Science

A Science Service Publication Vol. 107/January 25, 1975/No. 4 Incorporating Science News Letter

Of the Week

Report on climate change	52
Saccharin and more data	53
Muscle contraction	53
Redshifts, galaxies, bridges	54
A second SMS satellite	54
AEC's demise	55
Tracing space curvature	55
Oak Ridge's name change	55

Research Notes

Physical Sciences	56
Natural Sciences	56
Space	57
Biomedicine	57

Articles

Departments	
Books	50
Letters	51
Stars of February	63

58

The new physics particles

COVER: Charmonium is not a musical instrument found in 19th-century parlors. It's one suggested characterization for the two newest discoveries in particle physics, the psi, or J, particles. Theorists are working overtime on explanations. Read all about the first of them on page 58. (Cover: Dale Appleman)

Publisher E. G. Sherburne Jr. **Editor** Kendrick Frazier Senior Editor and

Physical Sciences Dietrick E. Thomsen

Senior Editor and

New Products

Behavioral Sciences Robert J. Trotter Biomedical Sciences Joan Arehart-Treichel Chemistry and Biology Janet H. Weinberg Science and Society John H. Douglas Space Sciences Jonathan Eberhart Lisa J. Shawver Writer/Copy Editor Art Director Dale Appleman Assistant to the Editor Esther Gilgoff **Books** Margit Friedrich Advertising Scherago Associates, Inc.

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

Copyright © 1974 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.

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

To the Editor

Food, thought and survival

In my profession as a health instructor. I have come to recognize two extremes in the human species. At one extreme, we have individuals who objectively evaluate scientific findings and are thus able to encourage actions to avoid anticipated future problems. At the other extreme are individuals who are either totally unaware or refuse to recognize that the continuation of certain courses of action is undesirable.

It is indeed unforunate that so many of us tended toward this latter extreme despite predictions of serious food shortages by such foresighted individuals as those on the President's Science Advisory Committee over seven years ago (SN: 11/30/74, p. 351). For if we had acted then to maximize our efforts to curtail population growth, we might not now be faced with the problem of food shortage we have created for ourselves 11/30/74, p. 340).

And yet, incredibly, as clearly revealed in your fine coverage of the Rome Food Conference (SN: Vol. 106 #18-21), we still apparently have many people who cling to the delusion that the only moral course is to continue to try to feed everybody. What good is life if its quality is decimated by its quantity?

I can only hope that the current crisis

will prove sufficiently painful to convince the majority of our species that the only hope for our survival as a species lies in a better application of the name we have given ourselves—"thinking" man!

Terry Fleishman Toledo, Ohio

A science of honesty?

Can it be true that a scientific world that can sense the importance of a unified theory of natural forces, cannot sense the need to search for a unified theory of human behavior?

Seven of the nine letters appearing in the Aug. 8 issue of Science News, commenting on the Uri Geller performance, express skepticism of fraud.

In your recent article on Watergate (SN: 12/14/74, p. 378), Robert J. Trotter refers to the Garrett and Wallace suggestion that the dissonance theory helps to explain some motivation in the Watergate syndrome.

In your year-end issue you mention the falsification of immunology research reports at the Memorial Sloan-Kettering Cancer Center in New York City, and dismiss the motivation behind the Rosenfeld forgery at Harvard as a "mystery."

Surely, logic suggests man must direct his greatest efforts in the area of his greatest need. The above items are but continuing examples of the prevalence of deception. If any one need becomes more apparent in the complex world of modern man, it seems it surely must be the need of integrity. Why then is there no science of honesty?

Why do we have an I.Q. scale, but no integrity quotient?

Who offers a course in honesty, or a degree in integrity?

Can we honestly feel that mankind has any greater need?

> C. Lyle Strand Strand Enterprises Canton, Ohio

Black hole model

A recent TRW advertisement in your magazine showed an artist's rendering of a black hole accretion disk model of Cygnus X-1. We erroneously attributed the calculations underlying this model to Professor Kip Thorne of the California Institute of Technology. Professor Thorne informs us that this attribution is incorrect. The key calculations were carried out by research groups in Moscow, Russia, and Cambridge, England, not by him. apologize for this error.

Special Projects Manager TRW Systems Group Redondo Beach, Calif.

Tasty morsels?

I was much troubled by your report on the lack of roughage in our diet (SN: 12/14/74, p. 379) until I hit upon the perfect solution. After I finish my week's issue of Science News, I eat it.

T. V. Wolansky $Thiells,\ N.Y.$

Chinese art

I can't put it any other way, the color reproductions of the Chinese art in the year-end review issue were beautiful! What a delightful and unexpected treat to open the magazine and see them!

Keep up the excellent reporting.

Robert F. Neff Physics Teacher Suffern, N.Y.

(Credit for taking those color photographs, incidentally, should go to SN's John H. Douglas, who also wrote the article.—Ed.)

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: 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, Associated Universities; Allen V. Astin, National Academy of Sciences; 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, National Academy of Sciences. Nominated by the JOURNALISTIC PROFESSION: Norman Cousins, "World": Julius Duscha, Washington Journalism Center; O. W. Riegel (Secretary), Washington and Lee University. Nominated by 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; Things of Science: Ruby Yoshioka.

January 25, 1975

51