

Perception & Psychophysics

Editor: Charles W. Eriksen

Associate Editors:

Myron Braunstein Edward C. Carterette Robert Fox Norma Graham Lester E. Krueger Herschel W. Leibowitz Christopher W. Tyler

Perception & Psychophysics, one of the most prestigious of the six journals published by the Psychonomic Society in the field of experimental psychology, deals primarily with sensory processes, perception, and psychophysics in studies that employ either human or animal subjects. Most articles published in the journal are reports of experimental investigations in these areas, but articles that are primarily theoretical are included as well, as are integrative and evaluative reviews.

RECENT ARTICLES include:

- "Interference with McCollough Effects via Pre- and Postinduction Exposure to Achromatic Gratings: Time Course and Magnitude of Aftereffect Decrement" by Diane Skowbo
- "An Investigation of the Equiratio-Mixture Model in Olfactory Psychophysics: A Case Study" by Franc T. Schiet and Jan E. R. Frijters
- "Experimental Demonstration of the Sensory Basis of the Size-Weight Illusion" by Sergio Cesare Masin and Loredana Crestoni
- "Subitizing: Direct Apprehension or Serial Processing?" by Charles L. Folk, Howard Egeth, and Ho-Wan Kwak
- "Facilitation and Interference with a Separable Redundant Dimension in Stimulus Comparison" by W. R. Garner
- "Are Letter Codes Always Activated" by Seth N. Greenberg
- "Masking the Motions of Human Gait" by James E. Cutting, Cassandra Moore, and Roger Morrison
- "The Effect of Orientation on Interpolated Elastic Structure from Dot Motion: Its Occurrence and Persistence" by Akira Ishiguchi
- "'Ratios' and 'Differences' in Perceived Sweetness Intensity" by Cees De Graaf and Jan E. R. Frijters
- "Separating Visible Persistence from Retinal Afterimages" by Vincent Di Lollo, Craig D. Clark, and John H. Hogben
- "Familiarity and Visual Change Detection" by Harold Pashler

Perception & Psychophysics is published monthly, two volumes per year. Annual subscription rates for Volumes 45 and 46 (1989): \$120 for Institutions; \$55 for Individuals. Please add \$12 for foreign/Canadian postage. Back issues and special student rates are also available.

	Psychonomic Society Publications	•	1710 Fortview Rd. • Austin, Texas 78
			Other
City	State (Country)	Zip	☐ Psychonomic Society membership☐ Student rates
			☐ Back issues
Address			☐ Other Psychonomic publications
			Please send information on:
mstitutioi	ıı		.1
Institution			☐ Payment (in U.S. dollars) enclosed (\$)
			☐ Bill me (institutional rates only)
Name			Perception & Psychophysics (Vols. 45 and 46)
			Please enter my 1989 subscription to

BEHAVIORAL and BRAIN SCIENCES



EDITOR:

Stevan Harnad, Princeton, NJ

Behavioral and Brain Sciences publishes particularly significant and controversial "target articles." These have been successful in drawing out the leading investigators in a wide range of fields who discuss, debate and critically analyze topics of current interest to the entire biobehavioral science community. Fascinating and often surprising results come from the 20-30 open peer commentaries on each target article from psychologists, linguists. philosophers, neuroscientists, anthropologists, developmentalists and other specialists within and across these disciplines.

Selected Papers

Sex differences in human mate preferences: Evolutionary hypothesis tested in 37 cultures, *D.M. Buss*

The child's trigger experience: "Degree-O" learnability, D. Lightfoot

Strategies for the control of voluntary movements with one degree of freedom, G.L. Gottlieb et al.

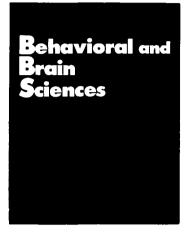
Numerical competence in animals: Definitional issues, current evidence and a new research agenda, *II. Davis, R. Perusse*

Reconciling Fechner and Stevens: Toward a unified psychophysical law, L.E. Krueger

Behavioral and Brain Sciences (ISSN 0140-525X) is published quarterly. Subscription to Volume 12, 1989 (US and Canada only): \$154.00 for institutions; \$65.00 for individuals; single parts \$43.00.

Back Volumes: 1-11 (1978-1988) \$54.00 each.

