

R&D Money Doesn't Grow on Trees

So, whether you're working in the public or private sector, for a university or national laboratory, in government or business, it's up to you to find out where the R&D dollars are hiding and how to go about getting them after you've found them.

The books in the Research and Development: AAAS Report Series can help you do this in two ways.

- 1. Annual R&D Reports written by experts in the field explore federal policies, budgetary concerns, the economy, and international and domestic developments as they relate to R&D policy making for the coming fiscal year.
- 2. Subsequent R&D Colloquium Proceedings featuring leaders from government, industry, universities, and other parts of the scientific community—give you the texts of presentations, question-and-answer periods, and discussions from annual AAAS Colloquia on R&D Policy.

Order the Research and Development: AAAS Report Series today. In these money-hard times, it's an investment you can't afford to miss out on.

New Titles

R&D, AAAS Report V, 1981 by Willis H. Shapley, Albert H. Teich, Gail J. Breslow, and Charles V. Kidd paper, \$7.00

Also Available

R&D: AAAS Report IV, 1980 R&D: AAAS Report III, 1979 R&D: AAAS Report II, 1978 R&D: AAAS Report I, 1977

paper, \$5.00 each

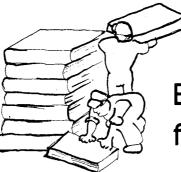
Colloquium Proceedings, 1980: R&D in an Inflationary Environment, paper, \$7.00 (available Sept. 1980)

R&D Colloquium Proceedings, 1979 R&D Colloquium Proceedings, 1978 R&D Colloquium Proceedings, 1977 R&D Colloquium Proceedings, 1976

Land

paper, \$5.00 each

Special Offer 5-volume set of either the Reports or Colloquium Proceedings, \$25.00 Entire 10-volume series, \$45.00 AAAS Sales Dept., L-1-80 1515 Massachusetts Ave., NW, Washington, DC 20005. Orders under \$10.00 must be prepaid. No further discount to AAAS members with Special Offer prices.



Build Your Library with Books from Science Magazine

Solar Energy in America

by William D. Metz and Allen L. Hammond Evaluates research strategies in the development of solar energy, covering the power tower concept; photovoltaic cells and other collectors; and biomass, wind, ocean thermal, and other energy sources. Includes illustrations, a directory of solar energy companies and wind turbine generator manufacturers, and a federal budget summary forsolar energy research, FY 1979. 256 pp. 1978 Illus. ISBN: 0-87168-238-9 (paper) \$8.50

Combating the #1 Killer: The Science Report on Heart Research

by Jean L. Marx and Gina Bari Kolata Presents readable, in-depth looks at the epidemiology of heart disease, its diagnosis and relationship to lifestyle, the most promising current and projected treatments, research in progress, and ethical problems which may confound research results. The authors won the American Heart Association's Blakeslee Award for the Science articles on which this book is based. 224 pp. 1978 Illus. ISBN: 0-87168-235-4 (paper) \$7.50

Science Compendia Series

Advanced Technology

Edited by Philip H. Abelson and Mary Dorfman 168 pp. 1980 Illus. ISBN: 0-98168-303-2 (cloth) \$14.00 ISBN: 0-87168-249-0 (paper) \$ 6.00

Electronics:

Price

The Continuing Revolution Edited by Philip H. Abelson and Allen L. Hammond 224 pp. 1977 Illus. ISBN: 0-87168-217-6 (cloth) \$10.00 ISBN: 0-87168-230-3 (paper) \$3.50

*Energy: Use, Conservation and

Supply (Vol. 1) Edited by Philip H. Abelson 160 pp. 1974 Illus. ISBN: 0-87168-213-3 (cloth) \$10.00 ISBN: 0-87168-237-0 (paper) \$3.50

*Energy: Use, Conservation, and Supply (Vol. 2) Edited by Philip H. Abelson and

Allen L. Hammond 208 pp. 1978 Illus. ISBN: 0-87168-300-8 (cloth) \$12.00 ISBN: 0-87168-237-0 (paper) \$5.00

Total

Food: Politics, Economics, Nutrition, and Research

Edited by Philip H. Abelson 208 pp. 1975 Illus. ISBN: 0-87168-215-X (cloth) \$10.00 ISBN: 0-87168-226-5 (paper) \$3.50

