

6 Supplement

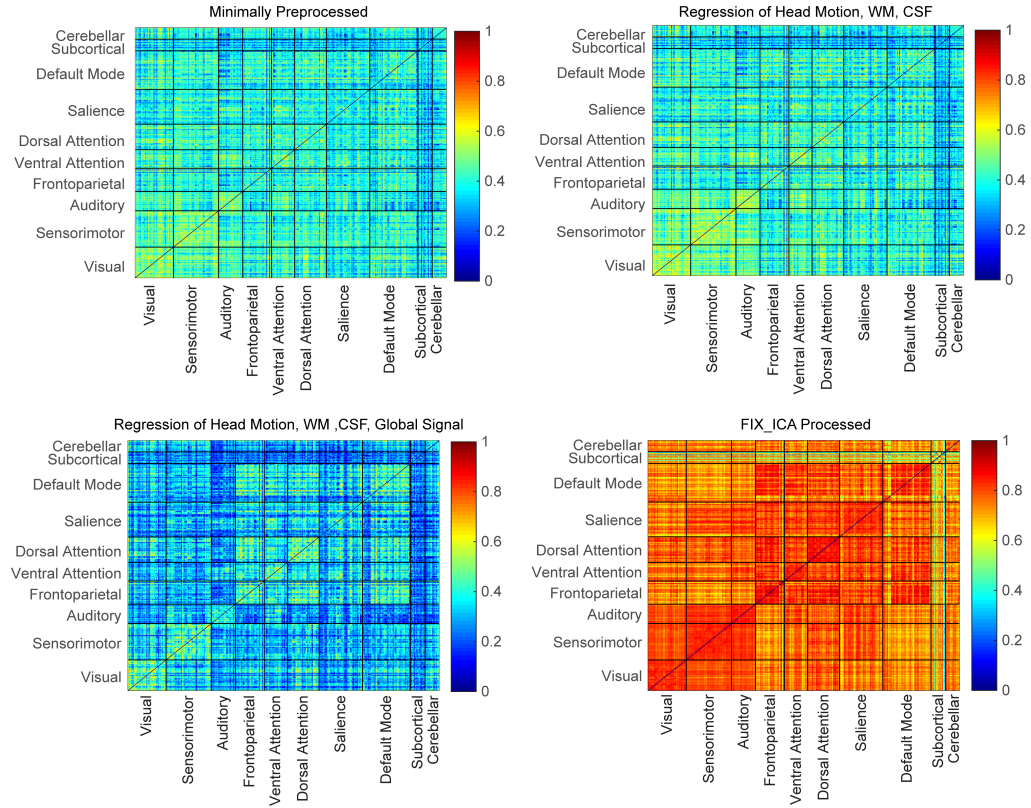


Fig. 4: Reproducibility (intraclass correlation coefficient, ICC) of functional connectivity by preprocessing strategy. Element-wise ICC values were calculated over each of the four cleaning pipeline connectivity matrices. FIX ICA clearly showed the strongest ICC reproducibility, whereas global signal showed a slight drop in reproducibility from the minimally processed data.

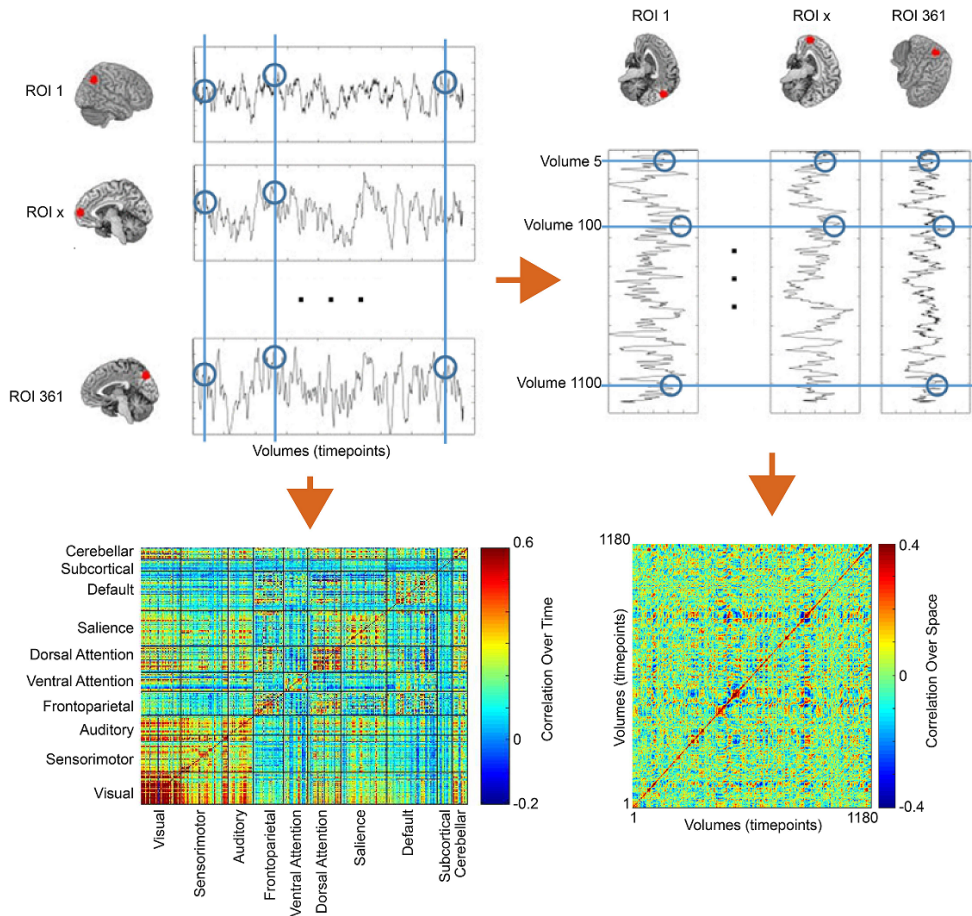


Fig. 5: Calculation of functional connectivity across time and space.

