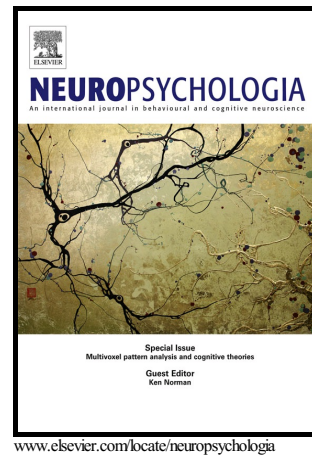


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Connectivity Patterns in Cognitive Control Networks Predict Naturalistic Multitasking Ability

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Abstract

Multitasking is a fundamental aspect of everyday life activities. To achieve a complex, multi-component goal, the tasks must be subdivided into sub-tasks and component steps, a critical function of prefrontal networks. The prefrontal cortex is considered to be organized in a cascade of executive processes from the sensorimotor to anterior prefrontal cortex, which includes execution of specific goal-directed action, to encoding and maintaining task rules, and finally monitoring distal goals. In the current study, we used a virtual multitasking paradigm to tap into real-world performance and relate it to each individual's resting-state functional connectivity in fMRI. While did not find any correlation between global connectivity of any of the major networks with multitasking ability, global connectivity of the

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