VOLUME 18 NUMBER 2 JUNE 1995 An International Journal of Current Research and Theory with Open Peer Commentary

Behavioral and Brain Sciences

Appearing in this issue, with Commentary . . .

On a confusion about a function of consciousness Ned Block

Preparedness and phobias: Specific evolved associations or a generalized expectancy bias? Graham C. L. Davey

Multiple book review of Images of Mind Michael I. Posner & Marcus E. Raichle

Also, Continuing Commentary on

"Coevolution of neocortical size, group size, and language in humans" (R. I. M. Dunbar)

"How we know our minds: The illusion of first-person knowledge of intentionality" (Alison Gopnik)

"The psychology of folk psychology" (Alvin I. Goldman)

CAMBRIDGE

Behavioral and Brain Sciences

Editor

Stevan Harnad

E-mail: bbs@ecs.soton.ac.uk
Behavioral and Brain Sciences
Department of Psychology
University of Southampton
Highfield, Southampton SO17 1BJ
United Kingdom

Managing Editor Henriette Korthals Altes

Production Coordinator Edward D. Miller

Chief Copy Editor Erika Kors

Associate Editors

Behavioral Biology Jack P. Hailman/U. Wisconsin Hubert Markl/U. Konstanz

Biosocial Behavior Glendon Schubert/U. Hawaii, Manoa

Cognition and Artificial Intelligence Zenon Pylyshyn/U. Western Ontario

Cognitive Development Annette Karmiloff-Smith/MRC, London

Computational Neuroscience Stephen Grossberg/Boston U.

Evolutionary Biology
Michael T. Ghiselin/California Academy of Sciences

Experimental Analysis of Behavior

A. Charles Catania/U. Maryland, Baltimore County

History and Systems
Julian Jaynes/Princeton

Language and Cognition
Philip Johnson-Laird/Princeton

Language and Language Disorders Max Coltheart/Macquarie U.

Linguistics

Robert Freidin/Princeton

Neurobiology

Irving Kupfermann/Columbia

Neurobehavioral Genetics

Wim E. Crusio/Centre National de la Recherche Scientifique

Neuropsychology

Jeffrey A. Gray/Inst. Psychiatry, London John C. Marshall/Radcliffe Infirmary, Oxford

Neurophysiology

Sten Grillner/Karolinska Institutet

Paleoneurology

Stephen Jay Gould/Harvard

Perception

Bruce Bridgeman/U. California Richard Gregory/U. Bristol

Philosophy

Daniel C. Dennett/Tufts Gilbert Harman/Princeton

Philosophy of Science Adolf Grünbaum/U. Pittsburgh Massimo Piatelli-Palmarini/MIT

Primatology

Horst D. Steklis/Rutgers

Psychobiology

Victor H. Denenberg/U. Connecticut

Vision and Artificial Intelligence Stuart Sutherland/U. Sussex **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.) 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.

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 write the editor.

Copying This journal is registered with the Copyright Clearance Center (222 Rosewood Dr., Danvers, MA 01923). Organizations in the U.S.A. who are also registered with the CCC may therefore copy material (beyond the limits permitted by sections 107 and 108 of U.S. Copyright Law) subject to payment to the CCC of the percopy fee indicated in the code on the first page of the article. This consent does not extend to multiple copying for promotional or commercial purposes. ISI Genuine Article Service, 3501 Market Street, Philadelphia, PA 19104, is authorized to supply single copies of separate articles for private use only. For all other use, permission should be sought from the Cambridge or New York offices of the Press.

Subscriptions Behavioral and Brain Sciences (ISSN 0140-525X) is published quarterly in March, June, September, and December. The subscription price for *institutions* of Volume 18 (1995) is US \$222.00 net in the U.S.A., Canada, and Mexico; UK £150.00 in the rest of the world; for *individuals* US \$90.00 net (£59.00); for *BBS Associates* and for students (in the U.S.A., Canada, and Mexico only) with proof of eligibility with order US \$50.00 net (£37.00). Subscription price includes surface postage.

