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Behavioral and Brain Sciences

Instructions for Authors and Commentators

Behavioral and Brain Sciences (BBS) is a unique scientific communication medium, providing the service of Open Peer Commentary for reports of significant current work in psychology, neuroscience, behavioral biology or cognitive science. If a manuscript is judged by BBS referees and editors to be appropriate for Commentary (see Criteria below), it is then circulated to a large number of commentators selected (with the aid of systematic bibliographic searches) from the BBS Associateship* and the worldwide biobehavioral science community, including individuals recommended by the author.

Once the Commentary stage of the process has begun, the author can no longer alter the article, but can respond formally to all commentaries accepted for publication. The target article, commentaries, and authors' response then co-appear in BBS. Continuing Commentary and replies can appear in later issues.

Criteria for acceptance To be eligible for publication, a paper should not only meet the standards of a journal such as *Psychological Review* or the *International Review of Neurobiology* in terms of conceptual rigor, empirical grounding, and clarity of style, but it should also offer a **clear rationale for soliciting Commentary**. That rationale should be provided in the author's covering letter, together with a list of suggested commentators.

A paper for BBS can be (i) the report and discussion of empirical research that the author judges to have broader scope and implications than might be more appropriately reported in a specialty journal; (ii) an unusually significant theoretical article that formally models or systematizes a body of research; or (iii) a novel interpretation, synthesis, or critique of existing experimental or theoretical work. Occasionally, articles dealing with social or philosophical aspects of the behavioral and brain sciences will be considered.

The service of Open Peer Commentary will be primarily devoted to original unpublished manuscripts. However, a recently published book whose contents meet the standards outlined above may also be eligible for Commentary. In such a BBS Multiple Book Review, a comprehensive, article-length précis by the author is published together with the commentaries and the author's response. In special cases, Commentary will also be extended to a position paper or an already published article dealing with particularly influential or controversial research. Submission of an article implies that it has not been published or is not being considered for publication elsewhere. Multiple book reviews and previously published articles appear by invitation only. **The Associateship and professional readership of BBS are encouraged to nominate current topics and authors for Commentary.**

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Style and format for articles and commentaries Target articles must not exceed 14,000 words (and should ordinarily be considerably shorter); commentaries should not exceed 1,000 words, including references. Spelling, capitalization, and punctuation should be consistent within each article and commentary and should follow the style recommended in the latest edition of *A Manual of Style*, The University of Chicago Press. It may be helpful to examine a recent issue of BBS.

All submissions must include an indexable title, followed by the authors' names in the form preferred for publication, full institutional addresses, and electronic mail addresses. Target article authors must also provide numbered subheads to facilitate cross-reference by commentators. **Two abstracts**, one of 100 and one of 250 words, should be submitted with every target article. The shorter abstract will appear one issue in advance of the article; the longer one will be circulated to potential commentators and will appear with the printed article. A list of 5–10 keywords should precede all target article texts. Notes, acknowledgments, appendices, and references should be grouped at the end of the target article or commentary.

Illustrations: Tables and figures (i.e., photographs, graphs, charts, or other artwork) should be numbered consecutively. Every table should have a title; every figure, a caption. At least one reference in the text must indicate the appropriate locations. (For sizes, see below.)

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Kupfermann, I. & Weiss, K. (1978) The command neuron concept. *Behavioral and Brain Sciences* 1:3–39.

Dunn, J. (1976) How far do early differences in mother-child relations affect later developments? In: *Growing points in ethology*, ed. P. P. G. Bateson & R. A. Hinde. Cambridge University Press.

Bateson, P. P. G. & Hinde, R. A., eds. (1976) *Growing points in ethology*. Cambridge University Press.

Preparation of the manuscript The original, **double-spaced** target article plus **eight single-spaced, double-sided** copies must be submitted. The entire manuscript, *including notes and references*, must be typed **double-spaced** (¼-inch space between lines) on 8½ by 11 inch paper, with margins set to 70 characters per line (not "justified") and 25 lines per page, and should not exceed 50 pages. Pages should be numbered consecutively. Commentators should send their original plus two copies. It will be necessary to return manuscripts for retyping if they do not conform to this standard.

Each table and figure should be submitted on a separate page, not interspersed with the text. Tables should be typed to conform to BBS style. Figures should be ready for photographic reproduction; they cannot be redrawn by the printer. Charts, graphs, or other artwork should be done in black ink on white paper and should be drawn to occupy a standard area of 8½ by 11 or 8½ by 5½ inches before reduction. Photographs should be glossy black-and-white prints; 8 by 10 inch enlargements are preferred. All labels and details on figures should be clearly printed and large enough to remain legible even after a reduction to half size. It is recommended that labels be done in transfer type of a sans-serif face such as Helvetica.

