

Faith Collins, Taylor Guthrie, Moriah Stendel, Robert Chavez
Department of Psychology

Hypothesis

Is a subject's positive self-representation similar to the group's positive representation of them over and above how the group sees someone else?

Introduction

Previous research has demonstrated that neural responses during self-referential thought are recapitulated in the brains of close friends thinking about the self. However, we also know that these processes are influenced by the affective valence of the stimuli and these processes recruit similar areas of the medial prefrontal cortex (MPFC). We sought to test this question by recruiting small groups of close-knit individuals in a round-robin fMRI design. Subjects reflected on positive and negative traits about both themselves and their group members to estimate neural responses to self and every other person in the group.

Method

Subjects

- N= 114; mAge: 23; Range 18-51 y/o; 44:70M; right-handed

20 groups

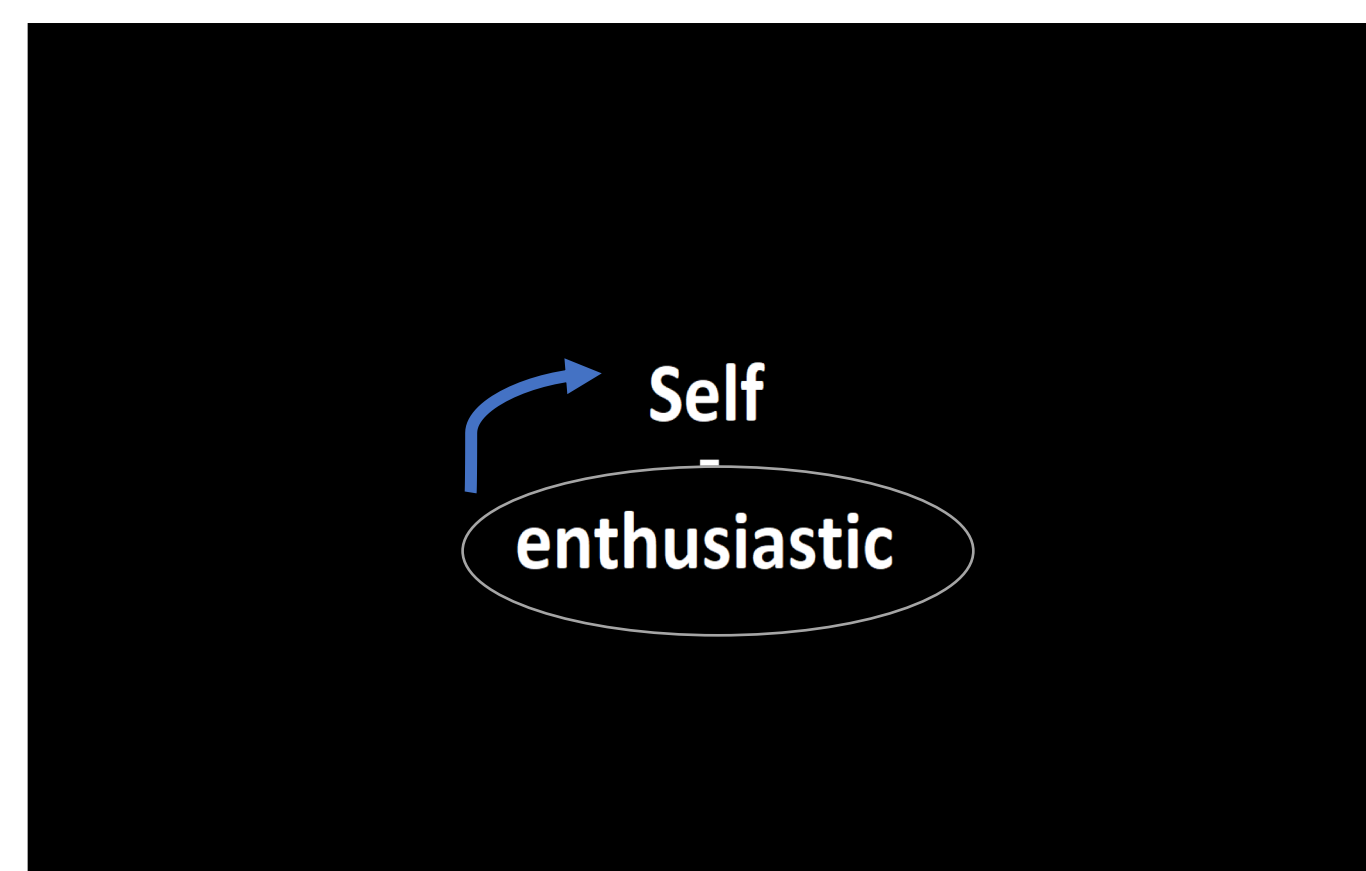
- Each group consisted of 5-6 people
- Academic, groups, friend groups, local businesses
- Each subject was monetarily compensated for their time

fMRI Task

Each member was brought into the scanner individually to do a trait adjective task.