Health Care: Regulation,

Economics, Ethics, Practice Edited by Philip H. Abelson 262 pp. 1978 Illus. ISBN: 0-87168-302-4 (cloth) \$12.00 ISBN: 0-87168-240-0 (paper) \$5.00

Materials: Renewable and

Nonrenewable Resources Edited by Philip H. Abelson and Allen L. Hammond 208 pp. 1978 Illus. ISBN: 0-87168-216-8 (cloth) \$10.00 ISBN: 0-87168-225-3 (paper) \$3.50

Population: Dynamics, Ethics, and Policy

Edited by Priscilla Reining and Irene Tinker 208 pp. 1975 Illus. ISBN: 0-87168-214-1 (cloth) \$10.00 ISBN: 0-87168-225-7 (paper) \$3.50

*Special two-volume price: hardbound \$20.00, paperbound \$7.00

Build my library, AAAS! Send me the following books:

Bill me (all orders under \$10.00 must be prepaid)
Payment enclosed (10% discount to AAAS members on prepaid orders)**

	Name
	Address
	CityStateZip
	Please allow 6-8 weeks for delivery.
— 10% discount**	Order from: AAAS, Dept. J-1-80, 1515 Massachusetts Ave., NW, Washington, DC 20005
TOTAL	

of

Copies Title

ISSN 0036-8075

2 January 1981

Volume 211, No. 4477

SCIENCE

	LETTERS	Pub	lic Health Issues: I M. Levine			0 .			· · · ·	6
	EDITORIAL	Affi	nities Between Sci	entists and H	Humanists: J.	M. Banner,	Jr		<i>.</i>	9
	ARTICLES	Syn	thesis Gas: A Raw	Material for	· Industrial Cł	emicals: R.	L. Pruett			11
		Imp	act on Agriculture	of the Mour	it St. Helens H	Eruptions: R	. J. Cook	et al		16
		The	Hawaii to Tahiti S	huttle Expe	riment: K. Wy	<i>ertki</i> et al	, 			22
NEWS	AND COMMENT	An	Early Test of Reag	an's Econon	nics					29
		Pen	tagon Orders End 1	to Computer	Babel		<i></i>			31
		The	Complete Index to	Man						33
		Din	osaur Battle Erupt	s in British N	Auseum					35
		Brie	<i>fing:</i> Joint Researc Consciousness Ra Second Gene Spli	aising; Long	-Awaited Ch	anges Made	in Patent	Law;	· · · ·	36
RE	SEARCH NEWS	Mya	asthenia Gravis Ur	ider Monocl	onal Scrutiny					38
		Ant	hropology Meeting	g Highlights	: Biology and	i Culture M	eet in Mil	k;		40
		0	Disease Clue to I	-						40
		Con	sensus on Bypass	Surgery				• • • • •		42
	AAAS NEWS	Scie	nce Celebrates 100 Report of West Af							44
В	OOK REVIEWS		Rainmakers, <i>revie</i> American Cities, 1 J. B. Hutchings; T M. C. Caldwell an	1870-1930, <i>L</i> The Red Fox	. P. Cain; Clo , E. D. Ables;	ose Binary S Animal Sor	tars, 1ar Systen	15,		46
BOARD OF DIRECTORS	KENNETH E. BOULD Retiring President, Ch	NG airman	FREDERICK MOSTEL	LER D. ALL Presid	AN BROMLEY	ELOISE (MARTIN	E. CLARK M. CUMMINGS		ENÉE C. FOX	
CHAIRMEN AND SECRETARIES OF AAAS SECTIONS	MATHEMATICS (A) Herbert B. Keiler Ronald Graham		PHYSICS (B) William M. Fair Rolf M. Sinclair	bank	CHEMIS H. S. Gut William L.	TRY (C) owsky		ASTRONO Tobias Ow Donat G. V	OMY (D) ven	
AAAJ JEGHUNJ	PSYCHOLOGY (J) Lioyd G. Humphreys Meredith P. Crawford		SOCIAL AND ECONOMIC Kingsley Davis Gillian Lindt	C SCIENCES (K)	HISTORY AND PH Brooke Hindle Diana L. Hall	HLOSOPHY OF S	CIENCE (L)	ENGINËERI H. Norinan A Donald E. Ma	NG (M) bramson arlowe	
	EDUCATION (Q) Joseph D. Novak Roger G. Oistad		DENTISTRY (R) Robert J. Genco Harold M. Fullmer	PHARMACEUTI David A. Knapp Robert A. Wiley	CAL SCIENCES (S)	INFORMATIC Henry M. Kis: Madeline M. I	DN, COMPUTI sman Henderson	NG, AND CC	MMUNICATI	iON (T)
DIVISIONS		ALA	SKA DIVISION		PACIFIC DIVISION	1	SOUTHWEST	ERN AND R		ITAIN DIVIS
	John Bligh President		T. Neil Davis Executive Secretary	Beatrice M. President		an E. Leviton ecutive Director	Sam Shu Presiden			chelle Balcon utive Officer
SCIENCE is published weekly on Friday 20005. Second-class postage (publication the Advancement of Science, Domestic inc.	y, except the last week i No. 484460) paid at Was	n Decer	mber, by the American As D.C., and at an additional e	sociation for the ntry. Now combine	Advancement of S ed with The Scientif	cience, 1515 Mas le Monthly®. Cop	sachusetts A byright © 1980	venue, NW. by the Ameri	Washington can Associati	, D.C. ion for

