

Announcing 3 New Publications From Excerpta Medica

CHILD NEUROLOGY

Proceedings of the IYDP Commemorative International Symposium on Developmental Disabilities, Tokyo, Japan, September 26-27, 1981

edited by **I. Fukuyama**

International Congress Series

No. 579

Contents:

Multidisciplinary approach to developmental disabilities. Etiology and various aspects of mental retardation. Convulsive disorders and mental retardation. Early detection and early intervention. Neonatal neurology. Community care. Pediatric neuroepidemiology. Author index. Subject index.

1982 258 pages

Price: US \$ 93.60 (in USA & Canada)

Dfl. 220.00 (rest of the world)

ISBN 0 444 90257 0

INTERNATIONAL CONFERENCE ON PERIPHERAL NEUROPATHIES

Proceedings of the International Conference on Peripheral Neuropathies, Madrid, Spain, June 24-25, 1981

edited by **S. Refsum, C.L. Bolis and**

A. Portera Sanchez

International Congress Series

No. 592

CONTENTS: Axonal transport in peripheral neuropathies (*B. Droz*); Long-term neural regulation of skeletal muscles (*G. Karpati*);

Discussion; Kuru, the Creutzfeldt-Jakob syndrome and amyotrophic lateral sclerosis - past and current research (summary)

(*D.C. Gajdusek, C.J. Gibbs Jr.*);

Pharmacological aspects of experimental

peripheral neuropathy (*A. Gorio, G.*

Carmignoto, G. Ferrari, F. Norido, M.G.

Nunzi, R. Rubini, R. Zanoni);

Epidemiology of peripheral neuropathies

(*B.S. Schoenberg*); Acute polyradiculoneur-

opathy of the Landry-Guillain-Barre-Strohl

type. Diagnostic aspects and a new

approach to management (*J.R. Estrada*

González); Differential diagnosis of

peripheral neuropathies (*P.K. Thomas*);

Discussion; Problems associated with the

clinical diagnosis of peripheral neuropathies

(*F. Escobedo, M. Ruben*);

Discussion; Genetic neuropathies associated

with disturbances of lipid metabolism

(*S. Refsum*); Discussion; Advice for patients

and their families with inherited neuro-

pathy (*P.J. Dyck*); Discussion; Toxic and

nutritional peripheral neuropathies (*B.O.*

Osuntokun); Discussion; Pathophysiology

of acute and chronic traumatic neuro-

pathies (*R.F. Ruberti*);

Problems concerning the diagnosis,

clinical course and prognosis of

localized traumatic neuropathies

Part I: Acute and chronic localized traumatic

neuropathies (*J.L. Trueba, E. Gutiérrez-*

Rivas, A. Portera Sánchez); Problems con-

cerning the diagnosis, clinical course and

prognosis of localized traumatic neuro-

pathies. Part II: Severity of lesions in acute

localized traumatic neuropathies (*J.L.*

Trueba, E. Gutiérrez-Rivas, A. Portera

Sánchez); Discussion: Concluding remarks

(*C.L. Bolis*); Authors Index.

1982 216 pages

Price: US \$ 62.75 (in USA & Canada)

Dfl. 135.00 (rest of the world)

ISBN 0 444 90277 5

CEREBRAL ISCHEMIA

- An Update -

Proceedings of the Third Akita International Joint Conference on Cerebrovascular Disease edited by **Z. Ito, T. Kutsuzawa and**

N. Yasui

International Congress Series

No. 599

Contents:

1. Introduction - Opening remarks -
2. Special Lecture - The Collaborative EC/IC Bypass Study
3. The etiology of Ischemic Brain Edema
4. Tomographic Cerebral Blood Flow Study
5. Topics on Etiology of Cerebral Infarction
6. Clinical Aspect
7. Modern Treatment
8. Surgical Treatment
9. Special Problems - Vasospasm
10. Subject Index

1983 284 pages

Price: US \$ 63.80 (in USA & Canada)

Dfl. 150.00 (rest of the world)

ISBN 0 444 90290 2

Excerpta Medica

Elsevier Science Publishers

P.O. Box 211, 1000 AE Amsterdam. The Netherlands

Distributor in the U.S.A. and Canada

ELSEVIER SCIENCE PUBLISHING Co., Inc., 52 Vanderbilt Ave., New York, NY 10017

The Dutch guilder price is definitive. US \$ prices are subject to exchange rate fluctuations.

