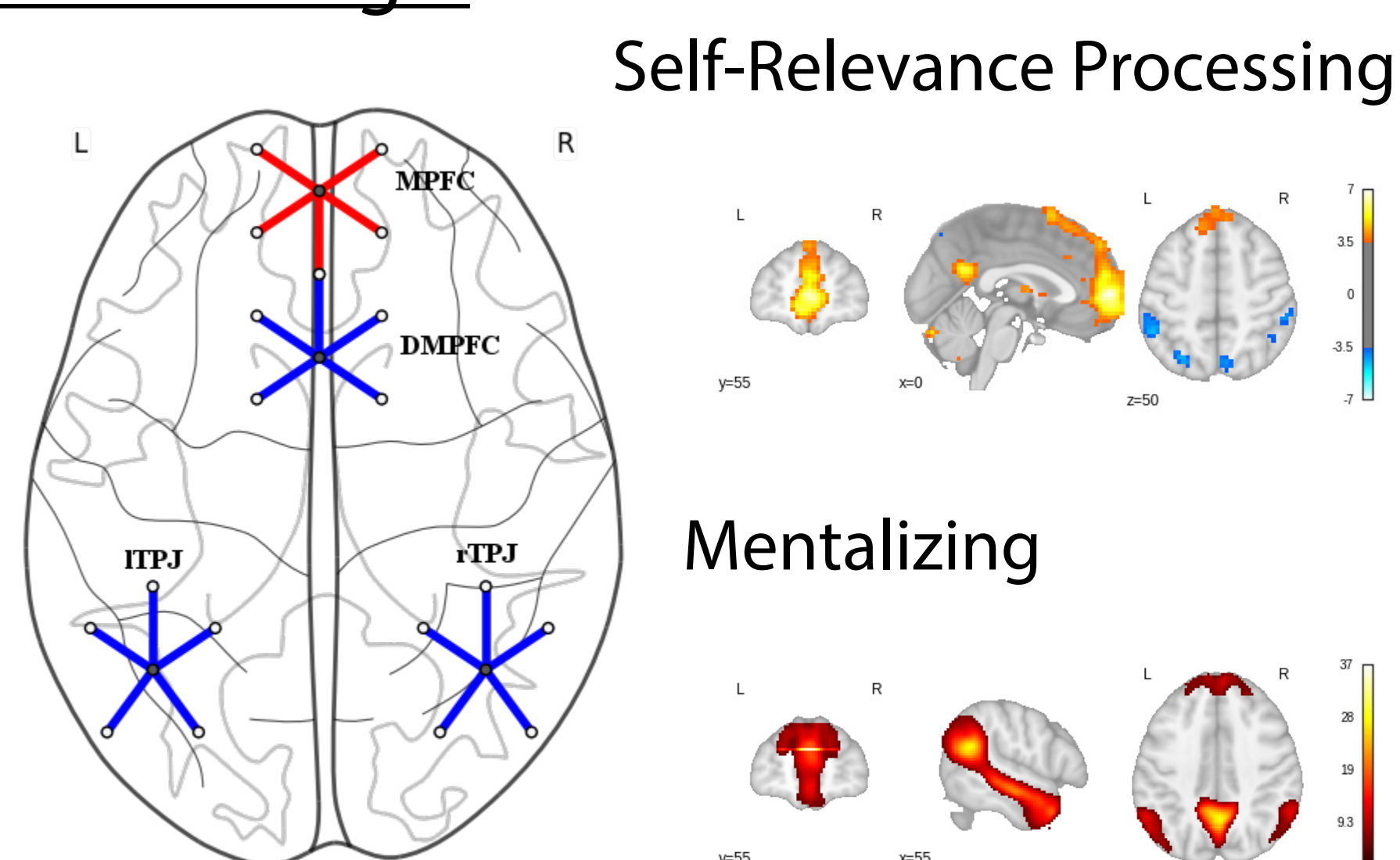
Successful communication of stories relies upon people retelling stories they have heard from others.

Using fNIRS, we tested whether similarity among listeners in self-relevance processing (i.e. MPFC) and mentalizing (i.e. DMPFC and TPJs) activity predicts three dimensions of successful communication - the perceived authenticity of a story reteller, their appeal to the listener, and the listener's overall experience.