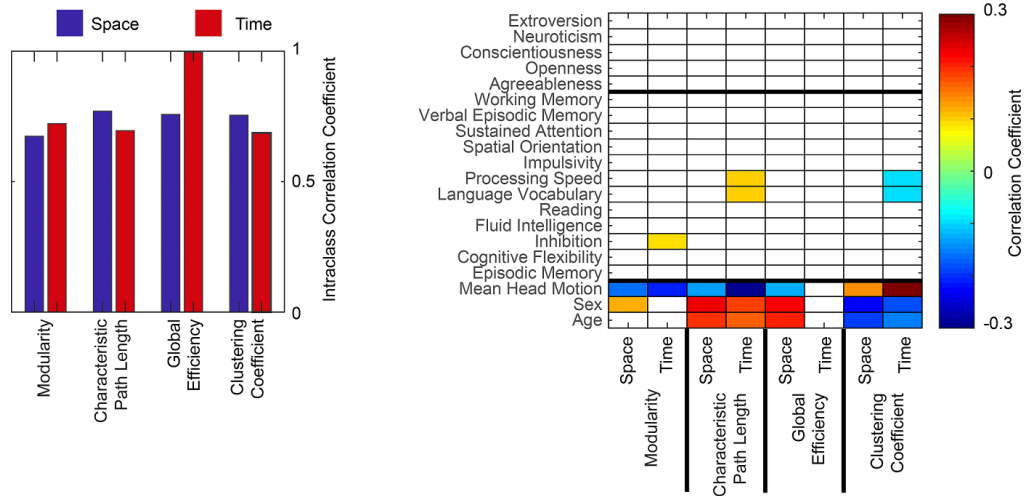


Fig. 6: Reproducibility and cognitive correlation of graph theoretic analysis of functional connectivity data. Cognitive and personality measures (right) were colored if they were significantly correlated to graph-theoretic measures, corrected for multiple comparisons using false discovery rate $q < 0.05$ across all comparisons tested.

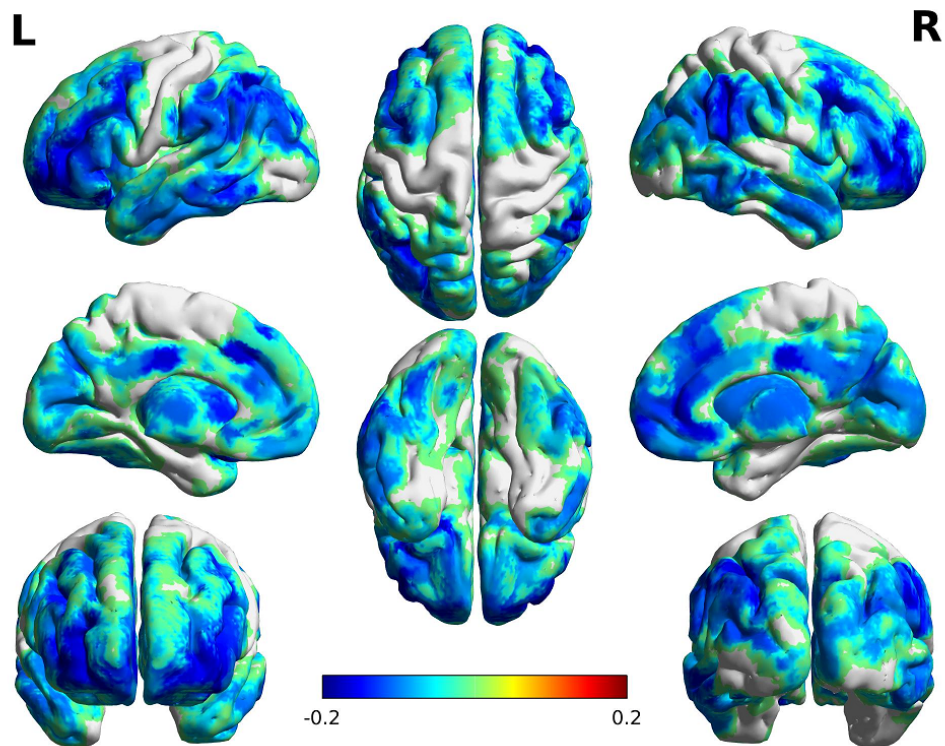


Fig. 7: Spatial distribution of correlation between persistent homology barcodes and fluid intelligence.