How To Comply With The New COPYRIGHT Law

Participation in the Copyright Clearance Center (CCC) assures you of legal photocopying at the moment of need.

Libraries everywhere have found the easy way to fill photocopy requests legally and instantly, without the need to seek permissions, from more than 3000 key publications in business, science, humanities, and social science. You can:

Fill requests for multiple copies, interlibrary loan (beyond the CONTU guidelines), and reserve desk without fear of copyright infringement.

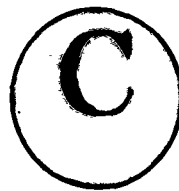
Supply copies from CCC-registered publications simply and easily.

The Copyright Clearance Center is your one-stop place for on-the-spot clearance to photocopy for internal use.

Its flexible reporting system accepts photocopying reports and returns an itemized invoice. You send only one convenient payment. CCC distributes it to the many publishers whose works you need.

And, you need not keep any records, the CCC computer will do it for you. Register now with the CCC and you will never again have to decline a photocopy request or wonder about compliance with the law for any publication participating in the CCC.

To register or for more information, just contact:



Copyright Clearance Center

21 Congress Street
Salem, Massachusetts 01970
(617) 744-3350

a not-for-profit corporation

NAME	TITLE		
ORGANIZATION			
ADDRESS			
CITY	STATE	ZIP	
COUNTRY	TELEPHONE		

W. J. A. J. Smeets, R. Nieuwenhuys, B. L. Roberts

The Central Nervous System of Cartilaginous Fishes

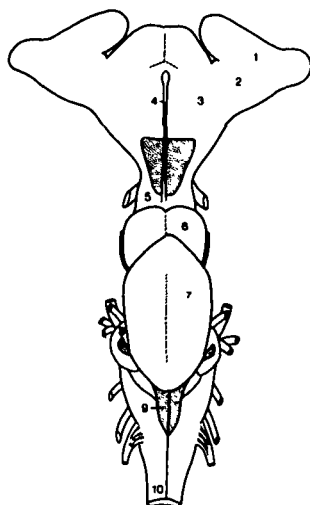
Structure and Functional Correlations

1983. 51 figures in the text, 139 figures in the atlas. IX, 266 pages. Cloth DM 348,-; approx. US \$ 150.00 ISBN 3-540-12146-3

Contents: Introduction. – Materials and Methods. – Gross Morphology. – The Overall Histological Pattern. – The Spinal Cord. – The Brain Stem. – Cerebellum. – The Tectum Mesencephali. – The Diencephalon. – Telencephalon. – Concluding Remarks. – Atlas. – References. – Abbreviations. – Subject Index.

The macroscopic and microscopic structure of the central nervous system of a highly interesting group of fish is surveyed in this work. As representatives of the major groups within the Chondrichthyes the authors have selected the sharks *Squalus acanthias* and *Scyliorhinus canicula*, the ray *Raja clavata* and the holocephalian *Hydrolagus collei*.

The book is divided into two parts: text and atlas. The text is based on personal research, as well as on the extensive literature on the subject. The atlas comprises a series of transverse sections and reconstructions of all subdivisions of the brain of each species. These sets of outstanding illustrations will be an indispensable guide for experimental studies on the brain and spinal cord of a group of fish which during the last decade has attracted a growing amount of interest because of its relatively large brain size and highly developed sensory systems.



Springer-Verlag
Berlin Heidelberg New York Tokyo

Tiergartenstr. 17, D-6900 Heidelberg 1, 175 Fifth Ave., New York, NY 10010, USA
37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan

7011/4/2 q

Now Available



ECONOMICS OF SCIENTIFIC JOURNALS

CONTENTS: Member Subscriptions • Single Issues and Back Volumes • Reprints • Advertising in Scholarly Journals • Page Charges • Journal Income: a Multipublisher's View • Editorial Operations • Copy Editing • Purchasing Typesetting Separately from Printing • Presswork, Binding, and Paper • Distribution and Postage • Subscription Fulfillment • Budgeting, Accounting, and Financial Planning • Marketing the Scientific Journal • Subject Index

Paperbound; ISBN: 0-914340-03-4; Publication date: December 1982; Trim size: 6 × 9 inches; 106 pages

Regular Price: \$11.95 (10% discount on 10 or more copies delivered to one address)

CBE Member Discount Price: \$10.75 (single copy paid by personal check)

Terms of Sale: All sales final; no returns.

Prepayment required; U.S. currency drawn on a U.S. bank.

Price includes BOOK RATE postage.

