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Although the BBS Commentary service is primarily devoted to original unpublished manuscripts, at times it will be extended to précis of recent books or previously published articles.

Published quarterly by Cambridge University Press. Editorial correspondence to: Stevan Harnad, Editor, BBS, Suite 240, 20 Nassau Street, Princeton, NJ 08540.

"... superbly presented ... the result is practically a *vade mecum* or *Who's Who* in each subject. [Articles are] followed by pithy and often (believe it or not) witty comments questioning, illuminating, endorsing or just plain arguing ... I urge anyone with an interest in psychology, neuroscience, and behavioural biology to get access to this journal."—*New Scientist*

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Application forms and full programme available from: *Rosemary Riddell, Meetings Secretary, FRAME, 5b The Poultry, Bank Place, Nottingham NG1 2JR. Telephone: 0602 584740.*

# CAMBRIDGE

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Daniel Kahneman, Paul Slovic, and Amos Tversky, Editors

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# The Behavioral and Brain Sciences

## Instructions for Authors and Commentators

*The 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 his article, but he can respond formally to all commentaries accepted for publication. The target article, commentaries and author's 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**. The original manuscript plus **eight copies** must be submitted.

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 is also eligible for Commentary if the author submits a comprehensive, article-length precis to be published together with the commentaries and his 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. 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 significantly 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**. Authors should use numbered section-headings to facilitate cross-reference by commentators.

**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** Articles must not exceed 14,000 words (and should ordinarily be considerably shorter); **commentaries should not exceed 1,000 words**. 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. A title should be given for each article and commentary. An auxiliary short title of 50 or fewer characters should be given for any article whose title exceeds that length. Each commentary must have a distinctive, representative **commentary title**. The contributor's name should be given in the form preferred for publication; the affiliation should include the full institutional address. **Two abstracts**, one of 100 and one of 250 words, should be submitted with every 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 the text of the article. Tables and figures (i.e. photographs, graphs, charts, or other artwork) should be numbered consecutively in a separate series. Every table and figure should have a title or caption and at least one reference in the text to indicate its appropriate location. Notes, acknowledgments, appendices, and references should be grouped at the end of the article or commentary. 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 for bibliographic citations are: Brown (1973); (Brown 1973), (Brown 1973; 1978); (Brown 1973, Jones 1976); (Brown & Jones 1978); (Brown, Jones & Smith 1979) and subsequently, (Brown et al. 1979). References should be typed in alphabetical order in the style of the following examples. **Journal titles should not be abbreviated.**

Kupfermann I & Weiss K. (1978) The command neuron concept. *The 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*, eds P. P. G. Bateson & R. A. Hinde, pp. 1-10. Cambridge University Press.

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

**Preparation of the manuscript** The entire manuscript, including notes and references, must be typed double-spaced on 8½ by 11 inch or A4 paper, with margins set to 70 characters per line and 25 lines per page, and should not exceed 50 pages. Pages should be numbered consecutively. 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.

Authors are requested to submit their original manuscript with **eight copies** for refereeing, and commentators their original plus **two copies**, to: Stevan Harnad, Editor, The Behavioral and Brain Sciences, 20 Nassau St., Suite 240, Princeton, NJ 08540. 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.



# The Behavioral and Brain Sciences

## To appear in Volume 5, Number 4 (1982)

Offprints of the following forthcoming BBS treatments can be purchased in quantity for educational purposes if they are ordered well in advance. For ordering information, please write to Journals Department, Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022

### Is there a schizophrenic language?

Steven Schwartz, *University of Queensland*

Among the many peculiarities of schizophrenics, perhaps the most obvious is their tendency to say odd things. Decades of clinical observation, experimental research, and linguistic analyses have produced many hypotheses about what, precisely, is wrong with schizophrenic speech and language. These hypotheses (and some of the observations on which they are based) are critically assessed in this paper. Work in the area is flawed by errors in experimental method, faulty observations, tautological reasoning, and theoretical models that ignore the complexities of natural language. Schizophrenics may have cognitive problems, but there is little evidence for "schizophrenic language."

With *Commentary* from NC Andreasen, M Bleuler, F Boller, HW Buckingham, Jr., LJ Chapman & JP Chapman, RL Cromwell & LG Space, JK Darby, AR Lecours, JR Martin, TF Oltmanns, K Zaimov, and others.

### What muscle variable(s) does the nervous system control in limb movements?

R. B. Stein, *University of Alberta*

Among the variables that have been proposed as answers to the question posed in the title of this article are muscle force, length, velocity, stiffness, and viscosity. The evidence that one or more of these variables is controlled by the nervous system during normal movements is critically assessed. Although the question has not been definitively answered, I suggest that many of these variables can be controlled or regulated, depending on the requirements and conditions of the movement.

With *Commentary* from U Bässler, J Dyuens, R Granit, JA Hoffer, JC Houk, GF Inbar, M Ito, L Stark, GE Stelmach & VA Diggles, CA Terzuolo & JF Soechting, and others.

### The defense motivation system: A theory of avoidance behavior

Fred A. Masterson, *University of Delaware and Mary Crawford, West Chester State College*

A motivation system approach to avoidance behavior is presented. A motivational state increases the probability of relevant response patterns and establishes the consummatory stimuli as positive reinforcers. The model attempts to resolve several long-standing problems, including the low correlation between negative affect and avoidance performance, differential rates of extinction for avoidance performance and conditioned emotional responses, and evidence that some avoidance responses are much more easily learned than others. Parallels between appetitive and aversive motivation, and sign-tracking in aversive conditioning and orientation of flight responses are discussed, as are historical antecedents and alternative approaches.

With *Commentary* from D Adams, PJ Bersh, RC Bolles, MN Branch, JA Dinsmoor, PN Himeline, AW Logue, AK Myers, J Panksepp & L Normansell, FM Toates, D Treit & ML Spetch, and EJ Wyers.

### Multiple representations of space underlying behavior

Israel Lieblch, *Hebrew University of Jerusalem* and Michael A. Arbib, *University of Massachusetts*

After a general discussion of the notion of a spatial map, we introduce the notion of a world graph as a spatial representation in the form of a directed graph with nodes containing locale-related information and edges representing features of paths between recognizable situations in the environment. A specific model of motivational learning of spatial behavior specifies drive dynamics, ways in which the world graph is updated, and ways in which the organism moves about in the world. Interaction of node choice and drive level, and ways in which weights are assigned to the different nodes are discussed. Maps in the brain, the representation of situations in the hippocampus, and the many visual systems in vertebrate brains are considered.

With *Commentary* from CM Butter, RM Downs, JA Feldman & D Zipser, S Kaplan, B Kuipers, JW Moore, J Pailhous & P Peruch, M Potegal, CK Riesbeck, A Trehub, and others.

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

BBS Multiple Book Review of FI Dretske, *Knowledge and the flow of information*

RN Haber, "The impending demise of the icon: A critique of the concept of iconic storage in visual information processing"

D Premack, "The codes of beast and man"

PL van den Berghe, "Human inbreeding avoidance: Culture in nature"

GA Ojemann, "Brain organization for language from the perspective of electrical stimulation mapping"

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