SCIENCE is published weekly on Friday, except the last week in December, by the American Association for the Advancement of Science, 1515 Massachusetts Avenue, NW. Washington, D.C. 20005. Second-class postage (publication No. 484460) paid at Washington, D.C., and at an additional entry. Now combined with The Scientific Monthly®. Copyright © 1980 by the American Association for the Advancement of Science. Domestic individual membership and subscription (51 issues): \$38. Domestic institutional subscription (51 issues): \$76. Foreign postage extra: Canada \$14, other (surface mail) \$17, air-surface via Amsterdam \$45. First class, airmail. school-year, and student rates on request. Single copies \$1.50 (\$2 by mail); back issues \$2.50 (\$3 by mail); classroom rates on request. Change of address: allow 6 weeks, giving old and new addresses and seven-digit account number. Postmaster: Send Form 3579 to Science, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005. Science is indexed in the Reader's Guide to Periodical Literature and in several specialized indexes.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

REPORTS	Stress Anomaly Accompanying the 1979 Lytle Creek Earthquake: Implications for Earthquake Prediction: B. R. Clark	51
	Siliceous Microfossils from the Lower Cambrian of Northwest Canada: Possible Source for Biogenic Chert: C. W. Allison	53
	Strain on the San Andreas Fault Near Palmdale, California: Rapid, Aseismic Change: J. C. Savage et al.	56
	Cellulose Metabolism by the Flagellate <i>Trichonympha</i> from a Termite Is Independent of Endosymbiotic Bacteria: <i>M. A. Yamin</i>	58
	Effect of Adenosine 3',5'-Monophosphate on Neuronal Pacemaker Activity: A Voltage Clamp Analysis: S. N. Treistman	59
	Lactose Facilitates the Intestinal Absorption of Lead in Weanling Rats: P. J. Bushnell and H. F. DeLuca	61
	Binding and Mobility of the Cell Surface Receptors for 3,3',5-Triiodo-L-Thyronine: F. R. Maxfield et al.	63
	Differentiation of Murine Bone Marrow Stem Cells in vitro: Long-Term Growth Promoted by a Lymphocyte-Derived Mediator: A. Altman, T. D. Gilmartin, D.H. Katz.	65
	Dye Coupling and Possible Electrotonic Coupling in the Guinea Pig Neocortical Slice: M. J. Gutnick and D. A. Prince	67
	Identification of Tissue-Specific Nuclear Antigens Transferred to Nitrocellulose from Polyacrylamide Gels: W. F. Glass II, R. C. Briggs, L. S. Hnilica	70
	Pituitary Intermediate Lobe in Dog: Two Cell Types and High Bioactive Adrenocorticotropin Content: N. S. Halmi et al.	72
	Immunophagocytic Properties of Retinal Pigment Epithelium Cells: V. M. Elner et al	74
	Resource Partitioning During Reproduction in the Norway Rat: B. Woodside et al.	76
	A Metric for Thought: A Comparison of P300 Latency and Reaction Time: G. McCarthy and E. Donchin	77
	Cyclophosphamide-Induced Spermatogenic Effects Detected in the F ₁ Generation by Behavioral Testing: P. M. Adams, J. D. Fabricant, M. S. Legator	80
	β-Endorphin: Possible Involvement in the Antihypertensive Effect of Central α-Receptor Activation: G. Kunos et al.	82
	Thermoregulatory Significance of Thoracic Lobes in the Evolution of Insect Wings: M. M. Douglas	84
	Technical Comments: Ape Language: D. Bindra; F. G. Patterson; H. S. Terrace et al.	86

