

# BBBS

Behavioral & Brain Sciences

An International journal of current research and theory  
with open peer commentary  
Volume 36 | Issue 2 | April 2013 | ISSN: 0140-525X

**CAMBRIDGE**  
UNIVERSITY PRESS

# Behavioral and Brain Sciences

## Editors

Paul Bloom  
Barbara L. Finlay

**URL:** <http://www.editorialmanager.com/bbs>

## E-mail: [bbsjournal@cambridge.org](mailto:bbsjournal@cambridge.org)

Behavioral and Brain Sciences  
Journals Department  
Cambridge University Press  
32 Avenue of The Americas  
New York, NY 10013-2473, U.S.A.

## Managing Editor

Gennifer Levey

## Chief Copy Editor

Sumitra Mukerji

## Proofreaders

Sylvia Elvin  
Rashidah Ismaili AbuBakr

## Editorial Board

### *Affective Neuroscience*

Stephanie D. Preston/U. of Michigan

### *Atypical Neurodevelopment*

Simon Baron-Cohen/Cambridge U.

### *Behavioral Neurogenetics*

Wim E. Crusio/CNRS UMR

### *Cognition and Artificial Intelligence*

Zenon Pylyshyn/Rutgers U.

### *Cognitive and Decision Sciences*

Nick Chater/University College London

### *Cognitive Development*

Annette Karmiloff-Smith/Birbeck College

### *Cognitive Neuroscience*

Moshe Bar/Harvard Medical School

### *Computational Neuroscience*

Nestor A. Schmajuk/Duke U.

### *Evolution of Brain and Cognition*

Dean Falk/Florida State U.

### *Evolution of Cognition*

Celia Heyes/Oxford U.

### *Experimental Analysis of Behavior*

A. Charles Catania/U. Maryland, Baltimore County

### *Language and Language Disorders*

Max Coltheart/Macquarie U.

### *Linguistics*

Robert A. Freidin/Princeton U.

### *Perception*

Bruce Bridgeman/U. of California, Santa Cruz

### *Philosophy of Science*

Massimo Piattelli-Palmarini/U. of Arizona

### *Primate Cognition*

Laurie R. Santos/Yale U.

### *Social Cognition*

Mahzarin R. Banaji/Harvard U.

### *Social Cognitive Neuroscience*

Rebecca Saxe/MIT

### *Vision, Language and Computation*

Shimon Edelman/Cornell U.

## FOUNDING EDITOR (1978–2001)

Stevan Harnad

**Editorial Policy** *Behavioral and Brain Sciences* (BBS) is an international journal providing a special service called Open Peer Commentary\* to researchers in any area of psychology, neuroscience, behavioral biology, or cognitive science who wish to solicit, from fellow specialists within and across these BBS disciplines, multiple responses to a particularly significant and controversial piece of work. (See Instructions for Authors and Commentators, inside back cover and also at <http://journals.cambridge.org/BBSJournal/Inst>) The purpose of this service is to contribute to the communication, criticism, stimulation, and particularly the unification of research in the behavioral and brain sciences, from molecular neurobiology to artificial intelligence and the philosophy of mind.

Papers judged by the editors and referees to be appropriate for Commentary are circulated to a large number of commentators selected by the editors, referees, and author to provide substantive criticism, interpretation, elaboration, and pertinent complementary and supplementary material from a full cross-disciplinary perspective. The article, accepted commentaries, and the author's response then appear simultaneously in BBS.

Commentary on BBS articles may be provided by any qualified professional in the behavioral and brain sciences, but much of it is drawn from a large body of BBS Associates who have become formally affiliated with the project (see <http://journals.cambridge.org/BBSJournal/BBSAssoc>).

Qualified professionals are eligible to become BBS Associates if they have (1) been nominated by a current BBS Associate, (2) refereed for BBS, or (3) had a commentary or article accepted for publication. A special subscription rate is available to Associates. Individuals interested in serving as BBS Associates are asked to view the full instructions for joining at <http://journals.cambridge.org/BBSJournal/Inst/Assoc> and then email [bbsjournal@cambridge.org](mailto:bbsjournal@cambridge.org).

© Cambridge University Press 2013. All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying, or otherwise, without permission in writing from Cambridge University Press. Policies, request forms, and contacts are available at: <http://www.cambridge.org/rights/permissions/permission.htm>.

Permission to copy (for users in the U.S.A.) is available from Copyright Clearance Center, <http://www.copyright.com>, email: [info@copyright.com](mailto:info@copyright.com).

