**Neural Correlates of Fluid Intelligence via Functional and Structural Network Connectivity Measures**

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Connectivity across regions in the brain can be characterized as either functional (correlated fluctuations in activity as measured by resting-state fMRI data) or structural (white matter pathways as measured by diffusion MRI data). Emerging studies suggest that the connections across brain regions that make up distinct cognitive networks can partially explain individual differences in behavioral traits. Some theorize that a reliable benchmark of intelligence is the ability to identify subtle patterns across distantly related ideas. The Raven’s Progressive Matrices (RPM), a pattern completion task, is one widely used measure of general fluid intelligence. Here, we use a combination of functional and structural connectivity metrics derived from a large MRI dataset [n=127] to examine the relationship between neural connectivity and RPM scores. We used a Support Vector Regression cross-validation procedure to assess the degree to which we could predict a subject’s intelligence based on these connectivity values. We were able to account for 14% of the variance in individuals’ intelligence scores when using specific combinations of functional and structural connectivity values.