	JOHN C. SAWHILL HARRIET ZUCKERMAN	WILLIAM T. GOLDEN Treasurer	WILLIAM D. CAREY Executive Officer	
GEOLOGY AND GEOGRAPHY Doris Malkin Curtis Ramon E. Bisque	(E) BIOLOGICAL SCIE Thomas Eisner Walter Chavin		ANTHROPOLOGY (H) Edward I. Fry Priscilla Reining	COVER Profile view of volcanic ash from
/EDI&AL SCIENCES (N) Philip K. Bondy Jeah M. Lowenstein	AGRICULTURE (O) Roger L. Mitchell Coyt T. Wilson		NDUSTRIAL SCIENCE (P) John D. Caplan Robert L. Stern	Mount St. Helens deposited on soil sur- face around stems of wheat plants near
•TATIOTICS (U) Decar Kempthome Ezra Glaser	ATMOSPHERIC AN SCIENCES (W) Edward S. Epstein Glenn R. Hilst		GENERAL (X) Vera Kistiakowsky S. Fred Singer	Lind, Washington. Most of the ash was shed from the wheat foliage and settled around the bases of the stems. A record wheat crop was harvested in Washing.

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to toster scientific freedom and responsibility, o improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and hppreciation of the importance and promise of the methods of science in human progress. Profile view of volcanic ash from Mount St. Helens deposited on soil surface around stems of wheat plants near Lind, Washington. Most of the ash was shed from the wheat foliage and settled around the bases of the stems. A record wheat crop was harvested in Washington because of the above normal rainfall in June and possibly because of the ash "mulch" on the soil surface. See page 16. [R. J. Cook, Regional Cereal Disease Laboratory, U.S. Department of Agriculture, Pullman, Washington 99164]

COMBATING THE #I KILLER

The SCIENCE Report on Heart Research

JEAN L. MARX and GINA BARI KOLATA

— based on a series of SCIENCE Magazine articles on cardiovascular disease that won the American Heart Association's Blakeslee Award.

— a direct, unbiased report with information for all investigators in the field, makers of public policy, scientists, and the general public.

Order your copy now — and investigate the details that you ought to know about heart disease and the steps you could take to prevent it.

224 pp. 1978 Illus. 0-87168-219-2 (cloth) \$17.00 0-87168-235-4 (paper) \$7.50

Send name, address and remittance to

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Department B-3V-80 1515 Massachusetts Avenue, NW Washington, DC 20005

Please allow 6-8 weeks for delivery. 10% discount to AAAS members on prepaid orders. All orders under \$10.00 must be prepaid.

Until winning isn't everything, the public <u>is</u> damned.

Nuclear waste v. cheap energy; the DC-10 disaster v. air travel; genetic engineering v. reducing birth defects. Complex socioscientific issues like these cannot be adequately addressed by our "either/or" system of dispute resolution, asserts legal scholar Milton R. Wessel. How to truly serve the public interest—by replacing winner-take-all adversary law with "the rule of reason"—is spelled out in SCIENCE AND CONSCIENCE, a work that every concerned citizen should read.



ENVIRONMENTAL SCIENCE AND ENGINEERING FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for summer environmental science and engineering fellowships. Applications are invited from postdoctoral to mid-career scientists, engineers, and other appropriate professionals. Six such fellowships are available for the summer of 1981. The deadline for application is 1 February 1981. The 10-week appointment begins approximately 1 June 1981 and lasts until approximately 15 August 1981. The awards will be announced prior to 15 April 1981.

The persons selected will work closely with the Environmental Protection Agency's Office of Strategic Assessment and Special Studies (OSASS) and assist it in identifying and assessing the significance of long-range environmental problems and opportunities. The award consists of a taxable stipend of \$500 per week and a nominal additional amount for temporary relocation expenses and travel in connection with the fellow-ship.

Each awardee will be assigned part or all of a policy research project of mutual interest to the fellow and OSASS and prepare a report at the completion of the focused research. The selection of projects and research approach will be designed to meet the two purposes to the program stated above as well as to draw upon the particular talents and interests of each fellow. Areas of interest include: mobile source air pollution; oxidants, gases, and particles; hazardous municipal wastewater and spills; drinking water; solid hazardous waste; chemical testing and assessment; pesticides; radiation; and energy.

