

October 25, 2016

*Nature Communications*

Dear Editors:

I have enclosed a manuscript entitled "Large-scale meta-analysis suggests low regional modularity in lateral frontal cortex." which was co-authored by Tal Yarkoni, Tor Wager, Marie Banich and myself. The manuscript is being submitted for consideration as an Article to *Nature Communications*.

We report on a large-scale meta-analysis of lateral frontal cortex conducted across nearly 12,000 fMRI studies. We attempted to overcome the difficult problem of inferring mental states from brain activity, known as the 'reverse inference' problem, by applying machine-learning classification to the full range of psychological states. Although we were able to identify and psychologically profile dissociable lateral frontal subregions, we observed relatively low functional specialization. Our results suggest discrete psychological processes, such as 'working memory', are not organized in a strict modular fashion in lateral frontal cortex. We believe this manuscript will be of interest to a broad scientific audience due to the broad and relatively unbiased nature of our meta-analysis; the present study provides a comprehensive functional-anatomical mapping of lateral frontal cortex, which should be of interest to a broad audience of researchers across various sub-areas of psychology and neuroscience.

Thank you very much for considering our submission. I look forward to hearing from you.

Sincerely,

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