

Human brain observatories: the power of the collective to unravel the mysteries of the human mind

In the past decade, much of the progress in human neuroscience has come under scrutiny due to issues related to reproducibility of findings, low powered studies and also the large degree of flexibility in the analysis pipelines. Several mechanisms have been put in place to address those challenges, e.g., preregistrations and registered reports. We have focused on another neglected aspect, the fact that theories and schools of thought develop in parallel leading to silos instead of cross-talk. To counteract those tendencies we are exploring an open science adversarial collaboration powered by multi team science. Implementing this initiative led us to face many obstacles concerning data sharing and integration of studies across laboratories. We discovered the importance of metadata, and the meandering road to define them. While team science may produce many advances, a big portion of the infrastructure still needs to be developed. The next frontier for human cognitive neuroscience lies in developing that infrastructure to materialise human brain observatories.

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