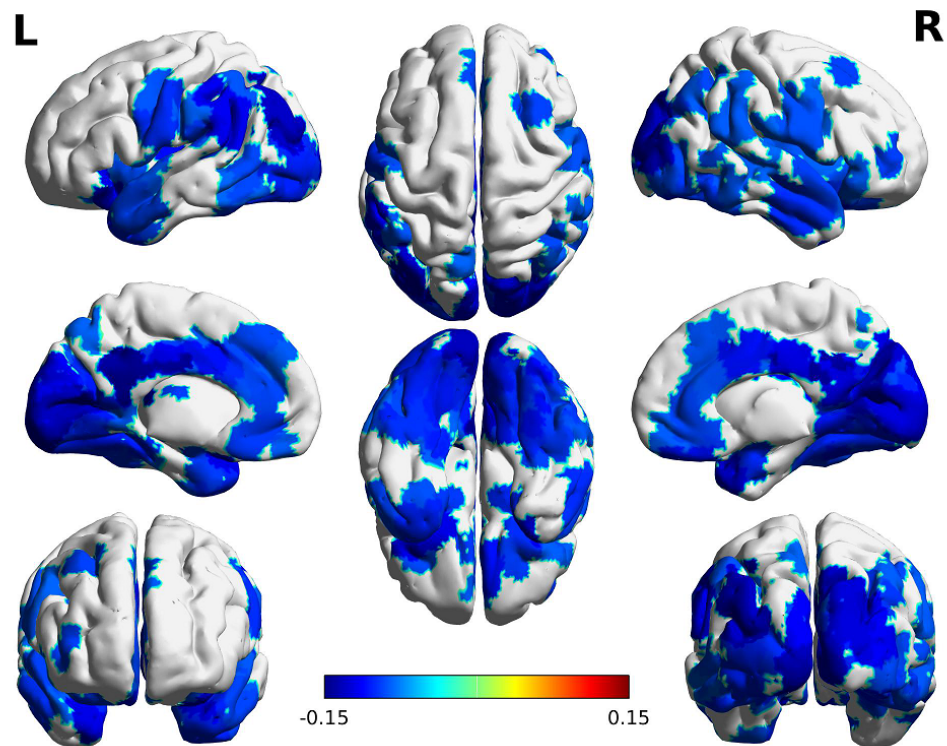


Fig. 8: Spatial distribution of correlation between persistent homology barcodes and episodic memory.

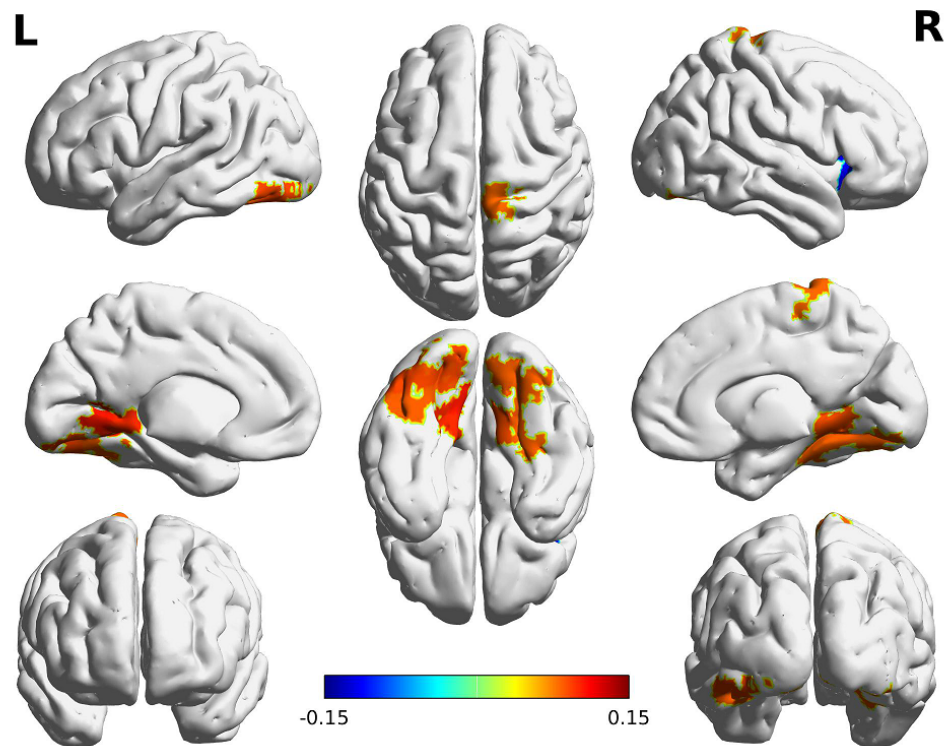


Fig. 9: Spatial distribution of correlation between persistent homology barcodes and cognitive flexibility.

