

# NATURALIZING ART: A REVIEW OF THE INTERDISCIPLINARY FIELD BETWEEN NEUROIMAGING AND AESTHETICS

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## Abstract

The new field of Neuroaesthetics introduced by the neurobiologist Semir Zeki (1999) along with the discovery of the Mirror Neuron System (Rizzolatti et al., 2001) enhanced the relations between Art and Neuroscience. Following Zeki, many neuroscientists started posing the question: "What happens in the brain when we experience art?". In the same spirit, neuroscientists also addressed other problems related to aesthetics: some employed paintings or movie shots as mere stimuli to better understand brain while experiencing art (i.e. Ed.Vessel, G. Star, N. Rubin, 2012); while others employed brain imaging techniques (i.e. functional Magnetic Resonance Imaging) to study the concept of "aesthetic pleasure" (i.e. Ishizu and Zeki 2011, 2014). In the majority of the neuroimaging experiments investigating aesthetic perception, the observers/spectators were presented with paintings or music inside an fMRI scanner in order to detect the brain regions activated during aesthetic appraisal (positive or negative). In other neuroimaging experiments, observers/spectators were exposed to mimed, symbolic and meaningless hand gestures -conditions that spectators are normally faced with during experiencing different kinds of art- which have contributed with complementary results on the perceptual process. Recently, the term Embodied simulation was introduced (V. Gallese, 2017) in order to describe the brain mechanism that underlies the experience of abstract art. The proposed announcement reviews the current neuroimaging data with respect to the neural interrelations between art and cognitive functions and argues that art may well be a "behavioural complex, an inherited tendency to act in a certain way" (Dissanayake, 1992).