

Models of the Mind

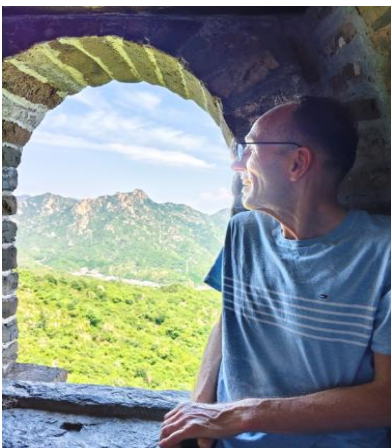
From Psychoanalysis to Neuroscience

An interdisciplinary dialogue between psychoanalysis, neuroscience and AI.

Georg Northoff is a philosopher, neuroscientist and psychiatrist, holding degrees in all three disciplines. Being a Fellow of the Royal Society of Canada, he works at University of Ottawa/Canada holding a Canada Research Chair for Mind, Brain Imaging, and Neuroethics. His research focuses on the relationship of brain and mind: why and how does our brain construct mental features like self, thoughts, and consciousness as well as their changes in mental disorders like depression and schizophrenia? He developed two major novel integrative brain-mind approaches. Spatiotemporal Neuroscience and Psychiatry investigate how the brain's inner time-space, e.g., its topography and dynamics, shape mental features. While non-reductive neurophilosophy allows connecting these insights to philosophical questions like the brain-mind problem. Being among the top 0.001% scientists world-wide with global impact, he publishes regularly in the top journals of neuroscience (Nature NS, Nature Reviews NS, Neuron, Advanced Science, Nature Com, PNAS, Physics in Life Review, etc.), neurology (Brain, Annals of Neurology, Nature Disease primer, Ebiomedicine, etc.) and psychiatry/psychology (Am J P, Molecular P, Biological P, JAMA P, Psychol Bulletin, etc.). He authored over 400 journal articles and 20 books that are translated into several languages including "Neuro-philosophy and the Healthy Mind" (Norton, 2016), "The spontaneous brain" (MIT, 2018), and "Neurowaves" (McGill, 2023). His impact factor is 114 with more than 50000 Citations. His work is regularly featured in international media outlets including BBC, New York Times, Wall Street, Guardian, and London Times.

See recent Podcast on Spatiotemporal Neuroscience for broader audience

<https://www.youtube.com/watch?v=IDX3xOVHB18&t=237s>.



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Title: *The Dynamic Self: From Brain Dynamics to Subjective Experience*

Abstract: Our mind is intrinsically dynamic with fleeting thoughts oscillating between conscious and unconscious. Where does such dynamics of our mind coming from? I demonstrate that thought dynamics directly relates to brain dynamics; if our brain is too slow, our mind is also too slow as for instance in depression. My talk will highlight the connection of mind dynamics and brain dynamics.

The search for the subjective nature of our self is intensely debated in philosophy and neuroscience. However, despite all progress, the subjectivity of self and how it fits into the seemingly objective world remains elusive. Drawing on recent empirical data, I show how the self is shaped by the brain's scale-free activity, that is, long-range temporal correlation (LRTC) and the world's ecological context. We assume that the scale-free LRTC of the world-brain relation provides the ontological basis for the point of view as the foundation of subjectivity within the world.