

Science Service Publication Volume 150, No. 3, July 20, 1996

Donald R. Harless Julie Ann Miller Blair Burns Potter Dan Skripkar Publisher Editor Managing Editor

Dan Skripkar Production/Design
Director
David Lindley Associate Editor
Janet Raloff Senior Editor
Environment/Policy
Ron Cowen Astronomy

Bruce Bower
Richard Lipkin
Richard Monastersky
John Travis
Kathleen Fackelmann,
Steve Sternberg
Behavioral Sciences
Chemistry/
Materials Science
Earth Science
Biology
Biomedicine

Steve Sternberg
Tina Adler
Ivars Peterson
Erik Skindrud

Meghan Mitchell

Cait Anthony

Life Sciences Mathematics/Physics Science Writer Intern Editorial Assistant Books/Advertising

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$49.50 for 1 year or \$88.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, D.C. 20036. Preferred Periodicals postage paid at Washington, D.C., and additional mailing office. POSTMASTER: Send address changes to Science News, P.O. Box 1925, Marion, Ohio 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1996 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A. on recycled paper. ⊕ Republication of any portion of Science News without written permission of the publisher is prohibited.

Editorial and Business Offices: 1719 N St. N.W., Washington, D.C. 20036 202-785-2255; scinews@scisvc.org

Advertising Representative: Lewis Edge & Associates, Inc. 366 Wall St., Princeton, N.J. 08540 609-683-7900

Subscription Department: P.O. Box 1925, Marion, Ohio 43305 For new subscriptions only, call 1-800-247-2160. For customer service, call 1-800-347-6969.

#### **This Week**

Putting a New Spin on Earth's Core
New tests mark big leap in HIV diagnosis
Picturing a new world: Views of Ganymede
Sticking tough with new hydrogen bonds
Umbilical cords as source of new blood
New signs of nicotine's addictiveness
Gene connected to human cognitive trait
Finding a new definition of photosynthesis

## **Research Notes**

41 Archaeology

### **Articles**

40 Foreign HIV Surfaces in the Bronx

42 Botanical Cleanup Crews

46 100-Day Cough

Cover: Though dazzling to look at, *Bordetella pertussis* causes whooping cough, a sometimes deadly illness for infants. Researchers now believe that some adults may unknowingly pass pertussis infection to infants and children. This close-up shows the bacterium (yellow) destroying airway cells, leading to violent coughing episodes. (Image: K.E. Muse, computer enhanced by William Goldman/Fran Heyl Associates)



## **Departments**

34 Books 35 Letters

Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921 to increase the public understanding of science. Through its youth programs, it administers the International Science and Engineering Fair and the Science Talent Search for the Westinghouse science scholarships.

Board of Trustees — Chairman, Dudley Herschbach; Vice Chairman, Gerald F. Tape; Secretary, David A. Goslin; Treasurer, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Shirley M. Malcom; C. Bradley Moore; Ben Patrusky; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe.

Honorary Trustees — Chairman Emeritus, Glenn T. Seaborg; Edward Bliss Jr.; Bowen C. Dees; Elena O. Nightingale; O.W. Riegel; John Troan.

# Letters

Seeking common ground

It's quite true that science might fare better among the religious public if that public were convinced that science and religion are compatible ("When Science and Beliefs Collide, SN: 6/8/96, p. 360). Many of us who teach at religious colleges work hard to convince our students that they are.

The job is made a lot tougher, however, when an eminent scientist like Carl Sagan uses his brilliant popularizations of science as a vehicle for antireligious propaganda—apparently with the full approval of the scientific establishment. For many, the "separation of spheres" between science and religion is in effect a one-way barrier: Intrusions of religion into science are bitterly resented and, where possible, punished, but imperialism in the opposite direction is regarded as benign.

The task of finding ways for science and

faith to coexist can only be furthered by honest dialogue based on mutual respect rather than on superiority and condescension from either side.

William Hasker Professor of Philosophy Huntington College Huntington, Ind.

It is wrong to lump all critics of science into one camp, namely, those who see sci-

mp, namely, those w

## CORRECTION

The references to "constructionism"—which appeared even in the penultimate draft of the National Science Standards—were in fact "almost entirely eliminated" in the final book, according to Gerald Holton ("When Science and Beliefs Collide," SN: 6/8/96, p. 360). Though he and other scientists were concerned about the report's earlier perspective, he endorses the final document.

ence as a kind of myth. One can argue that the research programs of science can be driven by ideological, political, economic, or other nonscientific interests—for example, Nazi Rassenkunde—without denying that objective science is possible. Science is not exempt from human weakness, including individual and social evil.

We need to recognize this if we are committed to the scientific ideals of reason, objectivity, and truth.

Michael Losonsky Associate Professor of Philosophy Colorado State University Fort Collins, Colo.

What I find galling—and what might turn others off of science—is the arrogance of some scientists who ignore that fact that electrons, protons, genes, neurons, and so forth were already in existence for them to

Letters continued on p.44

JULY 20, 1996

SCIENCE NEWS, VOL. 150

extend access to

Science News.

Www.jstor.org

35