

# 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The service of Open Peer Commentary will be primarily devoted to original unpublished manuscripts.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.**

In all the categories described, the decisive consideration for eligibility will be the desirability of Commentary for the submitted material. Controversiality *simpliciter* is not a sufficient criterion for soliciting Commentary: a paper may be controversial simply because it is wrong or weak. Nor is the mere presence of interdisciplinary aspects sufficient: general cybernetic and "organismic" disquisitions are not appropriate for BBS. Some appropriate rationales for seeking Open Peer Commentary would be that: (1) the material bears in a significant way on some current controversial issues in behavioral and brain sciences; (2) its findings substantively contradict some well-established aspects of current research and theory; (3) it criticizes the findings, practices, or principles of an accepted or influential line of work; (4) it unifies a substantial amount of disparate research; (5) it has important cross-disciplinary ramifications; (6) it introduces an innovative methodology or formalism for consideration by proponents of the established forms; (7) it meaningfully integrates a body of brain and behavioral data; (8) it places a hitherto dissociated area of research into an evolutionary or ecological perspective; etc. In order to assure communication with potential commentators (and readers) from other BBS specialty areas, **all technical terminology must be clearly defined or simplified, and specialized concepts must be fully described.**

**Note to commentators** The purpose of the Open Peer Commentary service is to provide a concentrated constructive interaction between author and commentators on a topic judged to be of broad significance to the biobehavioral science community. Commentators should provide substantive criticism, interpretation, and elaboration as well as any pertinent complementary or supplementary material, such as illustrations; all original data will be refereed in order to assure the archival validity of BBS commentaries. Commentaries and articles should be free of hyperbole and remarks *ad hominem*.

**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.)

**References:** Bibliographic citations in the text must include the author's last name and the date of publication and may include page references. Complete bibliographic information for each citation should be included in the list of references. Examples of correct style are: Brown (1973); (Brown 1973); (Brown 1973; 1978); (Brown 1973; Jones 1976); (Brown & Jones 1978); (Brown et al. 1979). References should be typed on a separate sheet in alphabetical order in the style of the following examples. **Do not abbreviate journal titles.**

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** (1/4-inch space between lines) on 8 1/2 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 8 1/2 by 11 or 8 1/2 by 5 1/2 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.

All submissions should include a diskette in Word™ or WordPerfect™ for Macintosh or IBM-compatible computers and containing the full manuscript. Target articles should be sent to: Stevan Harnad, Editor, *Behavioral and Brain Sciences*, Department of Psychology, University of Southampton, Highfield, Southampton, SO17 1BJ, United Kingdom. **Phone:** +44 (0) 1703-594-583. **Electronic mail:** bbs@ecs.soton.ac.uk. Commentaries should be sent to: *Behavioral and Brain Sciences*, Cambridge University Press, Journals Department, 40 West 20th Street, New York, NY 10011-4211. **Phone:** 212 924-3900 (ext. 369). **Electronic mail:** bbs@cup.org. *In case of doubt as to appropriateness for BBS commentary, authors should write to the editor before submitting eight copies.*

**Editing** The publishers reserve the right to edit and proof all articles and commentaries accepted for publication. Authors of articles will be given the opportunity to review the copyedited manuscript and page proofs. Commentators will be asked to review copyediting only when changes have been substantial; commentators will not see proofs. Both authors and commentators should notify the editorial office of all corrections within 48 hours or approval will be assumed.

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 18, Number 3 (1995)

Offprints of the following forthcoming BBS treatments can be purchased for educational purpose 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

### CONTROVERSIES IN NEUROSCIENCE III:

#### What are the mechanisms of photoreceptor adaptation?

**M. Deric Bownds and Vadim Arshavsky**

This article evaluates each of the reactions known to be involved in visual transduction as a potential site for the regulation of light adaptation. Extensive evidence suggests that calcium acts as a feedback messenger in several different points and recent work suggests a role for cyclic GMP in regulating the primary excitatory pathway. A conclusion is that adaptation is likely to be regulated by multiple and redundant mechanisms.

#### Signal transduction in the retina and brain

**Stephen P. Daiger et al., Human Genetics Center, Houston**

Rhodopsin and other photoreceptor proteins can serve as model systems for unravelling the connection between genotype and phenotype in inherited retinal diseases as well as for other degenerative disorders.

#### Future directions for rhodopsin structure and function studies

**Paul A. Hargrave, University of Florida**

To understand how the photoreceptor protein rhodopsin acts in its role as a receptor, its structure needs to be determined at the atomic level. Progress on rhodopsin crystallization and its important parameters are discussed.

#### Recoverin and $Ca^{2+}$ in vertebrate phototransduction

**James B. Hurley, University of Washington and Howard Hughes Medical Center**

The role of recoverin in phototransduction appears to be to determine the lifetime of light-simulated phosphodiesterase activity, perhaps by regulating rhodopsin phosphorylation.

#### Do the calmodulin-stimulated adenylyl cyclases play a role in neuroplasticity?

**Zhengui Xia et al., University of Washington**

*Aplysia*, *Drosophila*, and mammalian brain studies suggest that  $Ca^{2+}$ -sensitive adenylyl cyclases may be important for long-term synaptic changes and learning and memory.

#### The cGMP-gated channel of photoreceptor cells: Its structural properties and role in phototransduction

**Robert S. Molday and Yi-Te Hsu**

The molecular properties of the cyclic GMP-gated channel complex and the possible role of  $Ca^{2+}$ -calmodulin modulation of the channel during photoactivation and photorecovery is discussed in relation to the current mechanism of phototransduction in photoreceptor cells.

**With Joint Commentary from** TW Abrams; AAB Bergen; RK Crouch & DW Corson; RM Garavito; MP Gray-Keller & PB Detwiler; KW Koch; LW Haynes; D Wahlsten; TG Wensel & JK Angleson; BM Willardson, Tatsuro Yoshida & MW Bitensky; and others.

### And also

#### The sociobiology of sociopathy: An integrated evolutionary model

**Linda Mealey, College of St. Benedict**

This paper integrates "proximal" explorations of the existence and development of sociopathy from behavior genetics, child development, personality theory, learning theory, and social psychology with the more recent "ultimate" explorations from evolutionary and game theoretic models. There appear to be two distinct developmental etiologies of sociopathy maintained by two different mechanisms.

**With Commentary from** J Barresi; RJR Blair; RA Drake; L Ellis; AJ Figueredo, GH Gudjonsson; SC Maxson; R Plutchik; Y Wolf; and others.

#### Among the articles to appear in forthcoming issues of BBS:

DJ Amit, "The Hebbian paradigm reintegrated"; JA Gray, "The contents of consciousness"; AG Feldman and MF Levin, "The origin and use of positional frames of reference in motor control"; JJ Koehler, "The base rate fallacy reconsidered"; J Barresi and C Moore, "Intentional relations and social understanding"; "Controversies in neuroscience IV" (Motor learning and synaptic plasticity in the cerebellum)"

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