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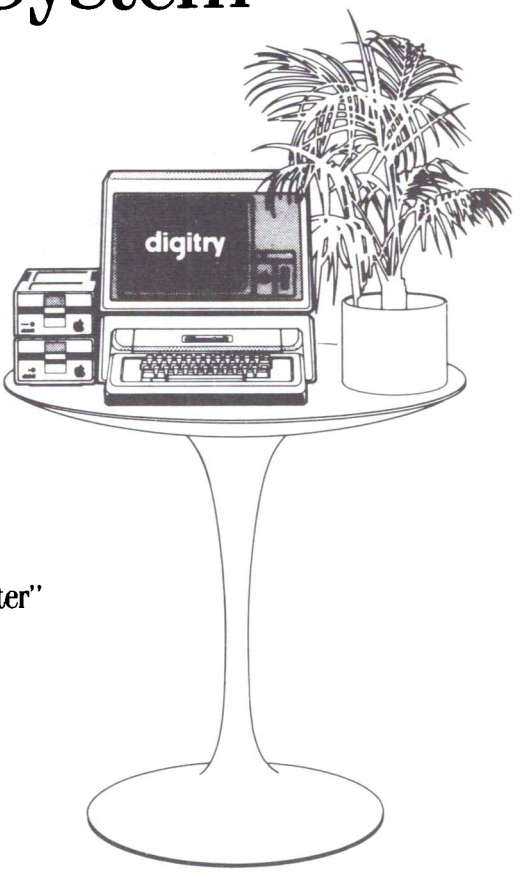

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The Behavioral and Brain Sciences

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 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.** 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.

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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.

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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 ordering information, please write to Journals Department, Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022.

The nature of the black-white difference on various psychometric tests: Spearman's hypothesis

Arthur R. Jensen, *University of California*

Variation in the mean difference between black and white populations on various psychometric tests of mental ability is examined in the light of Spearman's hypothesis that the variable magnitudes of the black–white difference are directly related to the tests' loadings on the *g*, or general intelligence, factor. Eleven large-scale studies, each comprising anywhere from 6 to 13 diverse tests, consistently show substantial correlations between tests' *g* loadings and the mean black–white difference in standard score units, thus bearing out Spearman's hypothesis. The results are discussed in relation to theories of the nature of *g* and in terms of the chronometric measurement of individual and group differences in speed and efficiency of information processing.

With *Commentary* from E Callaway; TH Carr & JL McDonald; RB Cattell; HJ Eysenck; P Kline; YH Poortinga; MI Posner; PMA Rabbitt; PH Schönemann; RJ Sternberg; PE Vernon; and others.

Four frames suffice: A provisional model of vision and space

Jerome A. Feldman, *University of Rochester*

This paper presents a general computational treatment of how mammals are able to deal with visual objects and environments. Among the issues addressed are constancies and the stable visual world, categorization and context effects, perceptual generalization, and allocentric spatial maps. The computational model is expressed in connectionist terms, allowing biological as well as psychological experiments to be included. The model is perforce crude, but appears to be consistent with all relevant findings.

With *Commentary* from PC Dodwell, S Grossberg; RN Haber; GE Hinton; SM Kosslyn, SD Mainwaring & TA Corcoran; B Kuipers; BJ Richmond & ME Goldberg; SW Zucker; and others.

Choice, optimal foraging, and the delay-reduction hypothesis

Edmund Fantino, *University of California, San Diego and Nureya Abarca, Pontificia Universidad Catolica de Chile*

The recent convergence of operant conditioning and behavioral ecology on theory and research in foraging has motivated the present operant laboratory simulations of foraging. We examine the effects on subjects' choice of varying (1) the time spent searching for or traveling between potential outcomes, (2) the independent availability of preferred and less preferred outcomes, and (3) the rate, amount, and probability of food, and we assess the effects of different types of deprivation. The findings are largely consistent with both optimal foraging theory, developed in behavioral ecology, and the delay-reduction hypothesis, developed in the operant laboratory: Pigeons maximize both rate of energy intake and reductions in time to reinforcement.

With *Commentary* from MN Branch; JA Dinsmoor; AI Houston; A Kacelnik & JR Krebs; PR Killeen; SEG Lea; RL Mellgren; N Rowland; M Sato & T Sakagami; SJ Shettleworth; and others.

Among the articles to appear in forthcoming issues of BBS:

Multiple book review of A Grünbaum, *The foundations of psychoanalysis*

R Ader & N Cohen, "CNS-immune system interactions: Conditioning phenomena"

MB Berkinblit, AG Feldman & OI Fukson, "Adaptability of innate motor patterns and motor control mechanisms"

G Goldberg, "Supplementary motor area structure and function"

T Gualtieri & RE Hicks, "An immunoreactive theory of selective male affliction"

A Harrington, "Nineteenth century ideas on hemisphere difference and 'duality of mind'"

J Hartung, "Matrilineal inheritance"

D Holender, "Semantic activation without conscious identification in dichotic listening, parafoveal vision, and visual masking"

GW Humphreys & LJ Evett, "Are there independent lexical and nonlexical routes in word processing?"

B Libet, "Unconscious cerebral initiative and the role of conscious will in voluntary action"

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