

How Do We Catch a Blank Mind?

Comparing Self-caught and Probe-caught Experience Sampling Methods

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Introduction

What is mind blanking (MB)?

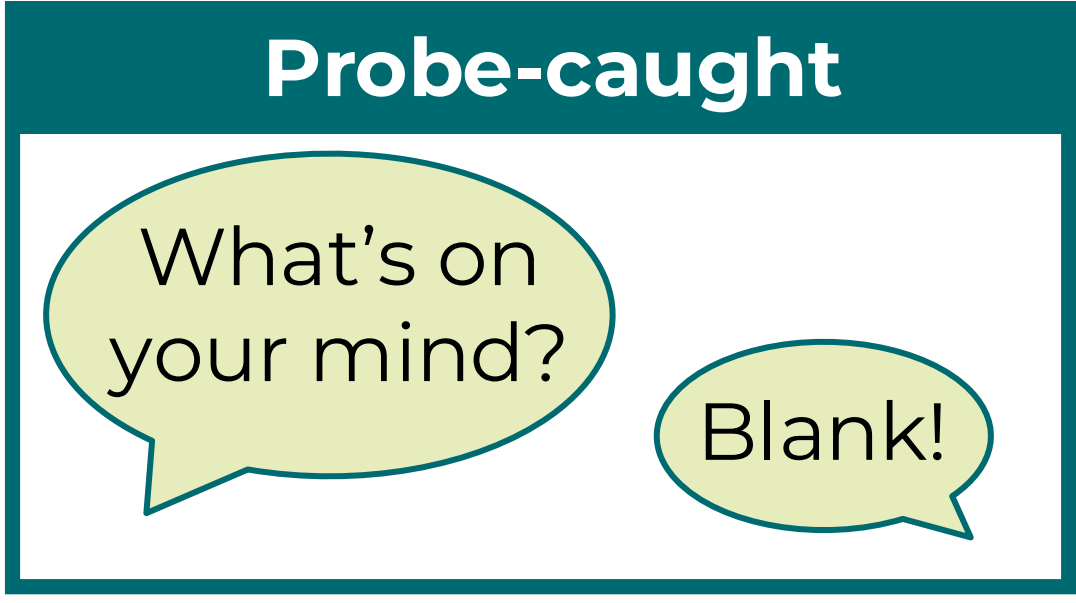
The experience of a seemingly empty mind while awake and alert [1,2]

What do we know about MB?

- Low frequency [3,4]
- Hyperconnected functional connectivity [3,4]
- Low arousal [1,3,4,5]

How do we study MB?

Most studies rely on:



An alternative not explored is:



Objective

To investigate whether probe-caught MB (pMB) and self-caught MB (sMB) converge in their behavioral and neural substrates

