

"Images without imaging-Techniques? Conceptions of Brain Science and Neuromythological Representations in a history of Science Perspective"



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Time: 12pm-1pm

Venue: AHC4 101

Biography: Dr. Frank W. Stahnisch is an Associate Professor at the University of Calgary In Alberta, Canada. Since 2008, he holds the AMF/Hannah Professorship in the History of Medicine and Health Care at the University of Calgary, and is cross-appointed in the Department of History and the Department of Community Health Sciences. Dr. Stahnisch began his studies in Philosophy, Psychology, Sociology and Medicine, received Masters of Science in Philosophy of Science and received a Doctorate in the History of Medicine from the Free University of Berlin. His area of research includes the history of experimental physiology, history and philosophy of neuroscience, historical epistemology of the life sciences and the historical development of visualization practices in medicine and health care. Dr. Stahnisch is also the author of numerous publications including *Ideas In Action* (2003) and *Medicine, Life and Function* (2012).

Abstract

In the history of neuroscience, the various programs of scientific investigation of the brain have often been subdivided as the morphological and the physiological tradition.

The "morphological tradition," according to this perspective, is seen as describing and mapping the form and structure of the external and interior parts of the brain and spinal cord. The "physiological tradition," on the contrary, is regarded as a compilation of all those approaches which pursue and investigate cerebral actions and functions in their dynamic interplay. It remains as an open question, however, whether the distinction between the morphological and functional tradition in clinical and basic neuroscience has not become obsolete with the development of recent neuroimaging techniques (MRI, PET scans, SPECT etc.) during the second half of the 20th century.

Modern research into the "visual brain" seems to "relate", "overlap", and even "identify" the morphological with the functional substrate of the nervous system, when mapping individual activation patterns across the delineated morphological structures.

In this sense, the lecture will explore some historical presuppositions about the visual brain from a distinct history of science perspective. Following some landmark research steps in neuroanatomy and trends in neuroimaging, it shall be analyzed how the changing developments towards an integrative theory of the brain put the emphasis on either side of the morphological and the functional distinction. The lecture thus seeks to identify and examine some of the fundamental continuities and breaks in this important research tradition from both a historical and epistemological perspective.

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