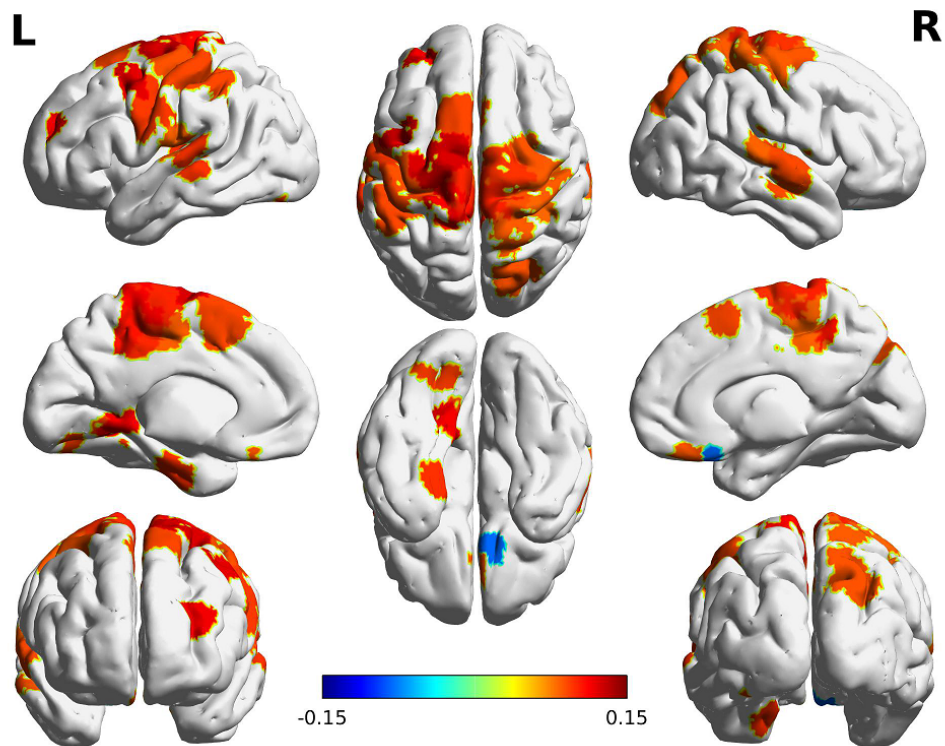


Fig. 10: Spatial distribution of correlation between persistent homology barcodes and processing speed.

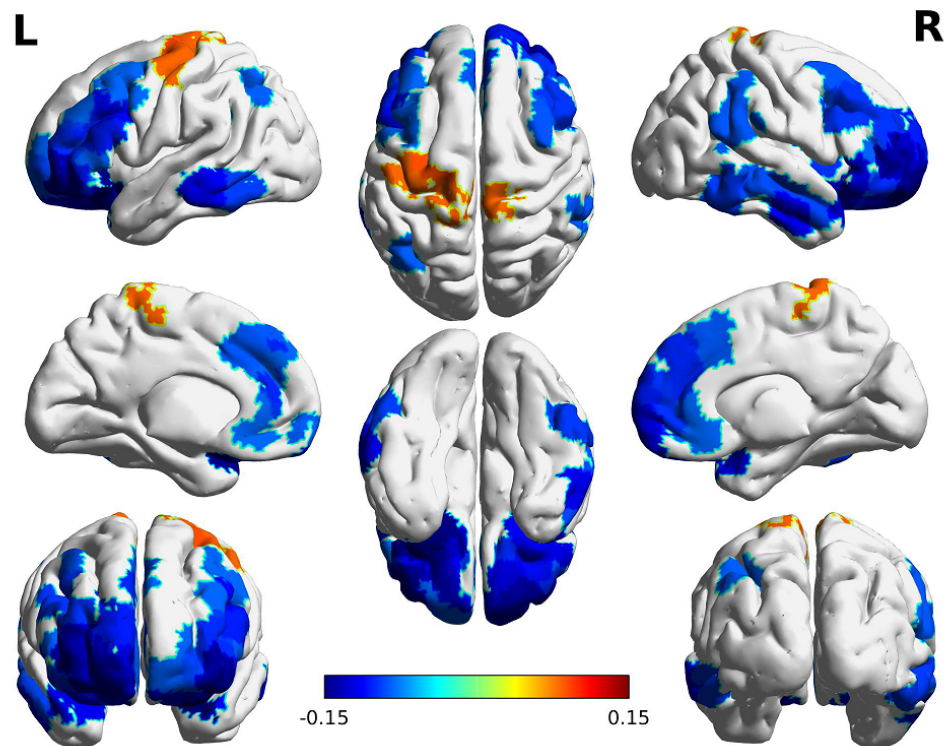


Fig. 11: Spatial distribution of correlation between persistent homology barcodes and reading.

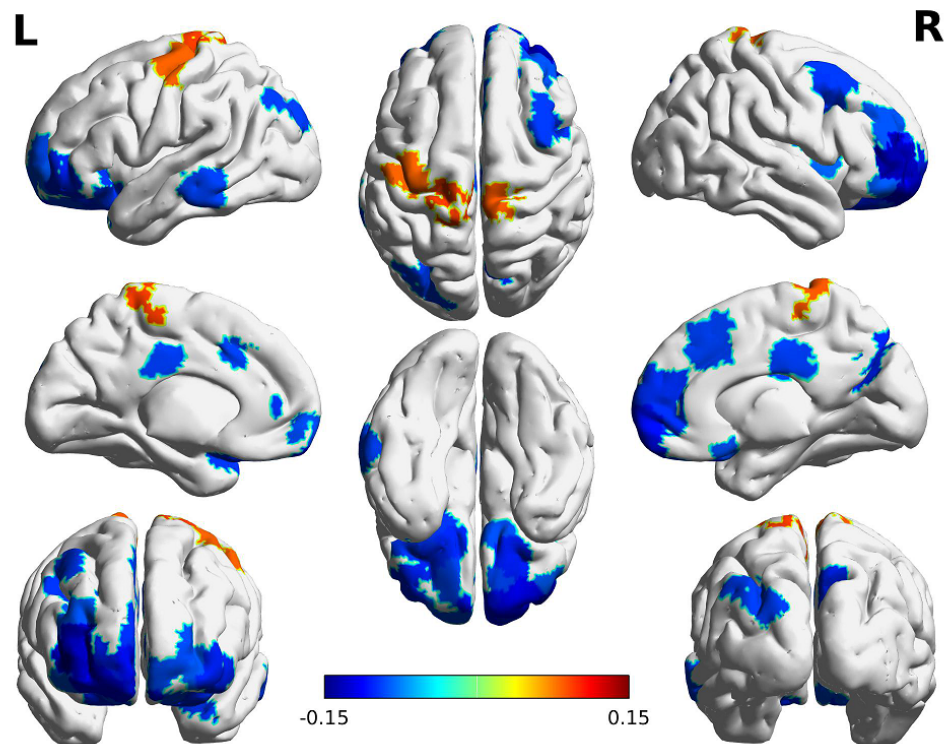


Fig. 12: Spatial distribution of correlation between persistent homology barcodes and language vocabulary.