Candidates are expected to be critical thinkers, articulate, adaptable, and able to work with a variety of people from different professional backgrounds. Persons may apply from any physical, biological, or behavioral science or any field of engineering or any other relevant professional field.

Persons interested in further information and details on selection criteria and requirements should write to: Environmental Science and Engineering Fellowship Program, American Association for the Advancement of Science, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Science serves its readers as a forum for the presenta-tion and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by pub-lishing only material on which a consensus has been reached. Accordingly, all articles published in *Science* including editorials, news and comment, and book re-views—are signed and reflect the individual views of the authors and not official points of view adopted by the AAAS or the institutions with which the authors are af-filiated.

Editorial Board

1981: PETER BELL, BRYCE CRAWFORD, JR., E. PETER GEIDUSCHEK, EMIL W. HAURY, SALLY GREGORY KOHLSTEDT, MANCUR OLSON, PETER H. RAVEN, WIL-LIAM P. SLICHTER, FREDERIC G. WORDEN 1982: WILLIAM ESTES, CLEMENT L. MARKERT, JOHN R, PIERCE, BRYANT W. ROSSITER, VERA C. RUBIN, MANINE F. SINCER PALL E. WACCONER, ALEXANDER

MAXINE F. SINGER, PAUL E. WAGGONER, ALEXANDER ZUCKER

Publisher

WILLIAM D. CAREY

Editor

PHILIP H. ABELSON

Editorial Staff Managing Editor ROBERT V. ORMES Assistant Managing Editor JOHN E. RINGLE

Business Manager HANS NUSSBAUM **Production Editor** ELLEN E. MURPHY

News Editor: BARBARA J. CULLITON News and Comment: WILLIAM J. BROAD, CON-STANCE HOLDEN, ELIOT MARSHALL, R. JEFFREY SMITH, MARIORIE SUN, NICHOLAS WADE, JOHN WALSH Research News: RICHARD A. KERR, GINA BARI KO-LATA, ROGER LEWIN, JEAN L. MARX, THOMAS H. MAUGH II, ARTHUR L. ROBINSON, MITCHELL WAL-DOD

DROP

Administrative Assistant, News: SCHERRAINE MACK. Editorial Assistants, News: FANNIE GROOM, CAS-

- Editorial Assistants, News: FANNIE GROOM, CAS-SANDRA WATTS Consulting Editor: Allen L. HAMMOND Associate Editors: Eleanore Butz, Mary Dorf-MAN, Sylvia Eberhart, Ruth Kulstad
- Assistant Editors: MARTHA COLLINS, CAITILIN GOR-DON, STEPHEN KEPPLE, EDITH MEYERS, LOIS SCHMITT Book Reviews: KATHERINE LIVINGSTON, Editor; LINDA HEISERMAN, JANET KEGG Letters: CHRISTINE GILBERT Copy Editor: ISABELLA BOULDIN

Production: NANCY HARTNAGEL, JOHN BAKER; ROSE OWERY; HOLLY BISHOP, ELEANOR WARNER; MARY McDaniel, Jean Rockwood, Leah Ryan, Sharon RYAN

Covers, Reprints, and Permissions: GRAYCE FINGER,

Guide to Scientific Instruments: Richard G. Sommer Assistants to the Editors: Susan Elliott, Diane HOLLAND

Membership Recruitment: Gwendolyn Huddle Membership Recruitment: GWENDOLYN HUDDLE Member and Subscription Records: ANN RAGLAND EDITORIAL CORRESPONDENCE: 1515 Massachu-setts Ave., NW, Washington, D.C. 20005. Area code 202. General Editorial Office, 467-4350; Book Reviews, 467-4367; Guide to Scientific Instruments, 467-4480; News and Comment, 467-4430; Reprints and Per-missions, 467-4483; Research News, 467-4321. Cable: Advancesci, Washington. For "Instructions for Contrib-utors", write to the editorial office or see page xi Sciutors," write to the editorial office or see page xi, *Science*, 19 December 1980. BUSINESS CORRESPONDENCE: Area Code 202.

Membership and Subscriptions: 467-4417.