Single parts cost US \$57.00 net (£36.00) plus postage. *Institutional* orders may be sent to a bookseller, or, in the U.S.A., Canada, and Mexico direct to: Cambridge University Press, 40 West 20 Street, New York, NY 10011-4211; in the U.K. and rest of the world to: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England. *Individuals* must order direct from the Press. Second class postage paid at New York, N.Y., and at additional mailing offices. **Postmaster**: Send address changes in the U.S.A., Canada, and Mexico to *Behavioral and Brain Sciences*, Cambridge University Press, Journals Dept., 110 Midland Ave., Port Chester, NY 10573.

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*.

© 1995 Cambridge University Press

Contents Volume 18:2 June 1995

Block, N. On a confusion about a fu	nction	of consciousness	227
Open Peer Commentary			
Armstrong, D. M. Perception-consciousness and		Lycan, W. G. We've only just begun	262
action-consciousness? Atkinson, A. P. & Davies, M. Consciousness without	247	Morton, A. Phenomenal and attentional consciousness may be inextricable	263
conflation	248	Natsoulas, T. How access-consciousness might be a	
Baars, B. J. Evidence that phenomenal consciousness is the same as access consciousness	249	kind of consciousness Navon, D. A-consciousness: The local newspaper	264
Bachmann, T. More empirical cases to break the	210	of the mind?	265
accord of phenomenal and access-consciousness	249	Revonsuo, A. Conscious and nonconscious control	965
Church, J. Fallacies or analyses? Dennett, D. The path not taken	251 252	of action Rey, G. Block's philosophical anosognosia	265 266
Dixon, N. F. Breakthrough on the consciousness front		Shepard, R. N. What is an agent that it experiences	
or much ado about nothing?	253	P-consciousness? And what is P-consciousness that	267
Farah, M. J. Is consciousness of perception really separable from perception?	254	it moves an agent? Tye, M. Blindsight, orgasm, and representational	201
Graham, G. Guilty consciousness	255	overlap	268
Harman, G. Phenomenal fallacies and conflations	256	Van Brakel, J. Consciousness is not a natural kind	269
Humphrey, N. Blocking out the distinction between sensation and perception: Superblindsight and the		Warren, R. M. Should we continue to study consciousness?	270
case of Helen	257	Young, A. W. More on prosopagnosia	271
Katz, L. D. On distinguishing phenomenal		Zalla, T. & Palma, A. P. Feeling of knowing and	071
consciousness from the representational functions of mind	258	phenomenal consciousness	271
Kitcher, P. Triangulating phenomenal consciousness	259	EDITORIAL COMMENTARY	272
Kobes, B. W. Access and what it is like	260 261	Author's Response	
Levine, J. Phenomenal access: A moving target Lloyd, D. Access denied	261	Block, N. How many concepts of consciousness?	272
Davey, G. C. L. Preparedness and or a generalized expectancy bias?	phobia	as: Specific evolved associations	289
Open Peer Commentary			
Delprato, D. J. Heredity x environment or	•	Mineka, S. & Cook, M. Expectancy bias as sole or	
developmental interactions?	297	partial account of selective associations?	307
Edelmann, R. J. Innateness versus expectation in human fears: Causal versus maintaining factors?	298	Neese, R. M. & Abelson, J. L. Natural selection and fear regulation mechanisms	309
Fantino, E. & Goldshmidt, J. Rule-governed and	200	Öhman, A. Eggs in more than one basket:	300
contingency-governed fears	299	Mediating mechanisms between evolution	210
Figueredo, A. J. A stochastic optimality theory of preparedness and plasticity	300	and phobias Plaud, J. J. The generalized expectancy bias: An	310
Hamm, A. Biologically primed acquisition of aversions		explanatory enigma	311
and association of expected stimulus pairs: Two different forms of learning	301	Schell, A. M. & Dawson, M. E. Responses conditioned to fear-relevant stimuli survive	
Klein, D. F. Counterevidence from	301	extinction of the expectancy of the UCS	312
psychopharmacology, psychopathology,		Sokolov, E. N. Phobias and anxiety in the framework	
and psychobiology Lovibund, P. F., Siddle, D. A. T. & Bond, N. W.	302	of the defense reflex Tomarken, A. J. What is the critical evidence favoring	313
Why are phobias irrational?	303	expectancy bias theory, and where is it?	313
McNally, R. J. Preparedness, phobias, and the	000	Vaitl, D. Associative learning: Stimulus arrangement	014
Panglossian paradigm Mealey, L. Enhanced processing of threatening	303	and response consistency	314
stimuli: The case of face recognition	304	Authoris Bearings	
Menzies, R. G. The uneven distribution of fears and	205	Author's Response	
phobias: A nonassociative account Miller, D. B. Nonlinear experiential influences on the	305	Davey, G. C. L. Expectancy bias and phobias: Accounting for the uneven distribution of fears	
development of fear reactions	306	and the characteristics of clinical phobias	315
		**	