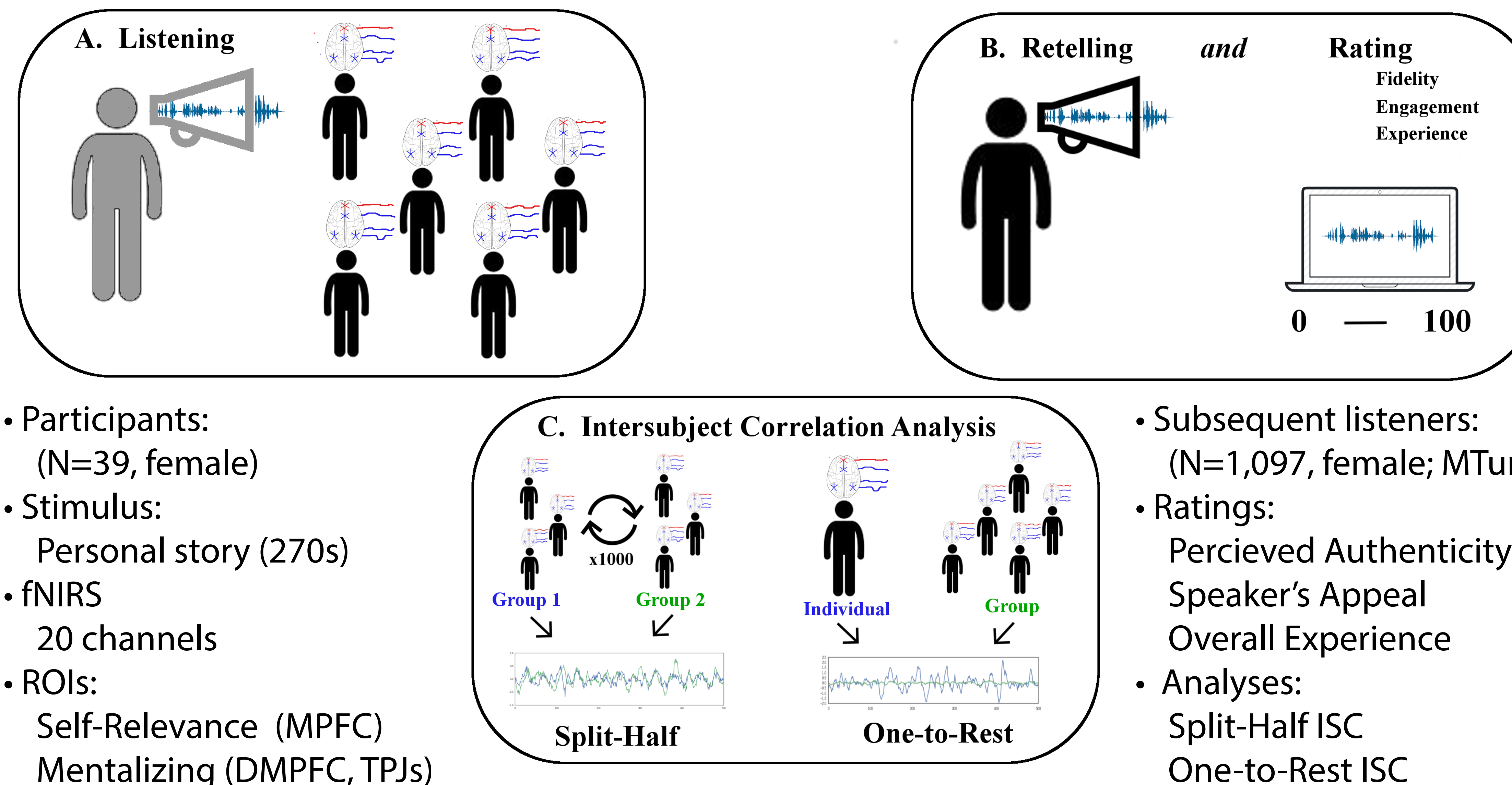
H1: Listeners will show significant synchrony in brain regions associated with self-relevance processing and mentalizing while listening to the same personal story.

H2: Listeners who show the most convergence with others' neural activity within self-relevance processing and mentalizing regions of interest during story listening will be more successful communicators when retelling the same story.

Probe Design:

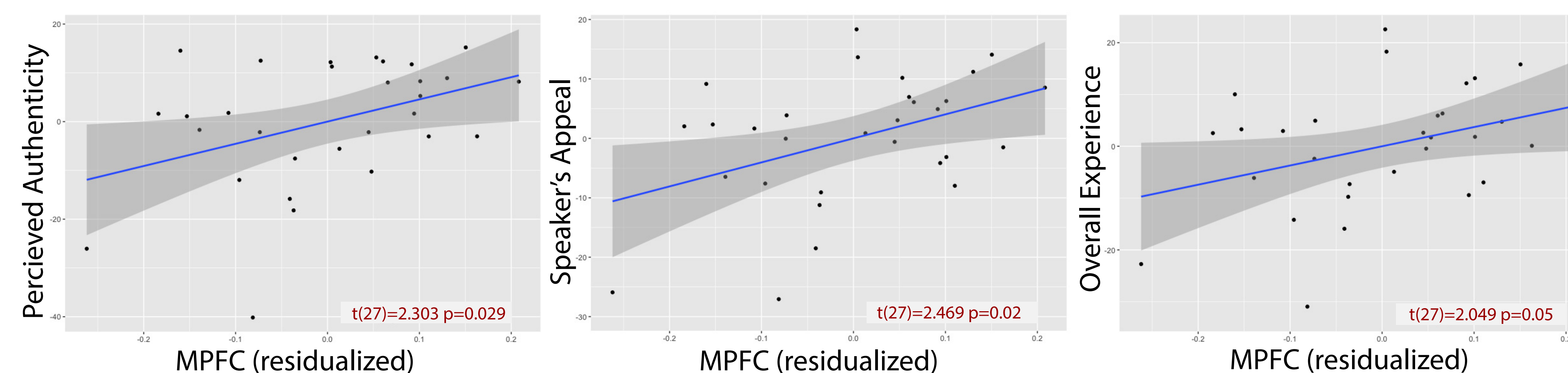


Methods



Results

One-to-rest ISC in the self-relevance processing ROI (i.e. MPFC) during initial exposure to the story predicts the perceived authenticity of the story reteller, as well as their appeal to the listener and the listener's overall experience.



