

THIS WEEK

Alcoholism study attacked 20
The shuttle's return 20
Dinosaur nesting sites 22
Asbestos flooring causes concern 22
Galactic energy sans black hole 23
Fetal sickle cell anemia test 23

RESEARCH NOTES

Environment 27
Science & Society 27

ARTICLES

Child abuse: Not for humans only 24
IQ: East vs. West 28

DEPARTMENTS

Books 18
Letters 19

COVER: At least one researcher is convinced that certain monkeys are high-strung from birth and that these monkeys are more likely to become poor mothers. This would explain the occurrence of child abuse in the wild, a phenomenon that other researchers dispute. See p. 24. (Photo courtesy of the University of Wisconsin Primate Laboratory)

PUBLISHER: **E. G. Sherburne Jr.**

EDITOR: **Joel Greenberg**

SENIOR EDITOR/PHYSICAL SCIENCES:
Denrick E. Thomsen

ASSISTANT EDITOR: **Judy Klein**

BEHAVIORAL SCIENCES: **Wray Herbert**

BIOMEDICINE: **Joan Arehart-Treichel**

CHEMISTRY: **Linda Garmon**

EARTH SCIENCES: **Cheryl Simon**

LIFE SCIENCES: **Julie Ann Miller**

POLICY/TECHNOLOGY:
Janet Raloff, Ivars Peterson

SPACE SCIENCES: **Jonathan Eberhart**

CONTRIBUTING EDITORS: **Lynn Arthur Steen (mathematics), Kendrick Frazier, John H. Douglas, Michael A. Guillen**

SCIENCE WRITER INTERNS: **Laura Tangley, Kathy A. Fackelmann**

ART DIRECTOR: **Ileana Mendez**

ASSISTANT TO THE EDITOR: **Betsy Gordon**

BOOKS: **Jane M. Livermore**

BUSINESS MANAGER: **Donald R. Harless**

ADVERTISING: **Scherago Associates, 1515 Broadway, New York, N.Y. 10036, Fred Dieffenbach, Sales Director**

Copyright © 1982 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Editorial and Business Offices
1719 N Street, N.W.
Washington, D.C. 20036

Subscription Department
231 West Center Street
Marion, Ohio 43302

Subscription rate: 1 yr., \$27.50; 2 yrs., \$47.50; 3 yrs., \$67.00. (Foreign postage \$5.00 additional per year.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code. For new subscriptions only call (1) 800-247-2160. Printed in U.S.A. Second class postage paid at Washington, D.C. Title registered as trademark U.S. and Canadian Patent Offices. Published every Saturday by SCIENCE SERVICE, Inc. 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255)
ISSN 0036-8423

JULY 10, 1982

LETTERS

Ask the experts

The article, "Radioactive Waste: Perceptions of Risk" (SN: 3/20/82, p. 199) clearly indicates some of the difficulties nuclear power generation is now facing. The paper stated that six groups of polled respondents consistently rated nuclear energy and its associated wastes storage as the highest risk industry in the U.S. The respondents included nuclear engineers, environmentalists, science writers and residents of large and small cities. Would the two Battelle social psychologists expect technical persons, such as civil engineers or chemical engineers, trained in their own specialty, but relatively incompetent in another scientific discipline, to project reasonable and technically correct answers to a specific poll? Such a situation would be similar to asking an industrial engineer or mathematician the risks or hazards of a brain operation as compared to heart surgery.

It is clear, to even the most casual public observer, that risks exist with the use of nuclear energy in its varied forms. What is not clear or even accepted by the general public, including some technical persons, are the relative risks of nuclear energy compared to other technological or sociological endeavors. However, it is equally clear that rational decisions and national approaches must be made by persons thoroughly knowledgeable of these risks.

For example, is it not ironic that cigarette smoking and other high risk activities do not receive an equivalent amount of concern from individuals and groups? Almost everyone agrees that cigarette smoking is definitely hazardous to one's health; yet smoking continues to flourish in all professions, groups and sexes.