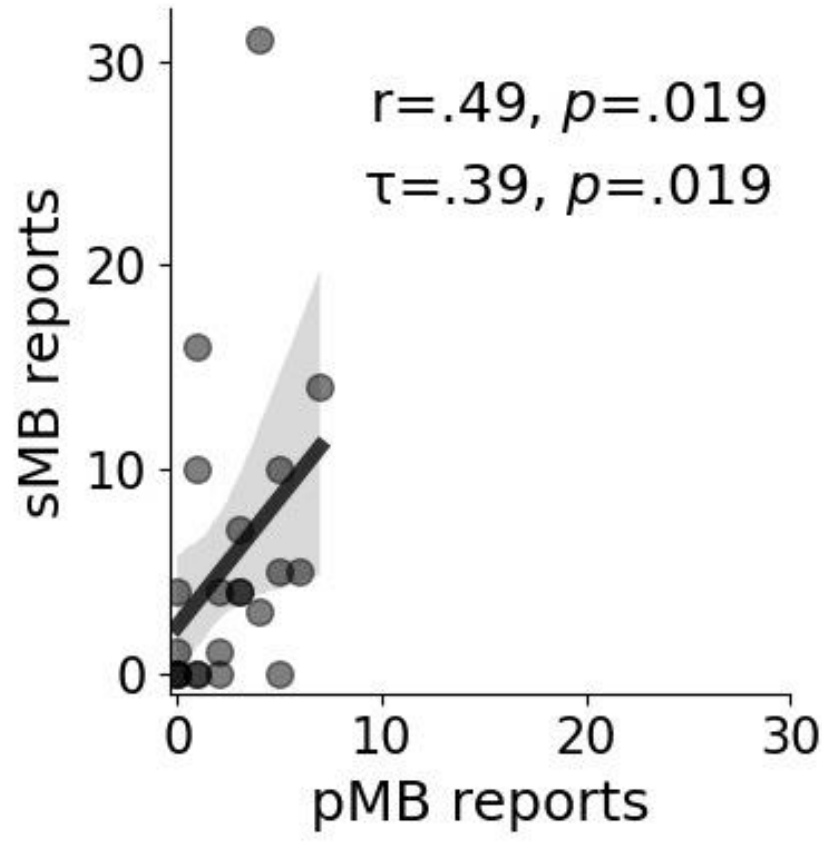
Results

Behavioral consistency of MB across both methods

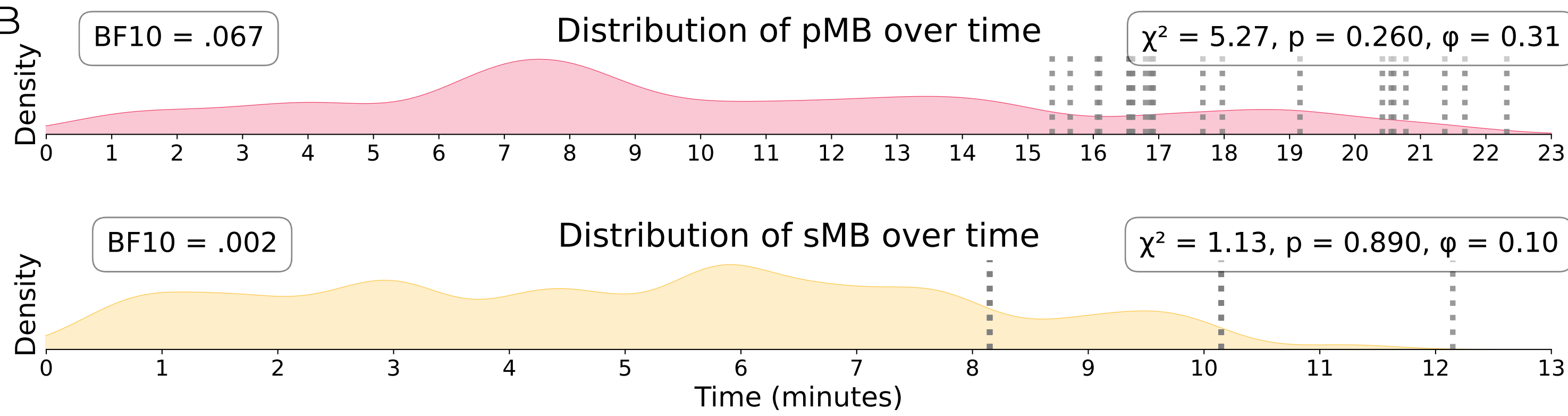
Low frequency

	Mean	Rate
pMB	2	10.8%
sMB	5	1 in ~3'

