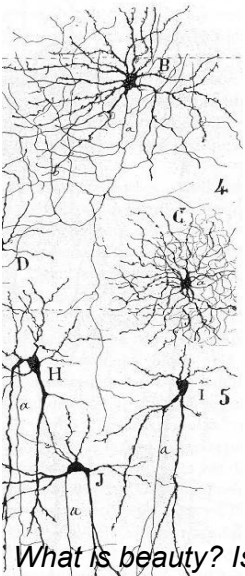


CUNY Neuroscience Collaborative Seminar Series

SPRING 2024

Friday, February 9th, 3:00 - 4:30 PM
The CUNY Graduate Center, Rm. 6495



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City College,
CUNY

An Interactionist Approach to the Neuroscience of Aesthetics

What is beauty? Is it a property of an object, or is it a feeling? Aesthetically appealing experiences, such as when we find a face or landscape to be beautiful or are “moved” by a performance, are an important but poorly understood subset of human experiences that have impacts on decision making, well-being and learning. Building a cognitive neuroscience of aesthetic experiences requires an approach that can deal with highly subjective, individually variable mental states. We are building an “interactionist” approach to the empirical study of aesthetic experiences — one that aims to characterize critical aspects of both the stimulus and the perceiver, as well as their dynamic interaction. Our starting point is the measurement of “shared taste” across individuals, which serves as an organizing principle for understanding how much variance in aesthetic appeal is attributable to stimulus characteristics, versus only understandable by quantifying internal states of the perceiver. We use computational approaches with deep neural networks to build models of the stimulus-related component. Using brain imaging (fMRI, EEG), we have found that the default-mode network (DMN), a brain system important for inwardly-directed thought and whose function is associated with a variety of clinically relevant behaviors, contains domain-general information about aesthetic appeal. We also find evidence that the large scale network dynamics of how the DMN interacts with other brain systems change when a person finds visual artwork to be aesthetically moving. To better understand the contribution of personally lived experiences to individuals’s unique responses to artwork, we create participant-tailored artworks using a deep neural network “style transfer” algorithm. Artworks that reflect one’s autobiographical memories and identity, core pieces of the self-construct, are rated as more aesthetically appealing, a finding that has implications for how the “aesthetics of the self” may impact mental health, decision making and media consumption. These findings demonstrate that research on aesthetics and the arts has the potential to positively impact important issues in health and wellness, and can advance a cognitive neuroscience of highly subjective mental states.

In-person

Hosts: **Dr. Nesha Burghardt** (nb844@hunter.cuny.edu) and **Dr. Asohan Amarasingham** (aamarasingham@ccny.cuny.edu)

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