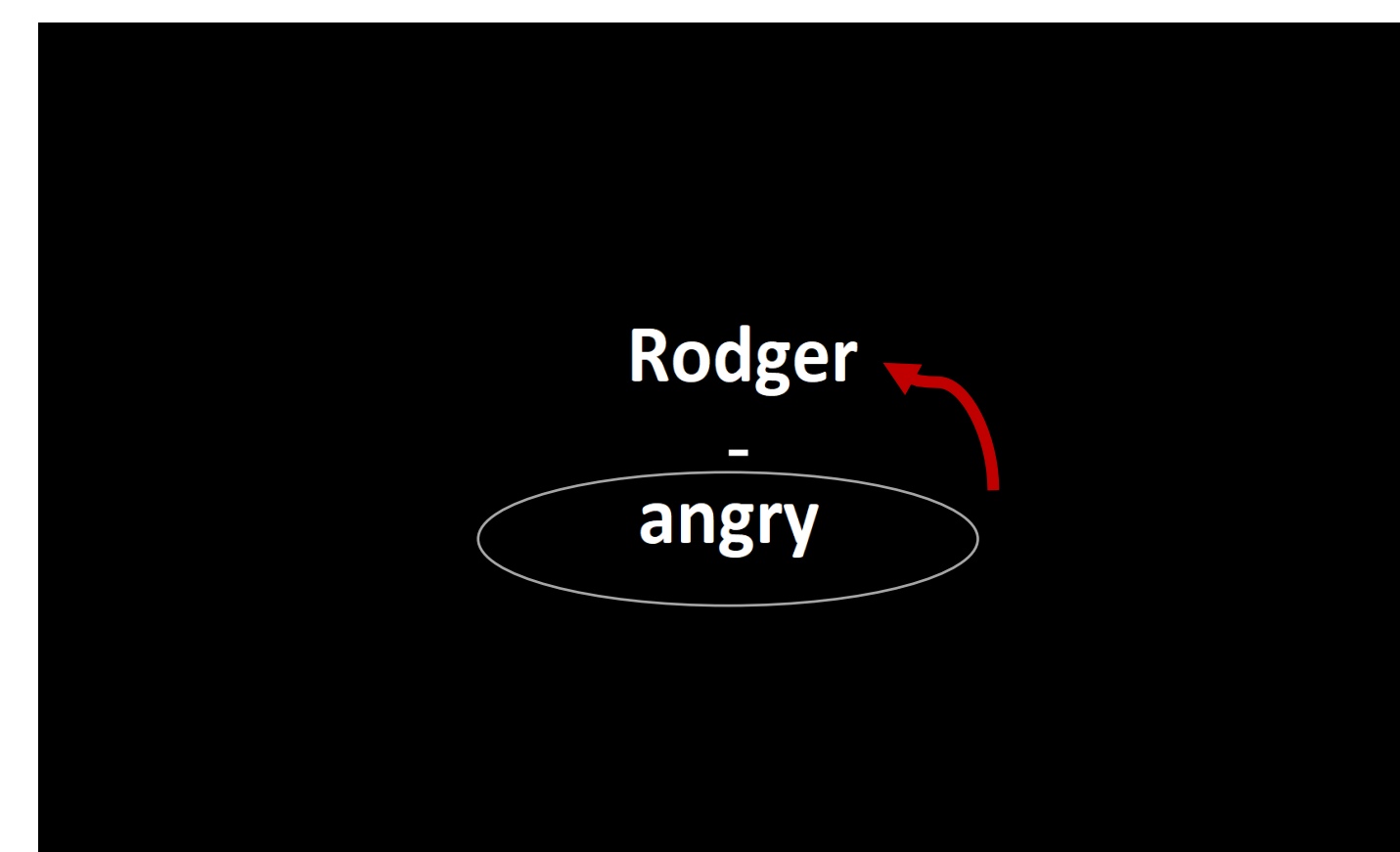
5 total runs

- Half negative words, half positive words
- All words were used with every target
- Yes/no response to whether trait word described target on top
- Full round-robin design, everyone was a target and a perceiver



