Aesthetic Science

Connecting Minds, Brains, and Experience

EDITED BY ARTHUR P. SHIMAMURA AND STEPHEN E. PALMER

OXFORD

Aesthetic Science

CONNECTING MINDS, BRAINS, AND EXPERIENCE

Edited by Arthur P. Shimamura and Stephen E. Palmer

OXFORD
UNIVERSITY PRESS

OXFORD
UNIVERSITY PRESS

Published in the United States of America by Oxford University Press, Inc.,
198 Madison Avenue, New York, NY, 10016
United States of America

Oxford University Press, Inc. publishes works that further Oxford University's objective of excellence in research, scholarship, and education

Oxford is a registered trade mark of Oxford University Press in the UK and in certain other countries

Library of Congress Cataloging-in-Publication Data

Aesthetic science : connecting minds, brains, and experience / edited by Arthur P. Shimamura & Stephen E. Palmer.
p. ; cm.
Includes bibliographical references.
ISBN 978-0-19-973214-2 (hardcover : alk. paper)
1. Neuropsychology. 2. Visual perception. 3. Aesthetics--Psychological aspects. I. Shimamura, Arthur P. II. Palmer, Stephen E.
[DNLM: 1. Esthetics—psychology. 2. Neuropsychology. 3. Art. 4. Visual Perception. WL 103.5]
QP360.A327 2011
612.8—dc22 2010053137

1 3 5 7 9 10 8 6 4 2

Typeset in Minion Pro
Printed on acid-free paper
Printed in the United States of America

PREFACE

As academic scientists, we have both led rather typical lives. We have been immersed in our respective research programs, trained graduate students, taught undergraduate courses, and dealt with perhaps more administrative duties than we care to remember. In fact, the variety of roles that we play as academicians has provided extraordinary opportunities to explore diverse avenues of interest (particularly after tenure). It is in this intellectual atmosphere that we have considered, rather late in our careers, the nature of aesthetic experiences.

Coincidentally, both of us developed an interest in aesthetics through our love of photography. In pursuing our artistic inclinations, we gained some insight into the nature of aesthetics as we honed our skills in artistic composition, lighting, and printmaking. We also learned from people's responses to our images. We began to ask questions: How do such things as color, balance, and form affect aesthetic responses? How does an image create a point of view or communicate a thought? What attracts people to some images but not to others? These questions led us to connect our experiences in photography with our knowledge of cognitive science. Art began teaching a freshman seminar on the *Psychology of Art* (no pun intended), whereas Steve began teaching research seminars about *Color and Aesthetics*. Soon, we realized that much of what we thought could or should be known about the nature of aesthetic experiences was not known or at least not well developed.

Individually, we set out trying to make meaningful contributions in areas where we felt the gaps most deeply. Art delved into those Big Questions where mostly philosophers and fools rush in: What drives our aesthetic experiences? How does culture and personal knowledge influence the way we look at art? What can neuroscience tell us about aesthetic experiences? With the good graces of a John Simon Guggenheim fellowship, Art spent a sabbatical year considering these questions from his own viewpoint. The product of this endeavor is his forthcoming book, *Experiencing Art*. Steve, on the other hand, took the empirical front and initiated a research program that explores the quality and nature of aesthetic preferences, in particular preferences for colors and spatial compositions. The fruits of his research are described in Chapter 8 and have sparked considerable interest across many disciplines, including cross-cultural psychology and the aesthetics of Web-based design.

From our casual conversations about photography, art, and aesthetics, we felt we could contribute to the field by working together to develop a much broader knowledge base than what has previously been considered. We have called this approach *aesthetic science,* which takes its lead from cognitive science, the

multidisciplinary approach that considers the nature of cognition. The goal of aesthetic science is to approach the issues by promoting meaningful dialogues among people in various disciplines, including psychologists, philosophers, neuroscientists, art critics, historians, anthropologists, and artists themselves. Such an endeavor is much easier to propose than it is to accomplish, because a real dialogue across disciplines requires a common language and some agreement as to what is being studied. Indeed, the very object of interest, *aesthetics,* is prone to heavy and serious debate.

Once we began to consider the breadth of disciplines that could make up aesthetic science, it became clear that the arena would include a realm of human endeavors broader than any scholastic field we have ever encountered. It would include (at least) the theory, history, and practice of the fine arts, as well as attempts to understand the creative process, such as painting, sculpture, film, theater, music, dance, literature, architecture, and of course many others. If one does not tether aesthetic experiences to art objects (and there are good reasons not to), then the way we decide what we like or dislike about any object could be worthy of investigation within the realm of aesthetic science. It is acknowledged that a full understanding of aesthetics requires a collaboration between scientists and non-scientists. We view this edited volume as an attempt to initiate a forum for such a multidisciplinary approach.

As an initial effort, we invited position papers from five philosophers (actually four philosophers and an art critic), five psychologists, and five neuroscientists. We asked these scholars to consider visual aesthetics from the beholder's perspective—that is, what aspects of the mind and brain drive our aesthetic experience? Is it even possible to consider a science of such complex experiences? By keying on the beholder's experience (and assuming that whatever the beholder is looking at is *art*), we avoid some very thorny issues: What is art? What is the nature of the artist's creative experience? Why do humans create art? Such questions are certainly relevant to aesthetic science, but we have put these issues aside in order to approach a somewhat more tangible issue. Yet even by focusing discussions on the beholder's (rather than the artist's) experience, there are still incredibly difficult questions to consider: Can a multidisciplinary approach advance our understanding of aesthetics, or will such an endeavor simply muddle the issues (will too many chefs spoil the consommé)? Must aesthetics be tethered specifically to art objects? Must experiences with art be tethered specifically to aesthetics? Can science help to connect mind, brain, and aesthetics? With these questions in mind, we offer these position papers as an invitation to begin a dialogue concerning the nature of aesthetics. We hope that readers will take our invitation and consider these issues from their own perspective.

CONTENTS