For faster delivery--first class, air mail, or UPS available at additional charge (book weight 8.5 oz).

Maryland residents, please add 5% sales tax.

COUNCIL OF BIOLOGY EDITORS, INC.
9650 Rockville Pike, Bethesda, MD 20814

Forthcoming

CBE STYLE MANUAL
5th edition
Summer 1983



SCIENTIFIC WRITING FOR GRADUATE STUDENTS

This manual is a "must" for those who would introduce courses of instruction in scientific writing into university graduate schools. The first nine chapters provide the essentials for "Writing a Journal Article," and the remaining five chapters cover "Related Topics" in scientific communication.

CONTENTS: 1. Clearing Away the Underbrush • 2. The Ground Plan • 3. The Master Plan • 4. The First Draft • 5. The First Revision: Structural Alterations • 6. Further Revision: Polishing the Style • 7. Editing Assignments • 8. The Final Steps • 9. Responding to the Editor • 10. Design of Tables and Figures • 11. Preparation for Writing the Doctoral Thesis • 12. Writing a Research Project Proposal • 13. Oral Presentation of a Scientific Paper • 14. Principles and Practices in Searching the Scientific Literature

Paperbound; ISBN: 0-914340-01-8; Published 1968, reprinted 1983; Trim size: 6 × 9 inches; 190 pages

Regular Price: \$9.75 (10% discount on 10 or more copies delivered to one address)

CBE Member Discount Price: \$8.75 (single copy paid by personal check)

Terms of Sale: All sales final; no returns.

Prepayment required; U.S. currency drawn on a U.S. bank.

Price includes BOOK RATE postage.

For faster delivery--first class, air mail, or UPS available at additional charge (book weight, 11.5 oz).

Maryland residents, please add 5% sales tax.

COUNCIL OF BIOLOGY EDITORS, INC.
9650 Rockville Pike, Bethesda, MD 20814

Investigators in Psychology, Neuroscience, Behavioral Biology, and Cognitive Science

Do you want to:

- draw wide attention to a particularly important or controversial piece of work?
- solicit reactions, criticism, and feedback from a large sample of your peers?
- place your ideas in an interdisciplinary, international context?

The Behavioral and Brain Sciences (BBS), an extraordinary journal now in its sixth year, provides a special service called Open Peer Commentary to researchers in any area of psychology, neuroscience, behavioral biology or cognitive science.

Papers judged appropriate for Commentary are circulated to a large number of specialists who provide substantive criticism, interpretation, elaboration, and pertinent complementary and supplementary material from a full cross-disciplinary perspective.

Article and commentaries then appear simultaneously with the author's formal response. This BBS "treatment" provides in print the exciting give and take of an international seminar.

The editor of BBS is calling for papers that offer a clear rationale for Commentary, and also meet high standards of conceptual rigor, empirical grounding, and clarity of style. Contributions may be (1) reports and discussions of empirical research of broader scope and implications than might be reported in a specialty journal; (2) unusually significant theoretical articles that formally model or systematize a body of research; and (3) novel interpretations, syntheses or critiques of existing theoretical work.

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*

"Care is taken to ensure that the commentaries represent a sampling of opinion from scientists throughout the world. Through open peer commentary, the knowledge imparted by the target article becomes more fully integrated into the entire field of the behavioral and brain sciences. This contrasts with the provincialism of specialized journals ..."—Eugene Garfield *Current Contents*

"The field covered by BBS has often suffered in the past from the drawing of battle lines between prematurely hardened positions: nature v. nurture, cognitive v. behaviourist, biological v. cultural causation. ... [BBS] has often produced important articles and, of course, fascinating interchanges. ... the points of dispute are highlighted if not always resolved, the styles and positions of the participants are exposed, hobbyhorses are sometimes ridden with great vigour, and mutual incomprehension is occasionally made very conspicuous ... commentaries are often incisive, integrative or bring highly relevant new information to bear on the subject."—*Nature*

"... a high standard of contributions and discussion. It should serve as one of the major stimulants of growth in the cognitive sciences over the next decade."—Howard Gardner (Education) Harvard

"... keep on like this and you will be not merely good, but essential ..."—D.O. Hebb (Psychology) Dalhousie

"... a unique format from which to gain some appreciation for current topics in the brain sciences ... [and] by which original hypotheses may be argued openly and constructively."—Allen R. Wyler (Neurological Surgery) Washington

"... one of the most distinguished and useful of scientific journals. It is, indeed, that rarity among scientific periodicals: a creative forum ..."—Ashley Montagu (Anthropology) Princeton

"I think the idea is excellent."—Noam Chomsky (Linguistics) M.I.T.