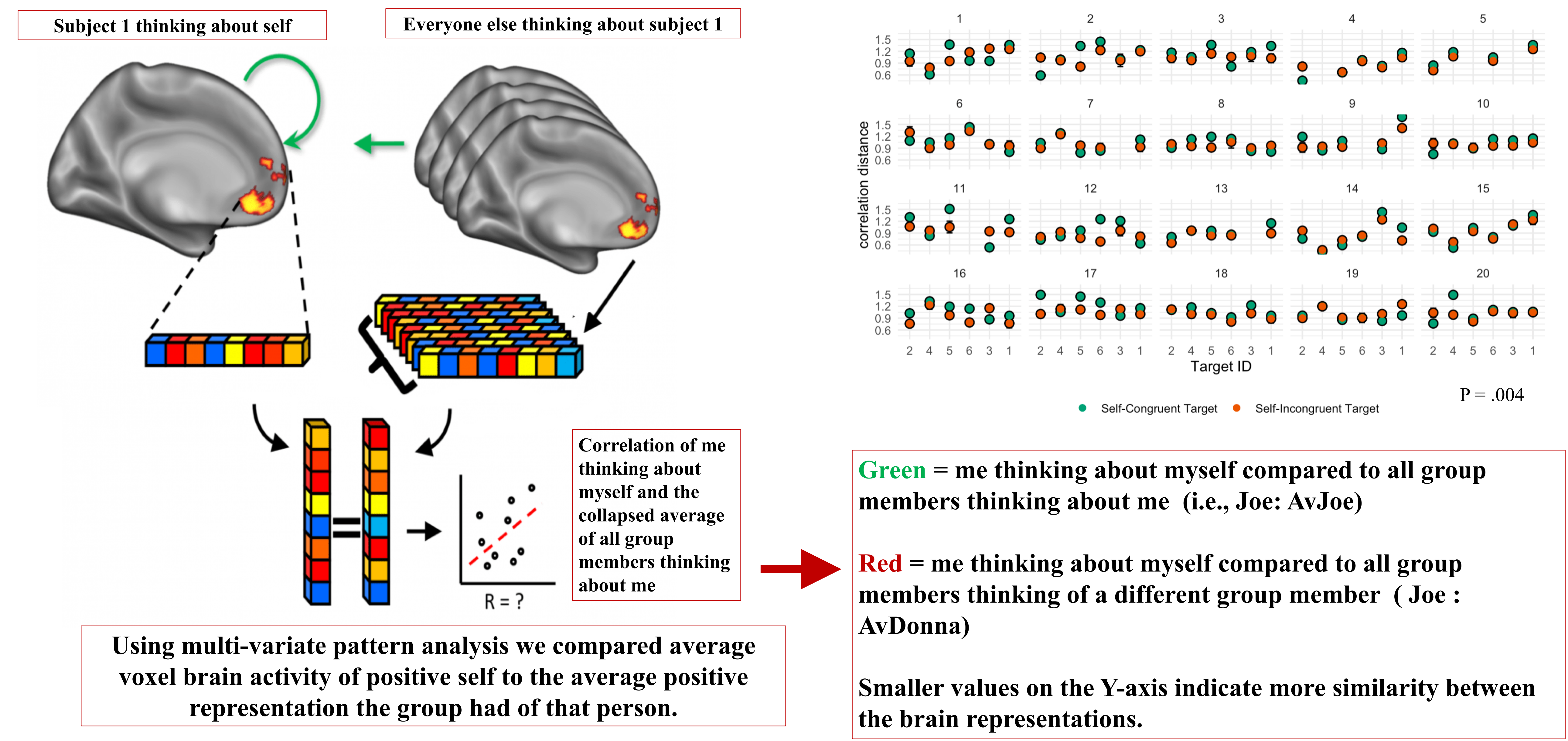
Yes

No



Yes

No



Conclusion

- Hypothesis predicted that positive self-representation was going to be similar to the positive groups representation of that target.
- Positive congruent trails (green dots) were significantly different than positive incongruent trails (red dots) but in a direction that was inconsistent with our hypothesis such that positive congruent trails were less similar than positive incongruent trails $F(1:564.99) = 8.1465; p = 0.004473$
- Positive self-representation was less similar than the group's positive representation about that target.

References

Chavez, R. S., & Wagner, D. D. (2019). The neural representation of self is recapitulated in the brains of friends: A round-robin fMRI study. *Journal of personality and social psychology*.