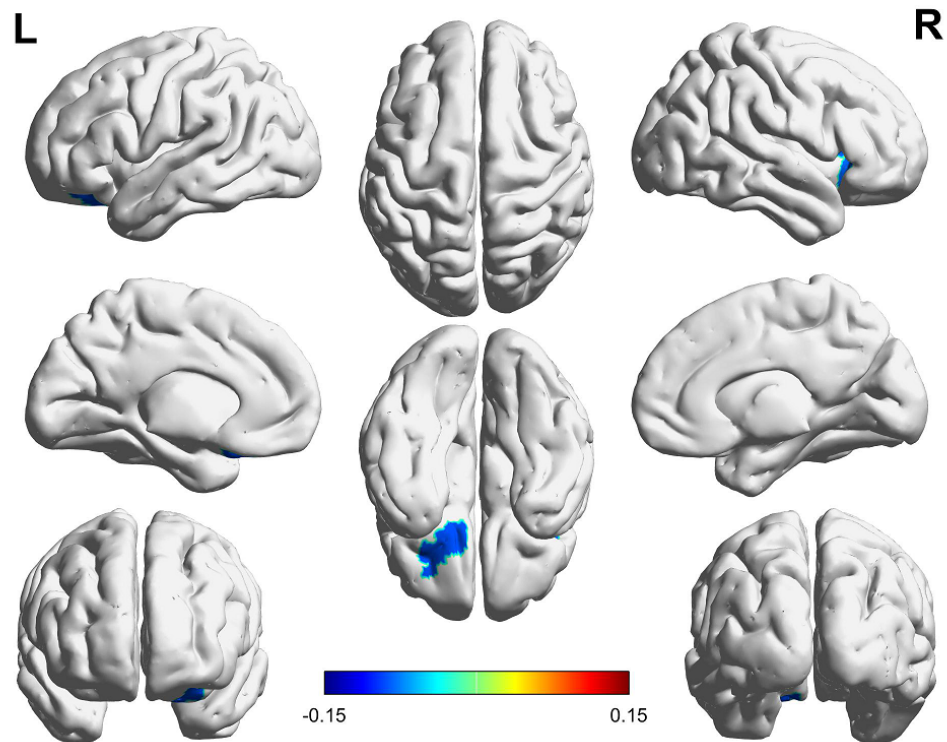


Fig. 13: Spatial distribution of correlation between persistent homology barcodes and inhibition.

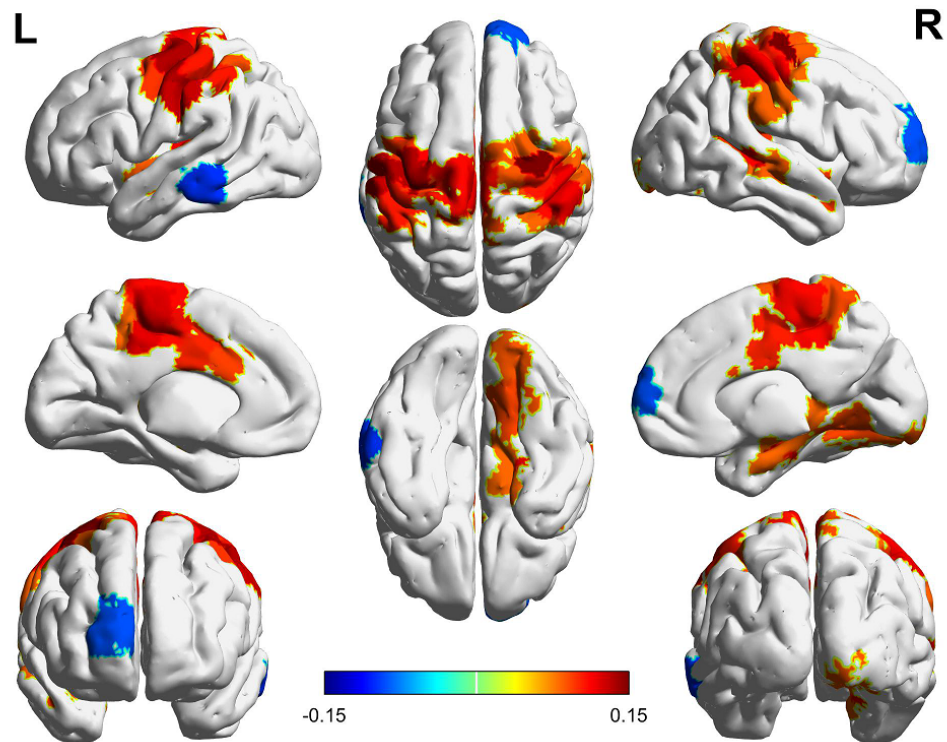


Fig. 14: Spatial distribution of correlation between persistent homology barcodes and impulsivity.

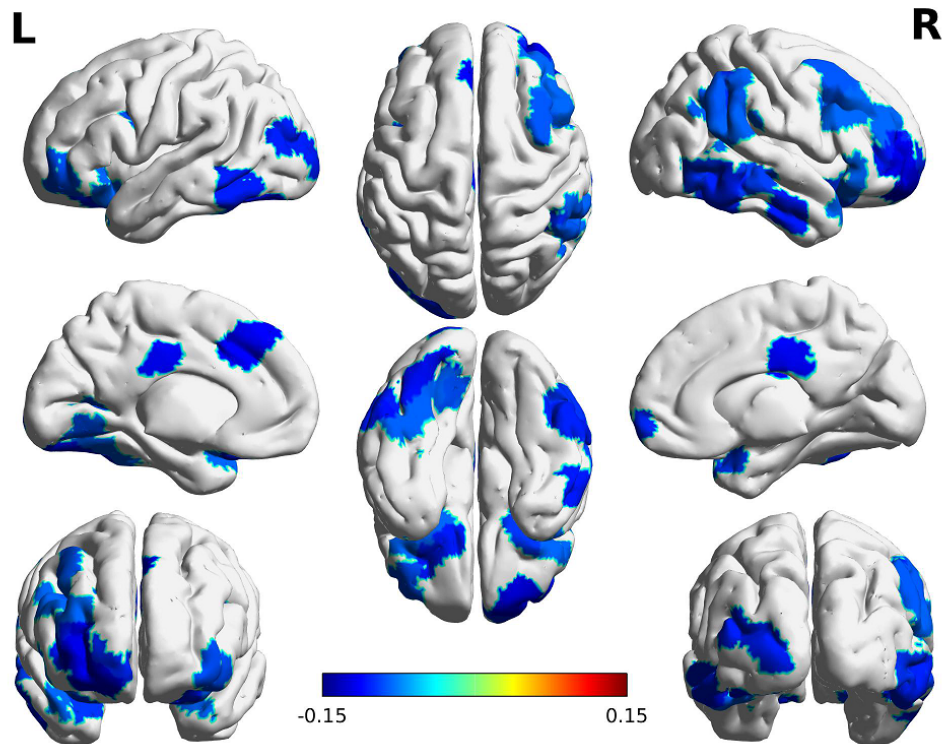


Fig. 15: Spatial distribution of correlation between persistent homology barcodes and spatial orientation.

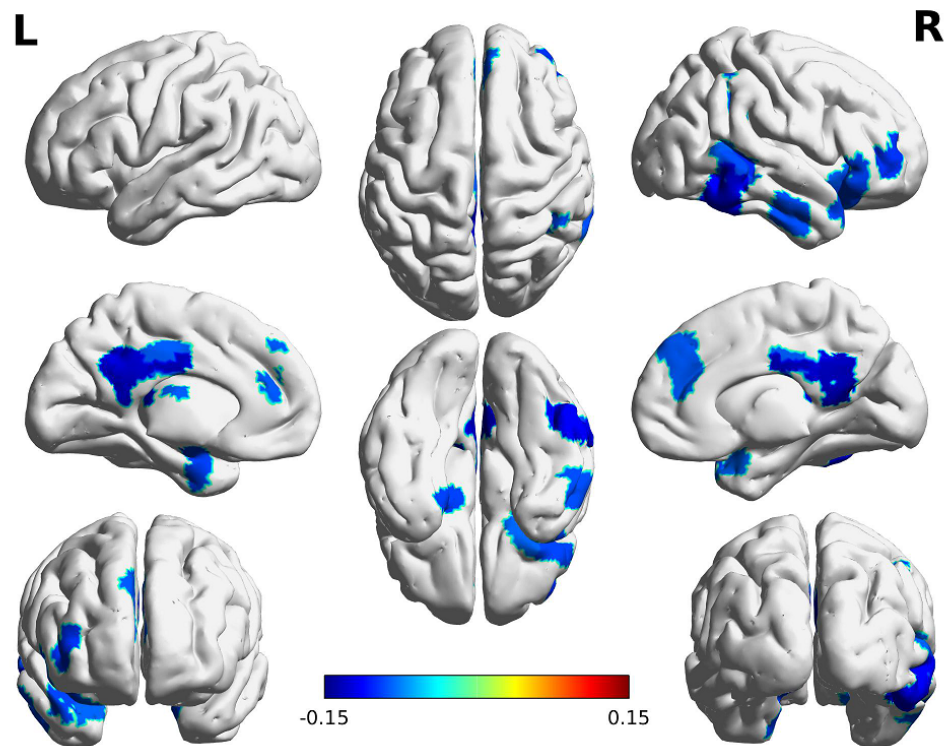


Fig. 16: Spatial distribution of correlation between persistent homology barcodes and verbal episodic memory.