"... open peer commentary ... allows the reader to assess the 'state of the art' quickly in a particular field. The commentaries provide a 'who's who' as well as the content of recent research."—*Journal of Social and Biological Structures*

"... presents an imaginative approach to learning which might be adopted by other journals."—*Library Journal*

"Neurobiologists are acutely aware that their subject is in an explosive phase of development ... we frequently wish for a forum for the exchange of ideas and interpretations ... plenty of journals gladly carry the facts, very few are willing to even consider promoting ideas. Perhaps even more important is the need for opportunities publicly to criticize traditional and developing concepts and interpretations. [BBS] is helping to fill these needs."—Graham Hoyle (Biology) Oregon

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 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 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: 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.

To appear in Volume 6, Number 3 (1983)

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.

Intentional systems in cognitive ethology: The "Panglossian paradigm" defended

Daniel C. Dennett, *Tufts University*

A "cognitivist" method of attributing mental or intentional states to organisms is sketched. Its applicability to ethology is illustrated with the case of the putative communicative behavior of vervets. The method, intentional system theory, suggests experimental tests of particular interest to cognitive model builders. Its underlying assumptions make it vulnerable to the criticisms of Stephen J. Gould and Richard C. Lewontin, but these criticisms are rebutted.

With Commentary from J Bennett; AC Danto; R Dawkins; DR Griffin; G Harman; A Jolly; RC Lewontin; D McFarland; J Maynard Smith; RG Millikan; BF Skinner; HS Terrace; and others.

Is blindsight an effect of scattered light, spared cortex, and near-threshold vision?

John Campion, Richard Latto, and Y. M. Smith, *University of Liverpool*

"Blindsight" describes unconscious visually guided behavior elicited by stimulation in a cortical scotoma (blind area). Mediation is thought to be by subcortical pathways (the second visual system). The literature is reviewed, and it is concluded that because of methodological and conceptual difficulties in the reported studies, blindsight effects could be attributed to processes other than blindsight. First, without histological verification, some effects may be mediated by residual but degraded striate cortex. Second, many effects could result from light scattering from scotomata into the good field. Experiments using hemianopic subjects and normal subjects with simulated hemianopias yield performance similar to blindsight when only scattered light is available. The existence of blindsight remains undemonstrated.

With Commentary from JL Barbur & KH Ruddock; P Bach-y-Rita; B Bridgeman; RN Haber; O Meinenberg; A Morton; P & T Pasik; E. Pöppel; R Puccetti; T Torjussen & S Magnussen; G Underwood; L Weiskrantz; J Zihl; and others.

How are grammars represented?

Edward P. Stabler, *University of Western Ontario*

Noam Chomsky and other linguists and psychologists have suggested that human linguistic behavior is somehow governed by a mental representation of a transformational grammar. Challenges to this are often met by invoking a computational perspective: A grammar could, of course, be represented in the memory of a computational device and govern the device's use of a language. The claim that humans are such devices, however, is unsupported and it seems unlikely that linguists and psychologists really want to claim any such thing.

With Commentary from RC Berwick; M Davis; W Demopoulous & RJ Matthews; DC Dennett; M Gross; RM Harnish; JD McCawley; JC Marshall; R May; J Morton; R Wilensky; and others.

Among the articles to appear in forthcoming issues of BBS:

DE Broadbent, "The Maltese cross: A new simplistic model for memory"

J Dinsmoor, "Observing and conditioned reinforcement"

S Grossberg, "The quantized geometry of visual space: The coherent computation of depth, form, and lightness"

ME Lamb, RA Thompson, W Gardner, EL Charnov & D Estes, "Security of infantile attachment as assessed in the "strange situation"

J Maynard Smith, "Game theory and the evolution of behaviour"

EA Stone, "Problems with current catecholamine hypotheses of antidepressant agents"

RD Weiner, "Does electroconvulsive therapy cause brain damage?"

R Wilensky, "Story grammars versus story points"

Special Issue: Event-related Potentials and Cognition

Special Issue: Canonical Papers of BF Skinner

Cambridge University Press

The Pitt Building, Trumpington Street, Cambridge CB2 1RP
32 East 57 Street, New York, N.Y. 10022
296 Beaconsfield Parade, Middle Park, Melbourne 3206

Printed in the United States of America
by Capital City Press, Montpelier, Vermont

© Cambridge University Press 1983