The social psychologists in the article reflected that unless the perceptions about nuclear energy use are altered, most people will reject nuclear facilities being in close proximity to them. This statement "smells" of the need for further training and public awareness. Most nuclear trained scientists and engineers would state that the public and private training and scrutiny in nuclear energy have been enormously intense since March 29, 1979 (incident at Three Mile Island). These activities have been, for the most part, useless. Training has miserably failed, I believe, in succeeding to alter, in significant numbers, wrong ideas and misguided opinions. If this is true, what will suffice in causing persons to dismiss gross biases and ill-conceived fears so that decisions can be made objectively? It is my belief that some technology decisions must be made by the most informed people, not all the people. Nuclear energy and other advanced technologies, by their very nature, require decisions contrary to the basic principles of this country.

*C.G. Hudson, Ph.D.
Muscle Shoals, Ala.*

Metaphysical speculation

As a long-term reader of SCIENCE NEWS I was disappointed in the metaphysical speculation at the end of your article on fundamental constants and biology (SN: 5/15/82, p. 334). It is true that the temperature of the sun depends on the strength of its self-gravitation. It is also true that this depends on the constant G, but it also depends on the mass of the sun. If the value of G were different, then stars of some different mass would have surface temperatures causing radiation which peaks in the range of wavelengths not absorbed by water. And in that case, life would presumably have developed on planets around those stars.

In fact, stars hotter than the sun, whose radiation peaks in the ultraviolet, give off more radiation in the so-called water window than the sun, and indeed they give off more radiation at all wavelengths than the sun.

In the vastness of the universe there are all types of stars, and presumably a wide variety of types of planets. The values of fundamental constants no doubt influence the probability of life on each of these, and the existing combination allows life on earth. But we already knew that.

*Beth Stoeckly
Santa Barbara, Calif.*

Don't blame the victim

Janet Raloff's article on occupational noise (SN: 5/22/82, p. 347) provided needed coverage of an issue that is often ignored. However, the discussion of measures to prevent loss of hearing was misleading. One would get the impression that personal protective measures are the only methods of safeguarding workers' hearing. In fact, though, the most effective noise control methods are engineering controls: machine design, the use of mufflers and the design of buildings are among them. It should also be noted that OSHA mandates an emphasis on engineering controls to protect worker health, and designates personal protective devices only as methods of last resort.

While the technology is available to employers to reduce noise, we should not be "blaming the victim," by emphasizing the misuse of personal protective devices by workers, who are only reacting to what are, at best, uncomfortable and only partially effective measures.

*Richard Rabin
Northampton, Mass.*

Not all in the mind

I was very interested in the article "Suicide Linked to Brain Chemical Deficit" (SN: 5/29/82, p. 355) which linked suicide to low levels of serotonin. I seem to remember other studies which linked pre-menstrual tension to both suicides and violent crimes by women. Is it possible that the level of serotonin varies with a woman's menstrual cycle? Too many doctors dismiss pre-menstrual tension as "all in the mind" ... maybe it's a chemical imbalance in the mind.

*Leah R. O'Connor
Chicago, Ill.*

SCIENCE SERVICE

Institution for the public understanding of science founded 1921; a nonprofit corporation.

Board of Trustees—*President, Glenn T. Seaborg*, University of California, Berkeley, CA; *Vice President, Gerald F. Tape*, Associated Universities, Washington, DC; *Treasurer, Milton Harris*, Washington, DC; *Secretary, Julius Duscha*, Washington Journalism Center, Washington, DC; *Allen V. Astin*, Bethesda, MD; *Joseph W. Berg Jr.*, National Research Council, Washington, DC; *Edward Bliss Jr.*, Newburyport, MA; *Bowen C. Dees*, The Franklin Institute, Philadelphia, PA; *David A. Goslin*, National Research Council, Washington, DC; *Elizabeth Neufeld*, National Institutes of Health, Bethesda, MD; *O. W. Riegel*, Glasgow, VA; *Edward W. Scripps II*, Edward W. Scripps Trust, Carson City, NV; *Willis Harlow Shapley*, Washington, DC; *John Troan*, Pittsburgh Press, Pittsburgh, PA; *Deborah P. Wolfe*, Queens College of City University of New York, Flushing, L.I., NY.

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless.