

OF THE WEEK

Contaminated feed spreads PCB's	228
Monogamy appears to be on the wing	229
Cosmic background study: We're going places	229
Tellico Dam: Environmentalists over a barrel	230
The why's behind heart death declines	230
NASA may extend Mars missions	231

RESEARCH NOTES

Chemistry	232
Earth Sciences	232
Biomedicine	233
Space Sciences	233

ARTICLES

Linear programing lessens math nightmare	234
------------------------------------------	-----

DEPARTMENTS

Books	226
Letters	227
Off the Beat	236

COVER: Geometry often intervenes to help solve mathematical problems that are basically numerical, like finding the best way to assign differently qualified workers to different jobs. Here on flat paper is an impression of what happens to 50 or 100 dimensions when 50 or 100 planes intersect to box in a solution. See p. 234. (Illustration: John Ellis.)

Publisher	E. G. Sherburne Jr.
Editor	Robert J. Trotter
Senior Editor and Physical Sciences	Dietrick E. Thomsen
Behavioral Sciences	Joel Greenberg
Biomedicine	Joan Arehart-Treichel
Earth Sciences	Susan West
Life Sciences	Julie Ann Miller
Policy/Technology	Janet Raloff
Space Sciences	Jonathan Eberhart
Contributing Editors	Lynn Arthur Steen (mathematics) Kendrick Frazier John H. Douglas Michael A. Guillen Susan Walton
Science Writer Intern	Judy Klein
Assistant Editor	Dale Appleman
Art Director	Angela Musick
Assistant to the Editor	Jane M. Livermore
Books	Donald Harless
Business Manager	Scherago Associates 1515 Broadway New York, N.Y. 10036
Advertising	Fred W. Dieffenbach, Sales Director

Copyright © 1979 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
Telephone (1) 800—247-2160

Subscription rate: 1 yr., \$15.50; 2 yrs., \$27.00; 3 yrs., \$37.50 (Add \$3 a year for Canada and Mexico, \$4 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. 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)
TWX 710-822-9433 SCIEN NEWS. ISSN 0036-8423

LETTERS

SETI, friends and opponents

The write-up of the symposium on SETI at the IAU meeting in Montreal (SN: 8/25/79, p. 132) contained several significant errors. Most SETI enthusiasts (such as Bernard Oliver) do not believe that "once a civilization achieved a certain level of technology it would just naturally spread out and colonize space." Rather, they maintain that interstellar travel is impossible, or at least impractical.

Instead, it was those persons at the symposium—such as myself—who do believe that interstellar travel is possible and will some day be a reality who were the ones who were most skeptical of the value of SETI. For if interstellar colonization is practical, then the most plausible reason why we have not been colonized is simply that there is nobody else out there (at least within this galaxy) to engage in colonization, or to signal us.

Your article gives the impression that I am a SETI enthusiast, which I certainly am not.

Michael H. Hart
San Antonio, Tex.

A sweet note

An article entitled "Controversy Over New Sweetener" (SN: 8/11/79, p. 103) displayed John Olney's one man fight to ban aspartame (a much needed replacement for saccharin). Olney's objection to the phenylalanine content of aspartame is absurd! He fears that the sweetener will "accidentally" be used by sufferers of phenylketonuria (PKU), thus causing brain damage. Fat chance!

First, the incidence of phenylketonuria in our population is 1 in 10,000. These rare cases, diagnosed immediately after birth, are put on diets strictly avoiding phenylalanine. This includes among other things all proteins. This diet must be initiated before the infant is nine months old or it is useless (see Tietz, *Fundamentals of Clin. Chem.*). But our outspoken Olney overlooks the thousands of dietary proteins available which would overdose any PKU infant. Rather, he insists that the myriad diabetics suffer the lack of an artificial sweetener for fear that 1 out of 10,000 infants will accidentally devour packets of the new artificial sweetener.

Olney's fears are unreal for a second reason. Even if phenylalanine is introduced to the PKU baby, brain damage can be prevented by simply removing the source of the amino acid from the diet. So for Olney's fear to become actuality the 1 out of 10,000 infants must accidentally devour packets of sweetener day after day for months and months! Is this scientific argument? Olney's brand of "scientific thought" is restricting many new drugs, cures and pleasures from the suffering public.

Thomas E. Holloway III,
Dallas, Tex.

Speak progress

SCIENCE NEWS is a truly outstanding publication and I have been a very pleased subscriber for many years. The informed layman should have no trouble reading and understanding any of the articles. The young readers are brought up with the latest developments and we older readers, if really informed, are constantly alert to the need to abandon the old ways and welcome the new.

If we were to cling to the language of the 1940s and 1950s, then how could we possibly comprehend the theories of quarks, quasars, neutron stars, black holes and the new cosmology?

I have been asked frequently to explain to laymen, in five minutes, the theory of time dilation. This, of course, is impossible, for the words that I would need to use would not be in the layman's vocabulary and the time required to explain each of these words would be far greater.

An active mind should welcome your expanding use of the metric system as an opportunity to become more knowledgeable than the other fellow. Had I been born and raised in China perhaps anything more modern than the abacus would have been unacceptable to me, but the slide rule, the electric calculator and the electronic solid-state calculator were successive causes for me to learn and enjoy new ways to do the same things, each one outmoding the other.

One fact remains. The younger people know the latest, as do I. However, I know the why and wherefore of mental and written mathematics, how to use the slide rule, how to use the "Monroe" or the "Frieden" electric calculators and many many more things that only my willingness to progress brought about.

If I am to teach the young, then I must know everything they know and much much more.

Rody J. Clutter
Pittsburgh, Pa.

The sterility of fashion

Of course PCB's will be increased in body fluids in a sample of 1979 students (SN: 9/15/79, p. 183). But why explain a drop in sperm count as a result of PCB's? The use of tight-fitting men's underwear, causing testicular temperatures to remain at body temperature, interferes with spermatogenesis. Better to return to boxer shorts than to dissect students.

Dennis Montre, M.D.
Minneapolis, Minn.

(If Klein, Fiorucci and others will include the three-yards-of-cotton look in their next collections. —Ed.)

Correction: The laboratory-grown insulin-producing hamster cells (SN: 7/28/79, p. 72) produce only 0.2 to 0.33 percent (not one-third) as much insulin as cells in the hamster. The cells do not produce infective SV40 viruses, but a special class of proteins commonly associated with SV40 transformed cells.

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; *Aaron Rosenthal*, Washington, DC; *Edward W. Scripps II*, Edward W. Scripps Trust, Carson City, NV; *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; Things of Science: Ruby Yoshioka.