

OF THE WEEK

the science budget:	
emphasis on applied research	68
biomedical science hard hit	69
science funds impounded	69
military r&d bolstered	69
space at a decade low	70
critics hit ost demise	70
crew for soviet-u.s. mission	71
witnessing a star's birth	71
tool-use by baboons	71
improving on the x-ray	72
trace-element multimonitor	72

NOTES

space sciences	73
behavioral sciences	73
medical sciences	74
earth sciences	74

ARTICLES

qolla hyperaggressivity	76
pollution drilling in california	78

DEPARTMENTS

letters	67
books	75

COVER: Qolla villagers in South America use locally made shotguns to hunt ducks and sometimes bothersome neighbors. An ethnographer suggests that these overly aggressive people may be suffering from hypoglycemia. See p. 76. (Photo: Ralph Bolton)

Publisher	E. G. Sherburne Jr.
Editor	Kendrick Frazier
Aerospace	Everly Driscoll
Behavioral Sciences	Robert J. Trotter
Earth Sciences	Louise A. Purrett
Medical Sciences	Joan Arehart-Treichel
Physical Sciences	Dietrick E. Thomsen
Staff Writer	John H. Douglas
Copy Editor	Nadine Clement
Assistant to the Editor	Esther Gilgoff
Production Manager	Dauida Daemon
Books	Margit Friedrich
Circulation Manager	Lawrence Cope
Advertising	Scherago Associates, Inc. 11 W. 42nd St., New York, N.Y. 10036 Fred W. Dieffenbach Sales Director

Copyright © 1973 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS is strictly prohibited.

Subscription Department
231 West Center Street
Marion, Ohio 43302

Subscription rate: 1 yr., \$10; 2 yrs., \$18; 3 yrs., \$25. (Add \$2 a year for Canada and Mexico, \$3 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. Established as Science News Letter® in mimeograph form March 13, 1922. Title registered as trademark U.S. and Canadian Patent Offices.

VICE, Inc., 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255). Cable: SCIENSERV. Published every Saturday by SCIENCE SER-

to the editor

Overspecialization in science

The evils of specialization emphasized in "Science: Self-criticism and self-defense" (SN: 1/6/73, p. 4), might be traceable to the Ph.D. degree, which has come to imply extreme specialization.

Perhaps it would be better to reserve the Ph.D. (Doctor of Philosophy) degree more for philosophers, and place more emphasis on the Master of Science degree in science. A Master of Science should believe in a general unifying approach, and should abhor overspecialization.

What good does it do to become the greatest specialist in the world, in nothing?

Kenneth J. Epstein
Chicago, Ill.

Intellectuals and science

The excerpts from Joseph F. Coates' speech (SN 1/6/73, p. 6) make it clear that his anger against intellectuals is inspired by something other than reason and understanding. He fails to distinguish between persons like Wald and Kistiakowsky (both scientists and intellectuals) on the one hand and someone like Lewis Mumford (an intellectual with no knowledge of modern science) on the other. Coates makes it clear by the tone of his remarks why many intellectuals do not, in fact, know much science. He is just as hostile toward them as they are toward his interests.

Bruce S. Eastwood
Associate Professor
Department of History
Kansas State University
Manhattan, Kan.

Coates states, "science and the derivative technologies are the leading edge of intellectual development." I contend that intellectualism (an unfortunately but necessarily vague term) possesses such a great number of facets that a "leading edge" is definitely an impossibility. I would not presume to relegate inquiry that is nonscientific in orientation to some secondary category. Man's soul must grow with his tools. Neither would I wholeheartedly applaud "derivative technologies" as a "leading edge," for a good many of these new developments might send the human race over that edge for all eternity whether it be weapons of destruction or genetic engineering in the hands of men who allow science and technology to stand alone as gods.

I am no zealot of mysticism, and I agree with Coates that intellectual leaders should certainly possess some knowledge of organic chemistry and other important fields in science. Yet, I believe it is vital that some members of this nebulous intellectual category continue to remain divorced from our own technological creations in order that some sort of perspective is available in time of decision. Even Coates must agree that mankind must savor its romantic qualities and non-scientific creativity or be lost in the scientific rush ahead.

Robert A. Jack
Portland, Ore.

More on 'doomsday'

A critical analysis of John Maddox's "The Doomsday Syndrome" is offered by Ehrlich and Holden in "The Hysteria Against the Case" recently reprinted from the London Times (Z.P.G. National Reporter, Vol. 4, No. 9, Oct. 1972).

Readers of your editorial "The Men Who Cry Doomsday" (SN: 12/9/72, p. 371) may wish to familiarize themselves with the pervasive errors in Maddox's arguments and his limited grasp of contemporary environmental problems before accepting on the basis of emotional concord as seems to underlie your support of this book.

Daniel G. Wall
Norton, Ohio

Universal cycles

I found your article "Time-reversed shadows from future passed" (SN: 11/18/72, p. 325) quite interesting. You noted that inhabitants of a universe in which the direction of time was opposite to that of ours would not notice the difference. You further stated that this "idea may drive some cosmologists up the wall." Although I do not know the arguments cosmologists might use against this idea, the idea itself seems quite logical. The important thing about events existing in time is that time "progresses" from one "point" to another, the ideas of past and future describe events, not time itself. In this sense the idea in question does not appear to be strange at all.

Jim Stephens
Chamblee, Ga.

*Address communications to Editor,
Science News, 1719 N Street, N.W.
Washington, D. C. 20036*

SCIENCE SERVICE

Institution for the Popularization of Science founded 1921; a nonprofit corporation

Board of Trustees—Nominated by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: **Bowen C. Dees**, The Franklin Institute; **Athelstan Spilhaus**, Woodrow Wilson International Center for Scholars; **Deborah Partridge Wolfe**, Queens College. Nominated by the NATIONAL ACADEMY OF SCIENCES: **Gerald F. Tape**, Associated Universities; **Allen V. Astin**, National Bureau of Standards; **Frederick Seitz**, Rockefeller University. Nominated by the NATIONAL RESEARCH COUNCIL: **Gerald Holton**, Harvard University; **Jacob Rabinow**, National Bureau of Standards; **Glenn T. Seaborg** (President), University of California at Berkeley. Nominated by the JOURNALISTIC PROFESSION: **Norman Cousins**, "World"; **Julius Duscha**, Washington Journalism Center; **O. W. Riegel** (Secretary), Washington and Lee University. Nominated by the E. W. SCRIPPS TRUST: **Milton Harris** (Treasurer), Washington, D.C.; **Edward W. Scripps II** (Vice President and Chairman of the Executive Committee), Edward W. Scripps Trust; **John Troan**, Pittsburgh Press.

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless; Staff: Things of Science: Ruby Yoshioka.