

[Paul J. Silvia](#) (2007). The ancestral angle on aesthetics, creativity, and the arts. [Review of the book *Evolutionary and neurocognitive approaches to aesthetics, creativity, and the arts.*] *PsycCRITIQUES*, 52(31), 7.

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The Ancestral Angle on Aesthetics, Creativity, and the Arts

Evolutionary and Neurocognitive Approaches to Aesthetics, Creativity, and the Arts

Edited by Colin Martindale, Paul Locher, and Vladimir Petrov

Amityville, NY: Baywood, 2007. 247 pp. ISBN 0-89503-306-2. \$49.95.

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

Anyone who works in a big department—or who enjoys stereotyping—can discern the stereotypical personalities associated with psychology’s subfields. Which member of the department owns a leather briefcase and a pen that requires refills? In a departmental colloquium, who is likely to ask the speaker “Have you thought about using signal detection theory for this?” Which faculty member eats lunch at the dismal vegan restaurant next to campus? (If you guessed I-O, Cognitive, and Social, you’re quick to judge by appearances.) Research in the psychology of science shows real differences between scholars in psychology’s domains. Researchers in the tough-minded sides of psychology resemble researchers in engineering and the life-sciences; researchers in the tender-minded sides of psychology resemble scholars in the arts and humanities (Feist, 2006; Simonton, 2005).

Members of APA Division 10—a small but valiant group devoted to aesthetics, creativity, and the arts—are a diverse group, but on the whole they lean toward psychology’s tender-minded side. It’s thus a surprise to see *Evolutionary and Neurocognitive Approaches to Aesthetics, Creativity, and the Arts*, a new book edited by Colin Martindale, Paul Locher, and Vladimir Petrov. This book is a companion to *New Directions in Aesthetics, Creativity, and the Arts* (Locher, Martindale, & Dorfman, 2006), a recent book by the same publisher and by some of the same editors (for reviews, see Cloonan, 2006; Silvia, 2006). Biological research and creativity research are far apart in psychology’s conceptual space: evolutionary and neurocognitive research is close to the life sciences and far from the humanities. This intriguing incongruity invites a close look at what happens when biology, creativity, and aesthetics collide.

Evolutionary Approaches

This edited book has 15 chapters from a diverse group of authors, but only three chapters directly concern evolutionary approaches. Two chapters explore evolutionary aspects of the arts (Dissanayake) and creativity (Feist). These fine chapters avoid some of the common sinkholes in evolutionary psychology, such as simple adaptationism (e.g., if it exists, it must be adaptive). Carroll, in contrast, stakes a claim to the adaptationist sinkhole and sets up camp, claiming that literature serves an adaptive role for human survival. Carroll's chapter is provocative, but one suspects that the methodologies of literary theory aren't the best way to settle this question. On the whole, it appears that an evolutionary approach to the psychology of creativity and aesthetics is nascent. All three chapters are theoretical, so the field hasn't made empirical inroads into evolutionary territory.

Neurocognitive Approaches

Two of the book's chapters concern neurological approaches to aesthetics and creativity. Vartanian and Goel review past work on the neuroscience of creativity, with an emphasis on their fMRI studies of insight, hypothesis generation, and problem solving. Chávez-Eakle describes research connecting dopamine receptor genes, brain imaging, and performance on divergent thinking tasks. In my view, these two chapters are the most intriguing chapters in the book. The neuroscience of creativity is in its early stages, but it promises to clarify some old problems. For example, debates over whether divergent thinking is an executive, top-down process versus a bottom-up process (Weisberg, 2006) can be informed by examining how the brain performs divergent thinking tasks.

And the Other Approaches

If three chapters concern evolution and two chapters concern neurocognition, what are the

other 10 chapters about? In his preface, Martindale makes a case for how each chapter connects to evolution or neuroscience. It's a creative exercise, I think, but I'm not convinced.

Most of the chapters are dedicated to cognitive approaches, such as psycholinguistics, cognition and emotion, text processing, and neural networks. The book's subtext is that cognitive psychology remains the major perspective on creativity and aesthetics. This isn't surprising, given that most of the field's early giants (e.g., Gustav Fechner, Daniel Berlyne, J. P. Guilford) were experimental psychologists. Nevertheless, this collection of chapters says a lot about the kinds of research done in aesthetics, creativity, and the arts: the field would like to know more about biological influences, but the field's biological side isn't mature yet.

On Finding Inspiration

This book will convince most readers of two things. First, evolution and neuroscience don't overlap much with modern research on creativity and aesthetics. Most of this book concerns other topics; the chapters that focus on evolution and neuroscience tend to be theoretical and preliminary. I don't see this as a flaw in the book: the major creativity and aesthetics journals don't publish much on neuroscience and evolution, either. There simply isn't much work being done. Second, psychologists interested in creativity and aesthetics ought to have more contact with modern biological psychology. I don't believe that the biological sides of psychology are basic or foundational—problems of creativity and aesthetics don't reduce to biological problems—but modern biological approaches will illuminate some problems that the psychology of creativity and aesthetics has struggled with for decades. This book reveals our ignorance, and that's always a good start.

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