

# SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication  
Volume 143, No. 20, May 15, 1993

Alfred Scott McLaren Publisher  
Patrick Young Editor  
Laurie Jackson Managing  
Vaughan, Editors  
Blair Burns Potter  
Janice Rickerich Production/Design  
Director  
Greg W. Pearson Associate Editor  
Janet Raloff Senior Editor  
Environment/Policy  
Ron Cowen Astronomy  
Bruce Bower Behavioral Sciences  
Karen F. Schmidt Chemistry/  
Materials Science  
Richard Monastersky Earth Sciences  
Daniel Pendick General Science  
Kathy A. Fackelmann, Life Sciences/  
Elizabeth Pennisi Biomedicine  
Ivars Peterson Mathematics/Physics  
Larry Norland Editorial Assistant  
Cait Anthony Books/Resource Manager  
Donald R. Harless Advertising/Business  
Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$39.50 for 1 year or \$68.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, DC 20036. Second-class postage paid at Washington, DC, and additional mailing office. **POSTMASTER:** Send address changes to SCIENCE NEWS, P.O. Box 1925, Marion, OH 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1993 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A.

Editorial and Business Offices:  
1719 N St., N.W., Washington, DC 20036  
(202-785-2255)

Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

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

## Letters

### Different slant on Mars data

I do not agree with Wisdom and Touma that the chaotic tilt of Mars' axis may "ultimately provide another test of the validity of general relativity" ("Tilted: Stable Earth, Chaotic Mars," SN: 2/27/93, p.132).

In the first place, there is as yet no way of knowing whether the calculations correspond to astrophysical fact; therefore, no meaning can be attached to the presence or absence of any particular pathology correlated to the inclusion of relativistic effects.

In the second place, if the results are so sensitive to the presence of relativistic components of Martian astrodynamics, then it is equally valid to suspect that other (possibly more important) effects may result from the consideration of Martian magnetic fields, electrostatic charge, and corresponding interaction with the solar wind and with Jupiter's magnetic field.

Finally, if these results are sensitive to all the

### This Week

- 308 Gender Paths Wind Toward Self-Esteem
- 308 Researchers bid for big-science biodiversity
- 309 Gene finding gives clues to DNA repair
- 310 Hazard from Soviet nuclear dumps assessed
- 311 Feds reluctantly accept Delaney ruling
- 315 Whipping up atomic crystals bound by light

### Research Notes

- 319 Astronomy
- 319 Materials Science

### Articles

- 312 Food, Drug, or Poison?  
Cover: Surprising new findings suggest that Southeast Asian refugees consider the "poisonous" black nightshade plant a healthful addition to a variety of rice dishes. In this photo, a woman harvests rice on a farm near Atlanta. (Photo: David Zeiger)
- 316 Material Peptide

### Departments

- 306 Books
- 307 Letters

Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

Board of Trustees — *Chairman*, Glenn T. Seaborg; *Vice Chairman*, Gerald F. Tape; *Secretary*, David A. Goslin; *Treasurer*, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Dudley Herschbach; Shirley M. Malcom; Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. *Honorary Trustees* — Edward Bliss Jr.; Bowen C. Dees; O.W. Riegel; John Troan. *President*: Alfred Scott McLaren; *Vice President and Business Manager*: Donald R. Harless.

foregoing, then it stands to reason that they must be dominated by the likely rearrangements of the Martian surface mass distribution in response to the widely varying tilts (melting of water, condensation of atmosphere, internal tectonic motions).

The calculations are intriguing, but we are a long way from obtaining the astrophysical data necessary to interpret them.

Michael J. Dunn  
Auburn, Wash.

### Creating language-learning input

The astonishing feat of language acquisition is accomplished *without* explicit teaching ("Neural networks for learning verbs," SN: 2/27/93, p.141). It is difficult, therefore, to see a theoretical distinction between the accepted view that children, given sufficient input, arrive at implicit rules, subrules, and exceptions and a neural network's model of generalizing by example.

That "the learning process itself yields the

observed behavior" is *not* "all you need to explain this kind of result." Just as crucial as replicating children's production data in the model's output is using input that approximates children's actual exposure. Young children are not given balanced sets of present- and past-tense verbs, nor do they conveniently hear regular and irregular verbs in relative frequencies that would enable them to make the right generalizations based on statistical probability.

Insight into the mechanism linking genuine input to genuine output would be progress indeed.

Phyllis Koenig  
New Haven, Conn.

Address communications to:  
Editor, SCIENCE NEWS  
1719 N Street, NW  
Washington, DC 20036  
All letters subject to editing.