Perceived Authenticity:

- Believability
- Realism of the story
- Trustworthiness

Speaker's Appeal:

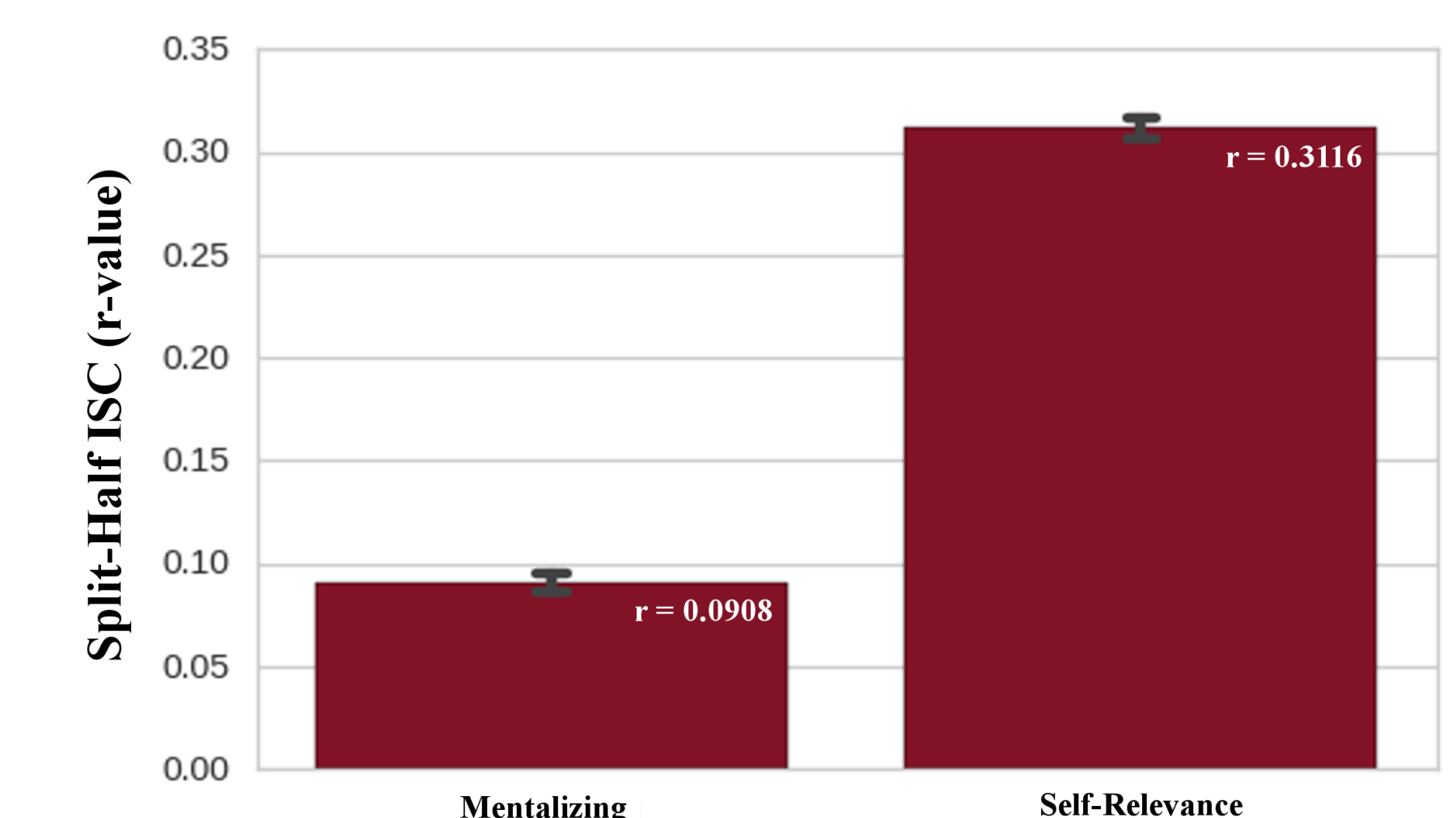
- Enthusiasm
- Likeability
- Similarity to the listener

Overall Experience:

- Enjoyment
- Likelihood of retelling the story

Results, con't

Split-half ISC shows greater correlation among listeners in a self-relevance region (MPFC) than mentalizing regions (DMPFC, TPJs)



Discussion

Being perceived as authentic when retelling a story may reflect normative patterns of response to stories.

- Listeners find retellers more authentic when their experience of a story represents the normative experience.
- Our findings are consistent with a model in which the degree to which an individual is successful in communicating is a function of their tendency to reflect broader group norms and values around the self-relevant elements of a narrative.
- Our results also support fNIRS as a tool for measuring brain activity during complex, naturalistic communication.

Acknowledgements:

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