

SCIENCE NEWS®

A Science Service Publication
Vol. 112/August 13, 1977/No. 7
Incorporating Science News Letter

OF THE WEEK

Quarks: Evidence for five	100
Harmful PBB effects	100
New baby boom looms	101
NAS O.K.'s Seafarer antenna	101
Madagascar's mystery meteorites	102
Alcohol against heart disease	103
Space colony planning	103

RESEARCH NOTES

Biology	104
Science & Society	104
Behavior	105
Biomedicine	105

ARTICLES

Stellar explosions	106
Protecting nuclear materials	108

DEPARTMENTS

Books	98
Letters	99

COVER: Amidst growing certainty of a nuclear future, there are vigorous efforts to find related safeguards against theft and sabotage. This sophisticated "padlock," developed by Sandia Laboratories for use in nuclear facilities, betrays any tampering with it. If its face or loop of optic fibers is violated, the time sequence of displayed characters (numbers and letters) will automatically change. This will be discovered during the subsequent visit by an inspector. See p. 108. (Photo: Sandia Laboratories)

Publisher E. G. Sherburne Jr.
Editor Kendrick Frazier

Senior Editor and
Physical Sciences Dietrick E. Thomsen
Behavioral Sciences Joel Greenberg
Biomedical Sciences Joan Arehart-Treichel
Life Sciences Julie Ann Miller
Space Sciences Jonathan Eberhart
Staff Reporter Michael A. Guillen

Contributing Editors:
Lynn Arthur Steen (mathematics)
Robert J. Trotter, John H. Douglas

Assistant Editor Michelle Galler Riegel

Art Director Dale Appleman

Assistant to the Editor Evelyn Harris

Books Jane Livermore

Business Manager Donald Harless

Advertising Scherago Associates, Inc.
11 W. 42nd St., New York, N.Y. 10036
Fred W. Dieffenbach, Sales Director

Copyright ©1977 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., \$12.50; 2 yrs., \$22; 3 yrs., \$30. (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. 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.

LETTERS

Metric a 'rip-off'?

The metric system's imposition upon the United States must rank as one of the greatest "rip-offs" of all time. When a 20th century version of *Extraordinary Popular Delusions and the Madness of Crowds* is written, this idiom will rate a chapter. Every single claim made for the metric system is either a misrepresentation, an over generalization, *non sequitur* or bald-faced lie.

I have some credentials for these remarks. I was the author of *Fundamentals of Dimension Metrology* which at the time of publication (1963) had perhaps the most complete discussion then in print. I was certainly not anti-metric. I was on the B80 Committee that established our decimal-inch standards. I am at present retained by the National Bureau of Standards, albeit in a different area.

It will be interesting to see the effect of your article. In spite of the science orientation of SCIENCE NEWS I expect that many will share my views.

T.N. Busch
Vice President Sales
Caswell Equipment Co., Inc.
Minneapolis, Minn.

After reading your article "U.S. Metric Conversion: Rough Road Ahead" (SN: 7/16/77, p. 42), I had to write and commend you. Through this article and your publication's continued use of "metrics," I believe you have made a valuable contribution to the conversion effort. You have given us all a reminder that conversion depends on each of us, not big business and the government, to help the U.S. conversion go smoothly.

Keep up the good work!

Doug Brenner
Jesup, Iowa

Be careful on conclusions

In behavior: "Children and a Sense of Justice" (SN: 6/18/77, p. 392), Linda Siegel's conclusions regarding her study of U.S. 4th to 12th graders are not the only possible conclusions that can be drawn from the results of that study. In fact, her conclusions may not even be among the more reasonable.

First, the finding that fewer 7th to 9th graders and fewer still 10th to 12th graders chose punishment over a fair trial, to the question

"How should the killer be treated?" than did 4th to 6th graders may not be due to a ... "development of the understanding of the law ... " nor necessarily have anything to do with ... "the growth of the child's ability to form abstractions about the political process," as Siegel concludes. These same results *could* as well, or even more so, be due to the older children having been more successfully *conditioned* to provide the "right" answer to this particular loaded question. We are, after all, a society that places a tremendous amount of emphasis on the "correctness" of providing an accused with a fair trial. This age group response, then, could simply be a reflection of long term social conditioning.

Second, the finding that the younger children attributed the assassination of King to a personal motive while the older children attributed it to a cause or conspiracy should not necessarily lead to the single conclusion that older children have a more developed ... "depersonalization of events and motives represent[ing] a growth of the child's ability to form abstractions about the political process." These same results *could* as well, or even more so, be due to the younger children being relatively ignorant of the King case, with all its findings and allegations, than could be the older children. Older children *could* be expected to list a cause, or conspiracy as significant answers simply by way of their increased exposure to this particularly well-publicized incident.

It would appear that Siegel's conclusions about her findings were made at the expense of a reasonable analysis of other obvious possibilities. In addition, one is forced to ask which political system her conclusions refer to.

Roger D. Rushton
Coos Bay, Ore.

Corrections:

• In the biomedicine note "A new class of neurotransmitters?" (July 23), we mistakenly said that most nerves in the cerebral cortex, brain-stem, caudate nucleus and thalamus were not inhibited by the enkephalin and endorphin proteins. In fact, they were inhibited, in contrast to the proteins' excitatory effect on the hippocampus.

• In "Flying Through the Cosmos" (July 16), if we are moving with reference to the microwave background and look forward in the direction of motion, we should see the background as blue-shifted (not redshifted).

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

SCIENCE SERVICE

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

Board of Trustees Nominated by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: **Deborah P. Wolfe**, Queens College of City University of New York; **Bowen C. Dees**, The Franklin Institute; **Athelstan Spilhaus**, National Oceanic and Atmospheric Administration. Nominated by the NATIONAL ACADEMY OF SCIENCES: **Gerald F. Tape** (Vice President), Associated Universities; **Allen V. Astin**, Bethesda, Md.; **Glenn T. Seaborg** (President), University of California, Berkeley. Nominated by the NATIONAL RESEARCH COUNCIL: **Gerald Holton**, Harvard University; **Joseph W. Berg Jr.**, National Research Council; **Aaron Rosenthal**, Washington, D.C. Nominated by the JOURNALISTIC PROFESSION: **Edward Bliss Jr.**, Newburyport, Me.; **Julius Duschka**, Washington Journalism Center; **O.W. Riegel** (Secretary), Glasgow, Va. Nominated by E.W. SCRIPPS TRUST: **Milton Harris** (Treasurer), Washington, D.C.; **Edward W. Scripps II**, Edward W. Scripps Trust; **John Troan**, Pittsburgh Press.

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

AUGUST 13, 1977

99