Posner, M. I. & Raichle, M. E. Pré	cis o	f Images of Mind	327
Open Peer Commentary			
Burghardt, G. M. Brain imaging, ethology, and the nonhuman mind	339	Jacobs, A. M. & Carr, T. H. Mind mappers and cognitive modelers: Toward cross-fertilization	362
Cotterill, R. M. J. Mindwatching Dalenoort, G. J. Is attention an appropriate concept	340	Jonides, J. & Reuter-Lorenz, P. Redefining cognitive psychology	363
for explaining brain processes?	341	Kapur, N. Looking for images of memory	364
Donald, M. Tough times for dualists Fidelman, U. The three attentional networks and the two	342	Kristeva-Feige, R. & Feige, B. Is the human brain only responsive?	365
hemispheric mechanisms	343	O'Mara, S. M. When is it sensible to use PET	
Fox, P. T. Broca's area: Motor encoding in somatic	344	to study brain function? Paller, K. A. If a picture is worth a thousand words,	366
space Freides, D. A major advance in neuropsychology	345	how many pictures is a word worth?	367
Frith, C. D. & Dolan, R. J. Brain imaging the	0.40	Perrone, A. L. & Basti, G. Neural images and	000
psychoses Goertzel, B. Images in search of a theory	346 347	neural coding Poeppel, D. & Johnson, S. Neuroimaging studies	368
Goldberg, G. & Mayer, N. H. The neurodynamics of heavy PETing, at/intention, learning, functional	J41	of language should connect with (psycho)linguistic theories	369
recovery, and rehabilitation	348	Robinson, D. L. The meaning of baselines	370
Grafman, J., Partiot, A. & Hollnagel, C. Fables	240	Schmitt, G. J. E. Bright red spots or—the meaning	07/
of the prefrontal cortex Halgren, E. PET may image the gates of awareness,	349	of the meaning Solso, R. L. Images of mind: A window to the brain	370 371
not its center	358	Tsotsos, J. K. Computation, PET images, and attention	
Hari, R. Tracking brain functions in space and time	359	Authors' Pagage	
Horwitz, B. Regions, networks: Interpreting functional neuroimaging data	360	Authors' Response Posner, M. I. & Raichle, M. E. Interaction of method	
Ingber, L. Multiple scales of brain-mind interactions	360	and theory in cognitive neuroscience	372
Continuing Commentary On Dunbar, R. I. M. (1993) Coevolution of in humans. BBS 16:681-735.	of neo	cortical size, group size and language	385
	005	m ver i i i i i	300
Bradshaw, J. Another far more ancient tongue Jaffe, K. & Chacon, G. Nonlinear trends in the evolution of the complexity of nervous systems,	385	Thompson, N. S. Does language arise from a calculus of dominance?	387
group size, and communication systems: A general		Author's Response	
feature in biology Solso, R. L. The origin of language: More words	386	Dunbar, R. I. M. Neocortical size and language	388
needed.	386		
On Gopnik, A. (1993) How we know our not intentionality. BBS 16:1-14;	ninds:	The illusion of first-person knowledge	
Goldman, Alvin I. (1993) The psycholog	y of fo	olk psychology. BBS 16:15-28.	390
Bogdan, R. J. The epistemological illusion	390	Authors' Responses	
Greve, W. & Buchner, A. Speaking of beliefs: Reporting or constituting mental entities?	391	Goldman, A. I. Epistemology, two types of	005
Pust, J. Two kinds of representational functionalism:	001	functionalism, and first-person authority Gopnik, A. How to understand beliefs	395 398
Defusing the combinational explosion Van Brakel, J. Interpreting self-ascriptions	392 393	, ,	330