

BOOKS & ARTS

Across the cultural divide

The Neural Imagination: Aesthetic and Neuroscientific Approaches to the Arts

by Irving Massey

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The history of neuroaesthetics might be described as an epic war that has been fought between scientists and artists since the days of Freudian psychology and surrealism. Both sides — one hopeful, one fearful — posit that science might eventually explain away the arts. In *The Neural Imagination*, Irving Massey asks how close this fantasy comes to reality, as revealed by academic research.

As emeritus professor of English and comparative literature at the State University of New York at Buffalo, Massey offers a revealing response to earlier works on neuroaesthetics by neurobiologists — notably Semir Zeki's *Inner Vision* (Oxford University Press, 1999) and Margaret Livingstone's *Vision and Art* (Abrams, 2002). As well as discussing visual art, Massey considers our responses to music and language.

The deep clash between art and science that is inherent to the neuroaesthetics field is fuelled by a fundamental concern: to what extent is appreciation of art driven by the automatic responses of human physiology and biology, versus the intellectual and emotional deliberations of the culture-influenced observer? Massey highlights extreme viewpoints through provocative scenarios.

He considers, for example, forms of art that are designed to induce purely automatic responses. The act of art appreciation can then be likened to the way a frog continues to twitch when its head is cut off. Such a comparison seems simplistic, but it does reflect the widespread fear of the 'physiology is destiny' approach to art. Equally, the 'culture is destiny' aficionados cannot distance art from physiology. After all, they witnessed the drastic evolution in the painting style of Willem De Kooning as his Alzheimer's disease progressed.

Here Zeki falls within Massey's sights. Zeki is famous for using functional magnetic resonance imaging (fMRI) to catalogue art based on the regions of the observer's brain that are activated, and later proposing that a 'beauty spot' lies in the orbito-frontal cortex. Massey expresses his concern by taking Zeki's vision one step further — if we can identify the region that is activated when looking at, say, a Monet, then might we replace the original artwork with technology that allows us to stimulate

this region directly?

Massey considers that the interplay between art, the mind and the brain will be crucial for our future understanding of humanity. He supports scientific exploration, but feels that it can go only so far. Science, he declares, can explain the 'how' but not the 'why' of artistic effects. For example, neuroscience can explain why stationary patterns are perceived to move in some artworks, such as the spinning circles of Isia Leviant's *Enigma* (1981). But it cannot judge the significance of the motion or its aesthetic value. Massey suggests that neuroscientists should collaborate with art theorists to integrate the scientific findings within the contexts of the acts of creation and observation of artwork.

Looking at analogous concerns in music, he says that, although it is possible to understand the role of pitch and tempo for inducing aesthetic sensations such as relaxation or anticipation, the neurology of musical effects remains elusive. For language, where his academic expertise lies, he discusses the future potential of fMRI studies, particularly for investigating dreams because, he explains, "In dreams we speak our language; when awake, the language of others."

Massey does not have all the answers. But in reading his appealing book we are witnessing a researcher thinking out loud. A common enthusiasm for a research field may one day defeat cultural divides, and the human mind and its relationship to the arts is one of the best contenders for collaboration. ■

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