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This is Your Brain on Art

Neuroaesthetics

Edited by Martin Skov and Oshin Vartanian

Amityville, NY: Baywood, 2009. 312 pp. ISBN 978-0-89503-336-9. \$68.50.

Reviewed by Paul J. Silvia

Paul J. Silvia, Department of Psychology, University of North Carolina at Greensboro, P. O. Box

26170, Greensboro, NC, 27402-6170. E-mail: p_silvia@uncg.edu

The marvelous human brain excels at finding patterns, at discerning structure, so we feel surprised or confused when our expectations are violated or unmet: Imagine, if you dare, encountering a Starbucks without a laptop-toting freelancer or a suburban preschool without a kid named Carter. But incongruity is interesting if it stretches our concepts and builds meaningful knowledge, and the edited book *Neuroaesthetics* is interesting in this way. Brains and art are things that we rarely see together: few neuro studies appear in the psychology-of-art journals, and someone could lurk around the imaging lab for years without running across a dog-eared copy of *The Story of Art* or *Axel's Castle*. Neuroaesthetics is thus an inviting neologism. What does this young field have to say?

The field of neuroaesthetics, viewed broadly, is the application of neuroscience to problems in the psychology of art and aesthetics. This definition alone implies that not many people study neuroaesthetics, so the chapters assembled by Martin Skov and Oshin Vartanian, the volume's editors, are all the more impressive—it looks like most of the world's neuroaestheticians provided a chapter. *Neuroaesthetics* is part of Baywood's "Foundations and Frontiers in Aesthetics" book series, and the prior series volume, *Evolutionary and Neurocognitive Approaches to Aesthetics, Creativity, and the Arts* (Martindale, Locher, & Petrov, 2007; for a review, see Silvia, 2007), is an informal companion volume. Collectively, the two books cover most of what psychology knows about the biological side (broadly defined) of the arts.

Like most edited books, *Neuroaesthetics* provides a mix of history, theory, research reviews, and applications. For the most part, it's theoretical and speculative—its aim is to shape and to motivate future research, and the book meets this aim well. Readers will come away believing that neuroscience

affords enormous opportunities for furthering our understanding of aesthetic problems.

The early chapters position the neuroscience of art in relation to the growth of neuroscience in the last century and the rebirth of empirical aesthetics in the 1960s, consider some of the fundamental problems that the field faces, and outline the major goals of the nascent scholarly movement. Chapters by Skov and Jacobsen, in particular, reveal that neuroaesthetics is firmly grounded in the behavioral tradition of experimental psychology, not simply because its neurocognitive methods, but because it reduces the complicated concept of “aesthetic experience” to self-reports of liking, preference, and pleasure. Daniel Berlyne (1971) thus left two great legacies for neuroaesthetics: the explicit belief that neural reward systems underlie aesthetic experience, and the tacit belief that self-reports of “pleasingness” variables (e.g., liking, beauty, pleasure) capture the core of people’s subjective experience of the arts.

The other chapters consider the nature of the brain’s involvement in aesthetic processes, the neuroscience of emotion, and the role of evolution and culture. Nadal and colleagues, for example, consider how the process of evolution constrains the kinds of aesthetic experience people can have; Fitch and colleagues, in contrast, consider how cultural practices act as a “cultural ratchet” that amplify and transform basic aesthetic processes. Several chapters review programs of research and apply neuroscience to aesthetic domains, and these might be the most intriguing chapters of them all. Miall, for example, speculates about neurocognitive empathic processes that enable people to become immersed in literature, and Grodal considers the astoundingly complicated problem of how people decode, comprehend, and experience film.

In their introduction, the editors claim that not much empirical research has been done in neuroaesthetics, and the chapters reveal that they're right. The beefy chapters, such as Wade's excellent chapter on visual cognition, are those that cover psychology's mature fields. In contrast, the chapters devoted to people's emotional experience of the arts cite the same handful of imaging studies. Such sparseness is fine—the point of the book is to motivate research, not to review it—but readers should not expect this to be a *Handbook of Neuroaesthetics*. Nevertheless, the book reminds me of other speculative edited books in psychology's history, such as Lindzey's (1958) *Assessment of Human Motives* and Fiske and Maddi's (1961) *Functions of Varied Experience*. Edited books are underrated as a way of bringing attention to hard problems that deserve more attention, and I think *Neuroaesthetics* could be remembered as a turning point in the psychology art.

The biggest challenge to the flourishing of neuroaesthetics is probably the marginal state of the psychology of art. Division 10—Psychology of Aesthetics, Creativity, and the Arts—is one of the American Psychological Association's smallest divisions, and grant funding for basic arts research is essentially zero. (Based on the volume of complaints about this, one would think that the funding level was negative, like a research tax.) Most researchers who study neuroaesthetics do so on the side, as a secondary interest. As a result, there's no training infrastructure: the PhD programs, predoctoral grants, postdoctoral positions, and jobs aren't there to educate the next generation of researchers. But that's okay for us arts researchers: Before psychology had grants it had books and intellectual fellowship, and *Neuroaesthetics* is a good read for researchers with a passion for such things.

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