

**Call for Abstracts
Philosophy and Neuroscience at the Gulf III
Third Meeting of the Deep South Philosophy and
Neuroscience Workgroup**

October 9-10 (Friday, Saturday), 2020
Location: TBD (see information in this Call below)

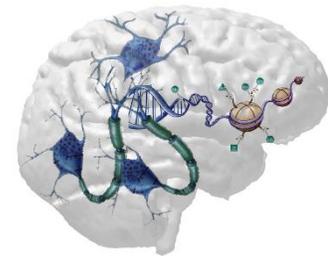
Co-organized by **John Bickle** (Mississippi State University and University of Mississippi Medical Center) and **Antonella Tramacere** (Mississippi State University and Max Planck

Institute for the Science of Human History, Germany)

Topics for this year's workshop

Epigenetics in the nervous system

The “molecular wave” in neuroscience that begun in earnest in the 1980s has greatly increased our understanding of the nervous system's structure and function, including the brain's role in cognitive phenomena. Recently ground-breaking progress has been made on *epigenetics in the nervous system*, the study of processes regulating gene expression in neurons, and subsequently on nervous system development, physiology and function. Scientists report transmission of these marks across individuals, potentially impacting the behavioral phenotypes of offspring across generations. Fascinating as these recent discoveries are, they have attracted little attention by philosophers of neuroscience or biology.



One goal of this year's workshop will be to raise philosophical awareness of this research and to explore its broader implications. We thus welcome abstracts for talks by philosophers and neuroscientists that explore consequences of recent research on epigenetics in the nervous system. Due to the novelty of this topic in philosophy, we construe this research very broadly. Talks might introduce new scientific discoveries, methodological issues and challenges concerning this research, or broader implications for what these new discoveries might be telling us about nervous system development and function.

Neuroscience of memory: from molecules to networks to behavior to cognitive function

One cognitive function that epigenetic studies of the nervous system have addressed is memory. The foundational mechanisms of memory have long been identified with changes in the strength of synaptic connections; molecular work over the past quarter-century has expanded this approach to link the firing patterns of neurons with gene expression, protein synthesis and behavior. Different epigenetic markers have recently been identified and correlated with various aspects of memory.

What is the relevance of the latest molecular evidence for our understanding of the biological bases of memory and the mind? Do these discovered molecular processes and pathways constitute simply additional mechanisms, useful only for scientists? Or does this evidence have a broader impact on our understanding of the biological bases of mental phenomena like memory, including the nature and promise of reductionist explanations? What can philosophical investigations of these experiments and results say about causal or constitutive

relations between mind, brain and genome? About broader understanding of contemporary neuroscience-in-practice? About the nature of memory phenomena themselves?

A second goal of this year's workshop is to provide a forum for philosophers of mind, neuroscience and cognition, and neuroscientists, to reflect upon: mechanistic accounts of memory; models of causations; reductionist taxonomies and explanations; the role of tools to integrate experiments and data connecting epigenetics phenomena to behavior; and the defining construct of memory itself.

We are calling for **abstracts of up to 750 words** for proposed workshop presentations. The deadline for submitting abstracts is **August 1, 2020**, with acceptances sent to presenters by **August 15, 2020**. *Given the scant philosophical attention to epigenetics in neuroscience, we invite exploratory projects!* Our goal is to get research on this topic started in philosophy of neuroscience by drawing together investigators interested in exploring these recent scientific developments. We also welcome projects on "levels" of memory research in neuroscience.

Abstracts should be sent to **John Bickle** as a Word doc (or docx) or pdf, attached to an email to jbickle@philrel.msstate.edu. Please direct all queries to John as well.

Due to ongoing uncertainties and the difficult-to-predict nature and course of the current COVID-19 pandemic, both the format (on line, in person) and location of our workshop (if we are able to meet in person) remain To Be Determined. But regardless of what transpires between now and October, we are committed to holding this workshop in some format amenable to all participants.