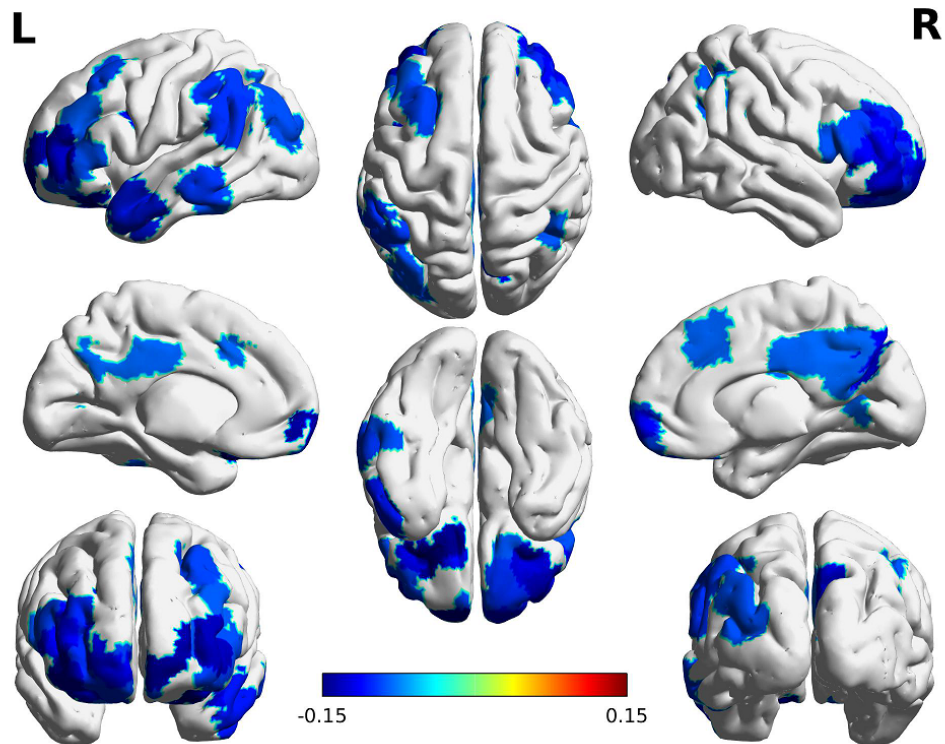


Fig. 17: Spatial distribution of correlation between persistent homology barcodes and working memory.

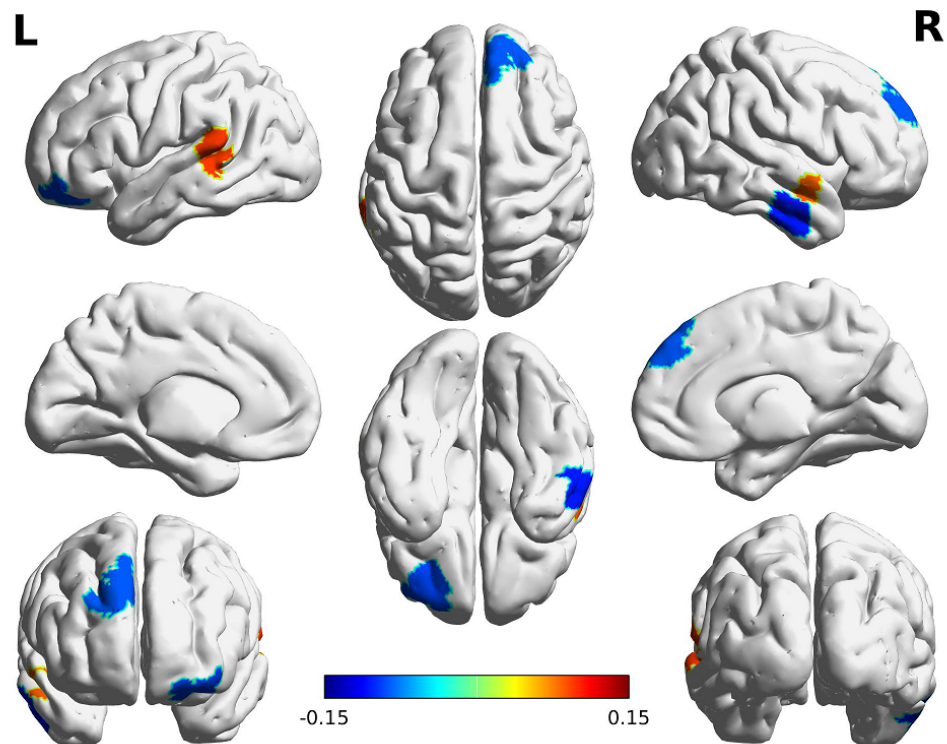


Fig. 18: Spatial distribution of correlation between persistent homology barcodes and agreeableness.

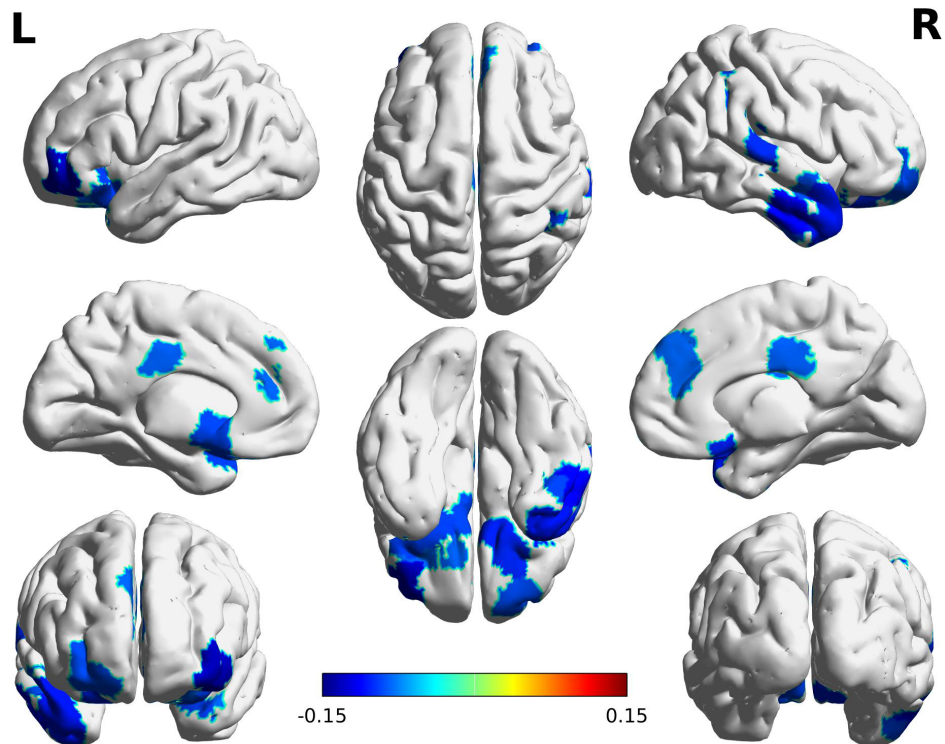


Fig. 19: Spatial distribution of correlation between persistent homology barcodes and openness.