Send orders to:
Journals Department
Cambridge University Press
32 East 57th Street, New York, NY 10022, USA; or
The Edinburgh Building, Cambridge CB2 2RU, UK



THE VISUAL PROCESSING OF MOTION

A meeting organized by the CNRS (Life Science Department) in the framework of the "Conférences Jacques Monod"

The meeting will take place in Roscoff (Brittany, France) from June 19 to June 23, 1989. Applicants should contact:

Dr. N. Franceschini, Chairman

Laboratoire de Neurobiologie 31 Chemin Joseph Aiguier 13402 MARSEILLES CEDEX 9, FRANCE

Telephone: 91-22-41-29 EARN: FRCHINI at FRMOP11

SPEAKERS INCLUDE:

C. Bonnet M. Imber O. Braddick A. Kaneko E. Buchner K. Kirschfeld P. Buisseret C. Koch J. Bullier S. Laughlin V. Conilleau-Perez R. Masland J. Cremieux D. Mestre M. Egelhaaf W. Newsome R. Emerson G. Orban C. Oyster O. Faugeras N. Franceschini J. M. Pichon Y. Fregnac W. Reichardt F. Schuling K. Götz P. Hammond M. Srinivasan H. van Hateren V. Torre R. DeVoe K. Kausen

CBE MEMBERS NOW SAVE 20%

Illustrating Science: Standards for Publication

Announcing CBE's newest book—the result of eight years of work by editors, illustrators, photographers, publishers, and printers.

Illustrating Science presents specific standards and guidelines for publication of illustrated scientific material. You'll use it as a definitive reference when creating, publishing or printing scientific illustrations. It will help you achieve the finest, most effective illustrations possible.

With more than 120 illustrations, including 32 in full color, this important new book covers scientific illustrations with an unmatched thoroughness.

CONTENTS: Prepress: Getting an Illustration Ready to Print ● Aspects of the Publishing Process Affecting Illustrations ● Preparation of Artwork ● Graphs and Maps ● Computer Graphics ● Camera-ready Copy ● Continuous Tone Photographs and Halftone Printing ● Color Printing ● Materials and Handling ● Standards, Illustrations, and Quality Criteria ● Legal and Ethical Considerations ● Glossary of Terms in Scientific Illustration ● Annotated Bibliography ● Index

Illustrating Science is a valuable reference addition to your professional bookshelf. Order your copy today!

It's easy to order Illustrating Science: Standards for Publication want and multiply by the appropriate price. Mail your order to	
Please send me copies of <i>Illustrating Science: Standard</i> (ISBN: 0-914340-05-0; clothbound; 1988; 7" × 10"; 308 pages of the control of	ds for Publication ges).
@ \$49.95 (regular price)	\$ S [
@ \$39.95 (CBE member price)	\$
Subtotal	\$
Maryland residents, add 5% sales tax	+
TOTAL	\$
Name	
Organization	
City, State, Zip Code	
Country Phone (_)
SATISFACTION GUARANTEED: CBE guarantees your satisfaction. original condition within 30 days for refund (shipping and handling cha	
TERMS: All orders must be prepaid in U.S. currency drawn on a U.S. \$3.00 per book for UPS delivery, available within the continental U.S. box, for UPS delivery. Maryland residents, add 5% sales tax. This offer	only. Include street address, rather than a p.o.
Mail was ander mith mannage to.	•

Council of Biology Editors, Inc. • Dept. 88Z • 9650 Rockville Pike • Bethesda, Maryland 20814 • (301) 530-7036



Please enter my subscription to Name of subscriber VISUAL NEUROSCIENCE (ISSN 0952-5238) Address Vols. 2 and 3, 1989, monthly Two volumes of six issues each. City State/Prov. \$280.00 Institutions \$120.00 Individuals* Payment enclosed. (Payment may be made in U.S. dollars or equivalent in Canadian dollars.) \$80.00 Students* □ VISA ☐ MasterCard (Interbank no. ____ *Discounted individual and student rates Card no. __ payable by personal check or credit card __Expires____ only. Students must supply proof of current enrollment. Signature No postage necessary if mailed in the U.S. Please note: If paying by credit card, enclose Cambridge University Press, 32 East 57th Street, New York, NY 10022 this card in an envelope for your security. Please enter my subscription to **VISUAL NEUROSCIENCE** Name of subscriber (ISSN 0952-5238) Vols. 2 and 3, 1989, monthly Address Two volumes of six issues each. \$280.00 Institutions \$120.00 Individuals* Payment enclosed. (Payment may be made in U.S. dollars or equivalent in Canadian dollars.) \$80.00 Students* T VISA ☐ MasterCard (Interbank no. ___ *Discounted individual and student rates payable by personal check or credit card _____ Expires_____ only. Students must supply proof of current enrollment. Signature Please note: If paying by credit card, enclose No postage necessary if mailed in the U.S. this card in an envelope for your security. Cambridge University Press, 32 East 57th Street, New York, NY 10022 Please send this form to any bookseller or subscription agent or direct to Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England. Please enter my subscription to Orders sent to the Press must be accompanied by payment which may be made, in sterling, by cheque, UK Postal Order, International Money Order, bank transfer (Barclay's Bank Ltd, 15 Bene't St., Cambridge CB2 3PZ; a/c no. 702 05931, Bank Code no. 20-17-19) or by Post Office Giro (a/c no. 571 6055 GB). Payment may also be made by Barclaycard/VISA/BankAmericard or Access/MasterCard/Eurocard. If payment is made by Money Order, bank transfer or Giro, advice of payment should be sent with the order to the Press. Cheques should be made payable to Cambridge University Press. **VISUAL NEUROSCIENCE** (ISSN 0952-5238) Vols. 2 and 3, 1989, monthly Two volumes of six issues each. £182.00 Institutions Payment enclosed Payment by Barclaycard/VISA or Access/MasterCard/ £84.00 Individuals* Eurocard £58.00 Students* Signature of cardholder___ __Amount___ *Discounted individual and student rates payable by personal check or credit card Barclaycard/VISA/BankAmericard number____ only. Students must supply proof of current enrollment. Access/MasterCard/Eurocard number____

Name of subscriber

Address

Please note: If paying by credit card, enclose

this card in an envelope for your security.





NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS

REPLY

MAIL

FIRST CLASS

PERMIT NO. 5206

NEW YORK, NY

POSTAGE WILL BE PAID BY ADDRESSEE

CAMBRIDGE UNIVERSITY PRESS

Attn: Journals Department 32 East 57th Street New York, N.Y. 10022



Cambridge Val Journals



BUSINESS

FIRST CLASS

REPLY

MAIL

NEW YORK, NY

POSTAGE WILL BE PAID BY ADDRESSEE

CAMBRIDGE UNIVERSITY PRESS

PERMIT NO. 5206

Attn: Journals Department 32 East 57th Street New York, N.Y. 10022 NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES



PLACE STAMP HERE

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building Shaftesbury Road Cambridge CB2 2RU England

THE JOURNAL OF PHYSIOLOGY

Published for the Physiological Society

Chairman of the Editorial Board: A. V. Edwards, University of Cambridge

This internationally respected journal publishes high quality papers representing original experimental work in three areas: general physiology, mammalian physiology, and human physiology. Each hardbound monthly volume of *The Journal of Physiology* is concerned with respiration, circulation, excretion, reproduction, digestion, homeostasis, and particularly neurophysiology and muscular contraction. Abstracts of scientific meetings of the Physiological Society, which are accepted by the members present at those meetings, are also published. A Cumulative Subject and Author Index is produced triennially and an Annual Index is produced in the intervening years.

Selected papers

Co-ordinated variations in chloride-dependent potassium transport and cell water in normal human erythrocytes, G. W. Stewart

Influence of right atrial stretch and atrial natriuretic factor on rate intestinal fluid content, S. Kaufman & E. Monckton

Outward rectification of inhibitory postsynaptic currents in cultured rat hippocampal neurons, J. L. Barker & N. L. Harrison

Review Lecture: Capillary permeability and how it may change, C. C. Michel

The Journal of Physiology (ISSN 0022-3751) is published monthly in 1989. Subscription to volumes 408-419: \$1200.00 per year; \$106.00 per volume.

Back Volumes: 254-407 (1976-1988) \$115.00 each.

Journals Department

Cambridge University Press

32 East 57th Street, New York, NY 10022 USA; or The Edinburgh Building, Cambridge CB2 2RU, UK



THE JOURNAL OF PHYSIOLOGY

THE PHYSIOLOGICAL SOCIETY

DI CALLAN MALBERT DE MARTIET TO DESCRIPTION DE L'ADMINISTRATION DE

CAMBRIDGE UNIVERSITY PRESS

CONTENTS

William D. Eldred, and Kristin Cheung	331	Immunocytochemical localization of glycine in the retina of the turtle (<i>Pseudemys scripta</i>)
Charles Straznicky, Roger McCart, and Pál Tóth	339	Retinal ganglion cell death induced by unilateral tectal ablation in Xenopus
Lisa McKerracher, Richard B. Vallee, and Albert J. Aguayo	349	Microtubule-associated protein 1A (MAP 1A) is a ganglion cell marker in adult rat retina
Y.H. YÜCEL, B. Jardon, and N. Bonaventure	357	Involvement of ON and OFF retinal channels in the eye and head horizontal optokinetic nystagmus of the frog
Mary E. Harrington and Benjamin Rusak	367	Photic responses of geniculo-hypothalamic tract neurons in the Syrian hamster
C. Benassi, G.P. Biral, F. Lui, C.A. Porro, and R. Corazza	377	The interstitial nucleus of the superior fasciculus, posterior bundle (INSFp) in the guinea pig: Another nucleus of the accessory optic system processing the vertical retinal slip signal
D.B. Bowling	383	Timing differences between the light responses of X cells recorded simultaneously in cat lateral geniculate nucleus
N. Tumosa, S.B. Tieman, and D.G. Tieman	391	Binocular competition affects the pattern and intensity of ocular activation columns in the visual cortex of cats
D.J. TOLHURST	409	The amount of information transmitted about contrast by neurones in the cat's visual cortex
		Short Communication
Charles Crist and David Lee Robinson	415	A large-field screen with even texture for vision research
•	419	Detailed Information for Contributors
	420	The Humane Care and Use of Animals

ISSN 0952-5238
© 1989 Cambridge University Press
Printed in the United States of America