Advertising Representatives

Director: EARL J. SCHERAGO Production Manager: GINA REILLY Advertising Sales Manager: RICHARD L. CHARLES Marketing Manager: HERBERT L. BURKLUND

Sales: NEW YORK, N.Y. 10036: Steve Hamburger, 1515 Broadway (212-730-1050); Scotter PLAINS, N.J. 07076: C. Richard Callis, 12 Unami Lane (201-889-4873); CHI-CAGO, ILL. 60611: Jack Ryan, Room 2107, 919 N. Mich-igan Ave. (312-337-4973); BEVERLY HILLS, CALIF. 90211: Winn Nance, 111 N. La Cienega Blvd. (213-657-2772); DORSET, VT. 05251: Fred W. Dieffenbach, Kent Hill Rd. (802-867-5581).

ADVERTISING CORRESPONDENCE: Tenth floor. 1515 Broadway, New York, N.Y. 10036. Phone: 212-730-1050.

Affinities Between Scientists and Humanists

A Commission on the Humanities, sponsored by the Rockefeller Foundation, recently issued a report on the state and role of the humanities in American life.* Scientists should take heed and take heart.

For possibly the first time, a diverse group of representatives of the humanities-from schools, colleges, and universities; from libraries, the media, and public life; from foundations, museums, and business-has summoned the humanities and modern liberal education to acknowledge, rather than flee, the realities and consequences of science and technology. "If the aim is to make invention creative and humane," the Commission insists, "knowledge of the humanities must be coupled with an understanding of the characteristics of scientific inquiry and technological change. Liberal education must define scientific literacy as no less important a characteristic of the educated person than reading and writing."

Yet, asserts the Commission, if humanists bear responsibilities, long disregarded, toward the sciences, so too scientists must accept reciprocal obligations toward the humanities. "When scientists and technicians are deeply concerned about questions raised by their unprecedented success in transforming the human environment, when questions of value, responsibility, and freedom can no longer be seen as falling outside the province of scientific activity, dialogue with humanists becomes increasingly important. . . . To be a good scientist, one must be more than a scientific specialist."

Lest such truths become mere truisms, however, scientists and humanists must go beyond the Commission's injunction and accept the deep intellectual affinity between their fields. The sciences, like the humanities, are not merely subjects of study but also ways of pursuing knowledge in its many manifestations. Both-contrary to the self-congratulatory views of some people from both groups—represent the great achievements of the human mind and spirit. Both, in their distinctive manner, have created and revealed the beauties and awesome realities of nature and human civilization. It serves no purpose, nor is it accurate, to think otherwise.

Nor is it wise for scientists to deprecate the ingredients of judgment, intuition, and ambiguity in the work of the humanities or for humanists to conceive of science and technology as the products of mere positivism. As we now know, the intellectual grandeur and predicaments shared by the sciences and humanities are as numerous and profound as the qualities and problems that may distinguish them. Scholars in both worlds confront the fragmentation and uncertainty of all knowledge and are faced with weak public understanding and declining support. And both scientists and humanists know the peril of claiming too much-that knowledge of Shakespeare makes for right conduct or that familiarity with the universe will put an end to human ills and discontent.

Sharing so much, the sciences and the humanities must therefore now conclude a new partnership on behalf of all knowledge and understanding. The communities of both—though the community of the humanities remains far less organized-should become more closely involved at all levels and in all pursuits. For without joint efforts-intellectual, institutional, and civicboth will suffer and, along with them, American culture will suffer, too. -JAMES M. BANNER, JR., Chairman, American Association for the Advancement of the Humanities, 918 16th Street, NW, Washington, D.C. 20006

*The Humanities in American Life, University of California Press, Berkeley, 1980. xiii + 192 pp.

SCIENCE

ANNOUNCING THE NEW **AAAS SCIEN** Featuring COVE • a new 13" x 26", easy-to-read wall format 14 striking full-color reproductions of Science covers, with detailed CALENDAR descriptions birth dates of notable contributors to scientific thought dates of AAAS meetings, symposia, and conferences FOR 1981 legal holidays AAAS membership information

large blocks for making notations

The 4th annual AAAS Science Cover Calendar is a useful, informative, and attractive complement to home or office and also makes a great gift. Send for copies for you and your friends today!

Name		Address		
City		State	Zip	
Please send	copy(ies) to a friend (\$4.00/\$3.50 to AAAS members).	
Name		Address		
City		State	Zip	