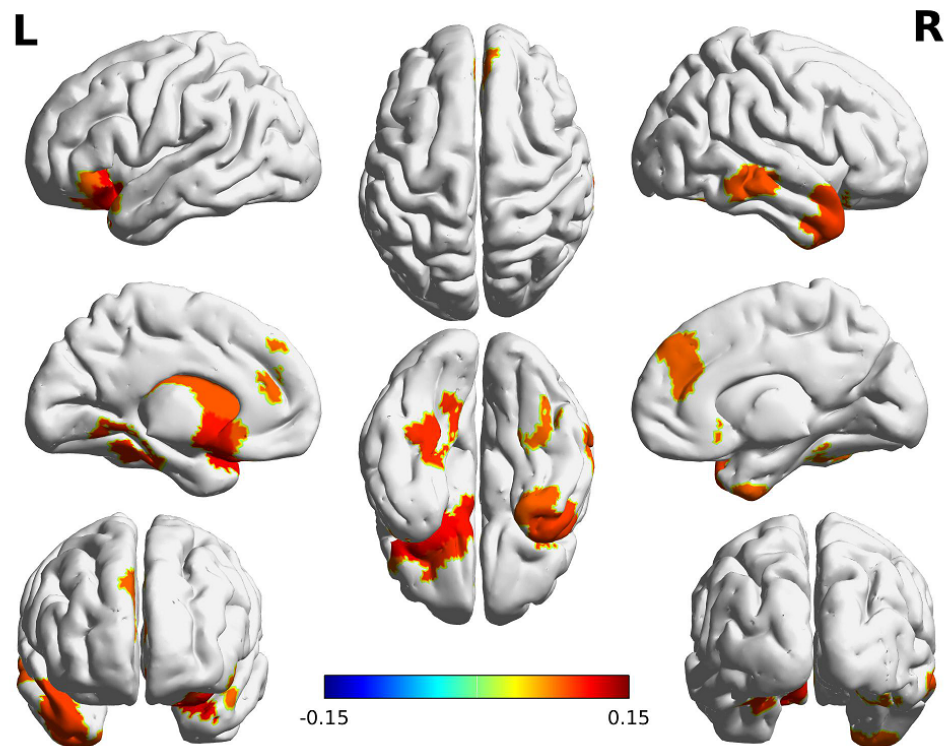


Fig. 20: Spatial distribution of correlation between persistent homology barcodes and conscientiousness.

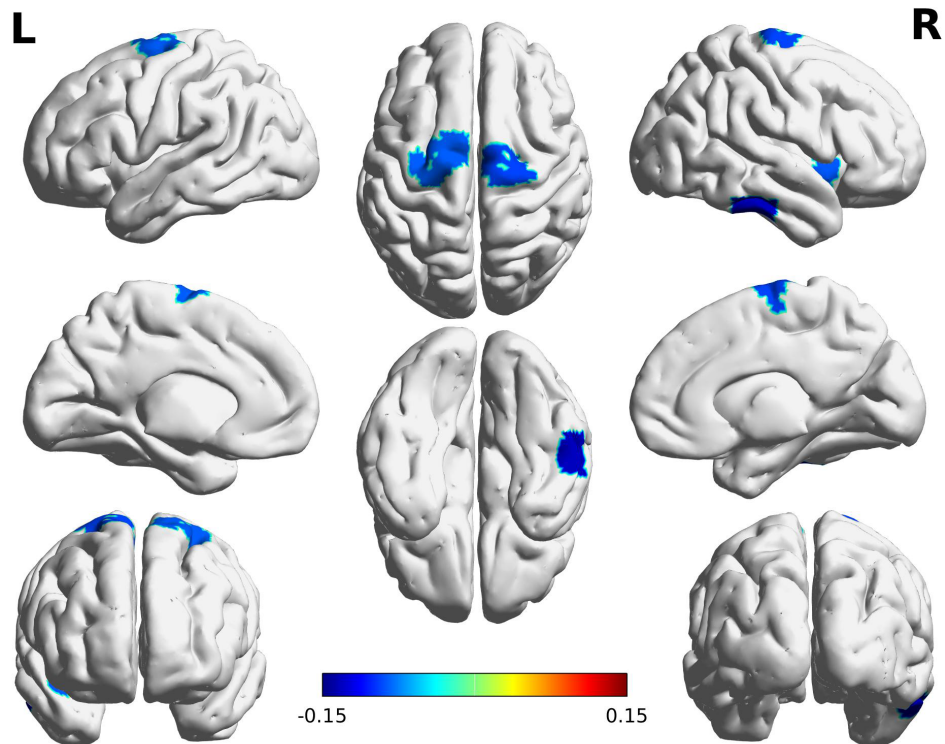


Fig. 21: Spatial distribution of correlation between persistent homology barcodes and extroversion.