**Subscriptions** *Behavioral and Brain Sciences* (ISSN 0140-525X) is published bimonthly in February, April, June, August, October, and December. The subscription price of Volume 36 (2013) for *institutions* is US \$1288.00 for print and online and US \$1055.00 for online only in the U.S.A., Canada, and Mexico; and UK £759.00 for print and online and UK £624.00 for online only elsewhere. The subscription price for *individuals* is US \$374.00 for print and online and US \$337.00 for online only in the U.S.A., Canada, and Mexico; and UK £219.00 for print and online and UK £199 for online only elsewhere. For *BBS Associates*, with proof of eligibility with order, US \$139.00 in the U.S.A., Canada, and Mexico; and UK £87.00 elsewhere. For *students*, with proof of eligibility with order, \$116.00 in the U.S.A., Canada, and Mexico; and UK £68.00 elsewhere. Subscription price includes surface postage. Single parts cost US \$250.00 (UK £124.00) plus postage. *Institutional* orders may be sent to a bookseller, or, in the U.S.A., Canada, and Mexico direct to: Cambridge University Press, 32 Avenue of The Americas, New York, NY 10013-2473 email: [journals\\_subscriptions@cambridge.org](mailto:journals_subscriptions@cambridge.org); in the U.K. and rest of the world to: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, England, e-mail: [journals\\_subscriptions@cambridge.cam.ac.uk](mailto:journals_subscriptions@cambridge.cam.ac.uk). *Individuals* must order direct from the Press. You may also subscribe through the Cambridge Journals website, <http://journals.cambridge.org/bbs>.

**Postmaster:** Send address changes in the U.S.A., Canada, and Mexico to *Behavioral and Brain Sciences*, Cambridge University Press, Journals Dept., 100 Brook Hill Drive, West Nyack, NY 10994-2133, U.S.A. Send address change elsewhere to *Behavioral and Brain Sciences*, Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, England.

**Online availability** *Behavioral and Brain Sciences* is part of the Cambridge Journals Online (CJO) service at <http://journals.cambridge.org>.

*Institutional subscribers:* Access to full-text articles online is currently included with the cost of the print subscription. Subscription must be activated; see <http://cambridge.journals.org>.

**Advertising** Inquiries about advertising should be sent to the Journals Advertising Department of the Cambridge or New York Office of Cambridge University Press.

\*Modelled on the "CA Comment" service of the journal *Current Anthropology*.

# Contents Volume 36:2 April 2013

<b>Bullot, N. J. &amp; Reber, R.</b> The artful mind meets art history: Toward a psycho-historical framework for the science of art appreciation	123
<b>Open Peer Commentary:</b>	
<b>Chatterjee, A.</b> Neuroaesthetics: Range and restrictions	137
<b>Davies, S.</b> Artists' intentions and artwork meanings: Some complications	138
<b>De Smedt, J. &amp; De Cruz, H.</b> The artistic design stance and the interpretation of Paleolithic art	139
<b>Fitch, W. T. &amp; Westphal-Fitch, G.</b> Fechner revisited: Towards an inclusive approach to aesthetics	140
<b>Freeman, N. H. &amp; Allen, M. L.</b> Educating the design stance: Issues of coherence and transgression	141
<b>Gelman, S. A., Meyer, M. A. &amp; Noles, N. S.</b> History and essence in human cognition	142
<b>Gibbs, R. W., Jr.</b> Artistic understanding as embodied simulation	143
<b>Gilmore, J.</b> Normative and scientific approaches to the understanding and evaluation of art	144
<b>Graham, D. J.</b> Integrating holism and reductionism in the science of art perception	145
<b>Hirstein, W.</b> Memories of Art	146
<b>Hogan, P. C.</b> Art appreciation and aesthetic feeling as objects of explanation	147
<b>Kozbelt, A. &amp; Ostrofsky, J.</b> Extending the psycho-historical framework to understand artistic production	148
<b>Leder, H.</b> Acknowledging the diversity of aesthetic experiences: Effects of style, meaning, and context	149
<b>Levinson, J.</b> Causal history, actual and apparent	150
<b>Malafouris, L.</b> Mindful art	151
<b>McManus, C.</b> "The anti-developmental, the anti-narrative, the anti-historical": Mondrian as a paradigmatic artist for empirical aesthetics	152
<b>Newman, G. E.</b> The duality of art: Body and soul	153
<b>Parsons, G. &amp; Carlson, A.</b> Distinguishing intention and function in art appreciation	153
<b>Rollins, M.</b> Exposure, experience, and intention recognition: Take it from the bottom	154
<b>Ross, S.</b> Context, causality, and appreciation	155
<b>Schellekens, E.</b> A bridge too far: From basic exposure to understanding in artistic experience	156
<b>Silvia, P. J.</b> Aesthetic meanings and aesthetic emotions: How historical and intentional knowledge expand aesthetic experience	157
<b>Takahashi, S. &amp; Ejima, Y.</b> Contextual information processing of brain in art appreciation	158
<b>Thompson, W. F. &amp; Antliff, M.</b> Bridging two worlds that care about art: Psychological and historical approaches to art appreciation	159
<b>Tullmann, K.</b> Questioning the necessity of the aesthetic modes	160
<b>Vartanian, O. &amp; Kaufman, J. C.</b> Psychological and neural responses to art embody viewer and artwork histories	161
<b>Wilson, R. A.</b> Extended artistic appreciation	162
<b>Authors' Reponse:</b>	
<b>Bullot, N. J. &amp; Reber, R.</b> A psycho-historical research program for the integrative science of art	163