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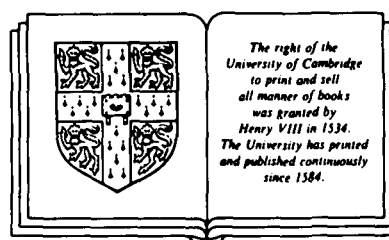
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Criteria for acceptance To be eligible for publication, a paper should not only meet the standards of a journal such as *Psychological Review* or the *International Review of Neurobiology* in terms of conceptual rigor, empirical grounding, and clarity 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The service of Open Peer Commentary will be primarily devoted to original unpublished manuscripts.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 précis 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. *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, 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: Steven Harnad, Editor, The Behavioral and Brain Sciences, 20 Nassau St., Suite 240, Princeton, NJ 08542. 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.

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

Semantic activation without conscious identification

Daniel Holender, *Université Libre de Bruxelles*

When the meaning of a stimulus is accessed through the processing of a sensory input a person usually recognizes the stimulus consciously. The idea that semantic activation can occur without conscious identification had been the central thesis of the controversial research in subliminal perception. Recently, new claims for such a possibility have come from studies in dichotic listening, parafoveal vision and visual pattern masking. This paper attempts to show that most of these apparent demonstrations can be attributed to inability of the experimental method to reveal conscious identification of the stimulus at the time of presentation rather than to the reality of the phenomenon.

With Commentary from E Bisiach; TH Carr & D Dagenbach; NF Dixon; MH Erdelyi; AW Inhoff; AJ Marcel; PM Merikle & J Cheesman; J Morton; R Näätänen; D Navon; K Rayner; G Underwood; and others.

Cortical connections and parallel processing: Structure and function

Dana H. Ballard, *University of Rochester*

The cerebral cortex is a rich and diverse structure that is the basis of intelligent behavior. One of the deepest mysteries of the function of cortex is that neural processing times are only about one hundred times faster than the fastest response times for complex behavior. At the very least, this would seem to indicate that the cortex does massive amounts of parallel computation. This paper explores the hypothesis that an important part of the cortex can be modeled as a connectionist computer especially suited for parallel problem solving. This computer can be thought of as computing hierarchies of sensory-motor invariants.

With Commentary from RA Andersen; JC Baird; PM Churchland; LH Finkel & GN Reeke Jr.; J Foss; S Grossberg; E Harth; JJ Hopfield; D Mumford; AJ Pellionisz; TJ Sejnowski; M Sur; JK Tsotsos; and others.

Intentionality and information processing

Kenneth M. Sayre, *University of Notre Dame*

(1) What is actually accomplished by the functions of the nervous system that we describe intentionalistically? (2) What makes the information processing involved in these functions semantic? The computational approach fails to provide satisfactory answers. A more promising start is to fall back on mathematical communication theory, with help from evolutionary biology and neurophysiology. Focusing on vision, representations can be defined as patterns of cortical activity constantly adjusting to maintain adequate mutual information between pattern and perceptual object. Intentionality is the direction upon objects accomplished by such representations and this intentionality adds semantic features to the information processing involved.

With Commentary from PM Churchland; JG Dugman; DC Dennett; FI Dretske; DP Ellerman; RT Eskew Jr.; J Heil; M Lebowitz; DM MacKay; LE Marks; D Perlis & R Hall; WT Powers; MT Turvey; and others.

Social versus reproductive success

Daniel R. Vining, Jr., *University of Pennsylvania*

The central postulate of sociobiology is that individuals exploit favorable environments to increase their genetic representation in the next generation. The data on fertility differentials among contemporary humans are not consistent with this postulate. Except for a period of rising fertility in the middle of this century, contemporary humans exhibit an inverse relationship between fertility and endowment (i.e., wealth, success and measured aptitudes). Contrary to the claims of some modern eugenicists, however, no threat to contemporary culture is posed by this inverse relationship. Environmental change appears to be shifting the means of various trait distributions at rates that are several orders of magnitude larger than those implied by the observed fertility differentials. However, there remains the question of just how elastic these distributions are in the absence of reinforcing genetic change.

With Commentary from JH Barkow; M Daly & M Wilson; R Dawkins; I Eibl-Eibesfeldt; JR Flynn; R Fox; MT Ghiselin & FM Scudo; J Hartung; W Irons; P Kitcher; RJ Sternberg; D Symons; and others.

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