Send all submissions, plus a disk (IBM-compatible if possible), to: Stevan Harnad, Editor, Behavioral and Brain Sciences, 20 Nassau St., Suite 240, Princeton, NJ 08542. **Electronic mail:** harnad@princeton.edu or harnad@pucc.bitnet. *In case of doubt as to appropriateness for BBS commentary, authors should write to the editor before submitting eight copies.*

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Authors of target articles receive 50 offprints of the entire treatment, and can purchase additional copies. Commentators will also be given an opportunity to purchase offprints of the entire treatment.

*Individuals interested in serving as BBS Associates are asked to write to the editor.

To appear in Volume 16, Number 4 (1993)

Offprints of the following forthcoming BBS treatments can be purchased for educational purposes if they are ordered well in advance. For ordering information, please write to Journals Department, Cambridge University Press, 40 West 20th Street, New York, NY 10011.

Species and individual differences in communication based on private states

David Lubinski, *Iowa State University*, and Travis Thompson, *Vanderbilt University*

Despite Darwinian assumptions of biological continuity, there have been few animal models of human communication for the way people come to report private stimulation from within their own bodies. An animal is described here that is based on concepts and methods derived from the study of discriminative stimulus effects of drugs, and recent research on interanimal communication. We analyze intra- and interspecies differences in neurochemical mechanisms for transducing interoceptive stimuli, enzymatic and other metabolic factors, learning ability, and discrimination learning histories and their relation to psychiatric and developmental disabilities.

With Commentary from DM Baer; WM Baum; MN Branch; EJ Capaldi & RW Proctor; M Hocutt; LG Humphrys; A Laakso; C Mortensen; IM Pepperberg; K Salzinger; IP Stolerman; NS Thompson; TR Zentall; GE Zuriff; and others.

Coevolution of neocortical size, group size and language in humans

R.I.M. Dunbar, *University College London*

A general relationship between relative and neocortical size and group size in nonhuman primates predicts a group size of 147.8 for modern humans. This turns out to be a common group size in both contemporary hunter-gatherer societies and post-industrial societies. The grooming time required to maintain cohesion of such large groups in the manner typical of nonhuman primates would place impossible demands on human time budgets. It is suggested that language evolved to provide a form of bonding that uses time more efficiently. Data on both conversation group sizes and the content of conversations lend support to this hypothesis.

With Commentary from RJ Andrew; RW Byrne; MC Corballis; TW Deacon; M Donald; RA Foley; RB Graber; RL Holloway; ME Hyland; CH Janson; R Jarvenpa; HJ Jerison; L McCune; A Whiten; J Wind; and others.

Multiple book review of *Origins of the modern mind*

Merlin McDonald, *Queen's University*

During the past two million years humans have passed through three major cognitive transitions, each leaving the human mind with a new way of representing reality and a new form of culture. Modern humans consequently have three systems of memory representation that were not available to our closest primate relatives; mimetic skill, language, and external symbols, each supported by new types of "hard" storage devices, two of which (mimetic and linguistic) are biological, one technical. Cognitive evolution is not yet complete: the externalization of memory has altered the actual memory architecture within which humans think, changing the role of biological memory and the way the human brain deploys its resources; it is also changing the form of modern culture.

With Commentary from D Bickerton; CL Brace; PG Chase; V Csányi; LM Gabora; KJ Gilhooly; J Halverson; HJ Jerison; A Laakso; R Lutz; A Marshack; HC Plotkin; M Tomasello; T Wynn; J Zhang; and others.

Among the articles to appear in forthcoming issues of BBS:

J Baron "Nonconsequentialist decisions"

M Farah, "Neuropsychological inference with an interactive brain: a critique of 'locality assumption'"

A Wertheim, "Motion perception during self motion: The direct versus inferential controversy revisited"

B Bridgeman, AHC van der Heijden & BM Velichkovsky, "A theory of visual stability across saccadic eye movements"

M Jeannerod, "the representing brain. Neural correlates of motor intention and imagery"

P Killeen, "Mathematical principles of reinforcement"

Multiple book review of M Boden, *The creative mind*

Multiple book review of A Karmiloff-Smith, *Beyond modularity*

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