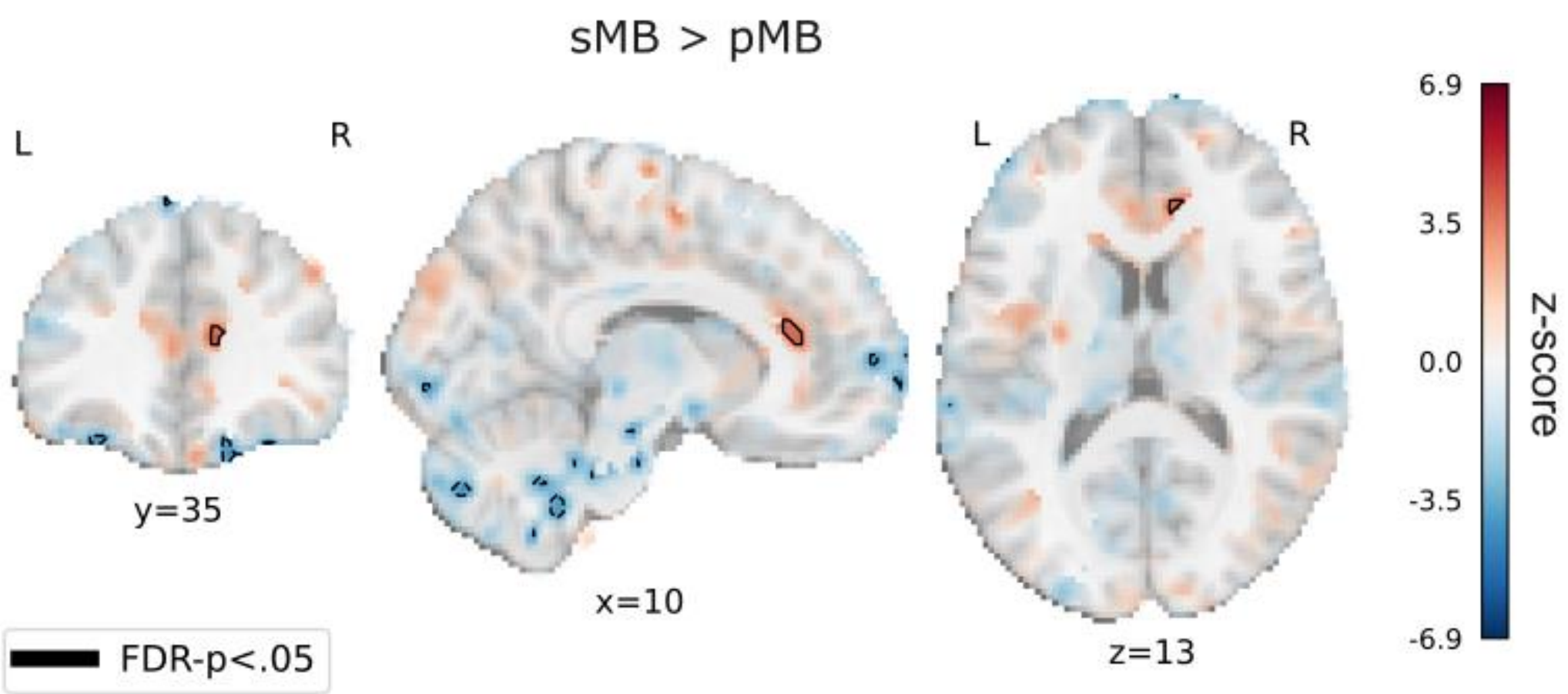
Cross-task consistency



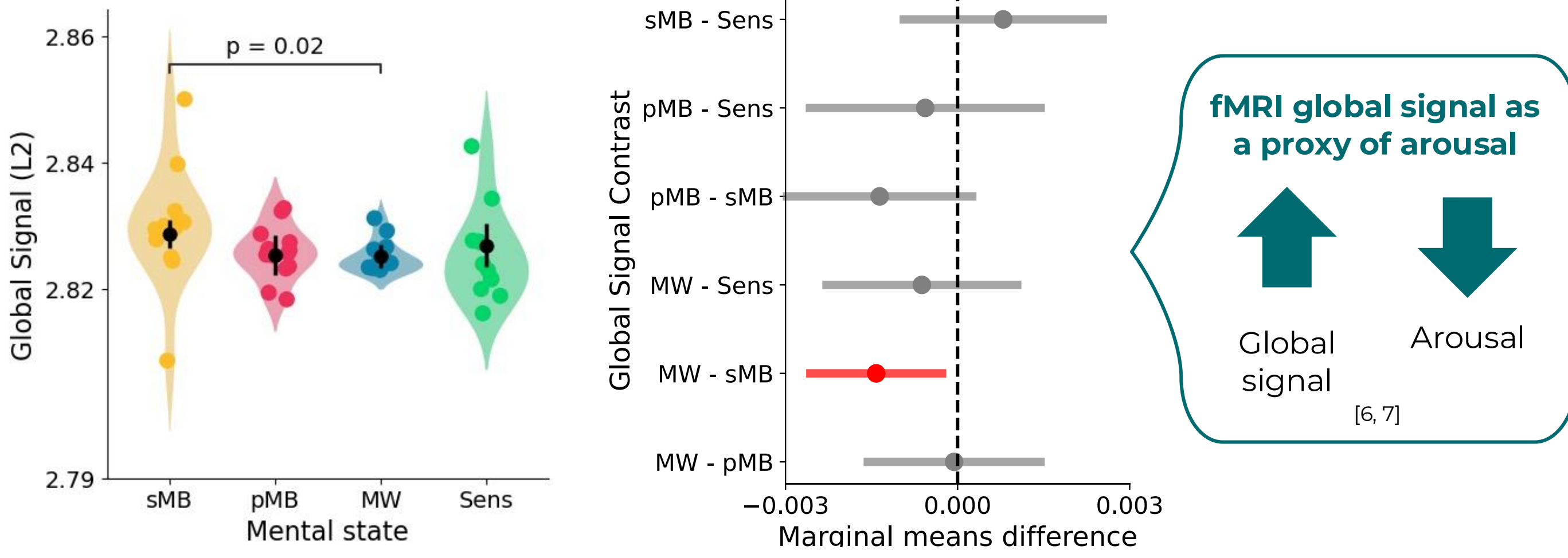
Uniformly distributed



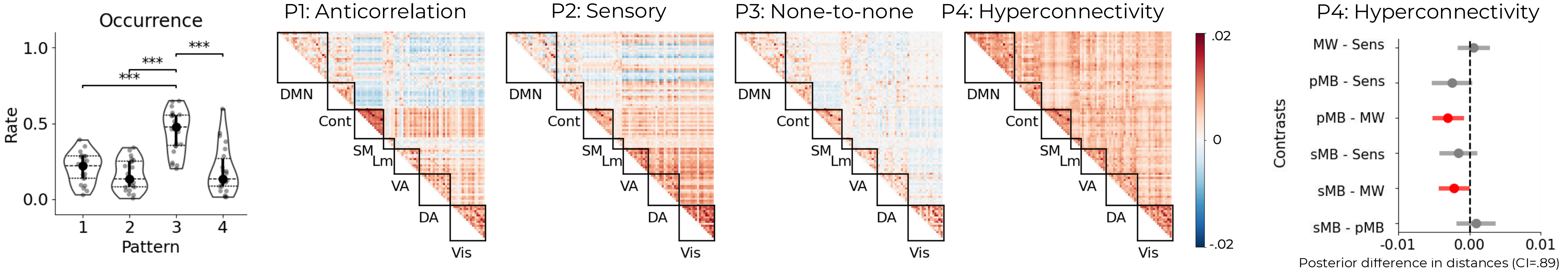
Self-caught MB recruits dorsal anterior cingulate



Self-caught MB has higher fMRI global signal



MB consistently associates with functional hyperconnectivity across both methods



Conclusion

Both MB quantification methods share behavioral properties and brain correlates of hyperconnectivity, although they diverge in the recruitment of the dACC, a difference we attribute to the meta-cognitive process involved inherent to the self-caught task. Overall, these findings support the self-caught methodology as a non-disruptive, complementary tool to study the boundaries of ongoing thinking.