

SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication
Volume 136, No. 26, December 23 & 30, 1989

E. G. Sherburne Jr.	Publisher
Patrick Young	Editor
Laurie Jackson	Managing Editor
Janice Rickerich	Production/Design Director
Bruce Bower	Behavioral Sciences
Ivan Amato	Chemistry/ Materials Science
Richard Monastersky	Earth Sciences
Janet Raloff	Environment/Policy
Kathy A. Fackelmann,	Life Sciences/ Biomedicine
Rick Weiss	
Ivars Peterson	Mathematics/Physics
Jonathan Eberhart	Space Sciences
Liz Marshall	Editorial Assistant
Diane E. Loupe,	Science Writer
Aline McKenzie	Interns
Wendy Smith	Books/Resource Manager
Donald R. Harless	Advertising/Business Manager

Copyright © 1989 by Science Service, Inc.,
Editorial and Business Offices,
1719 N St., N.W., Washington, D.C. 20036.
Republication of any portion of SCIENCE NEWS
without written permission of the publisher is
prohibited.

Subscription Department
231 West Center Street, Marion, Ohio 43305

Subscription rate: 1 yr., \$34.50; 2 yrs., \$58.00.
(Foreign postage \$6.00 additional per year.) Change of
address: Four to six weeks' notice is required. Please
state exactly how magazine is to be addressed.
Include zip code. For new subscriptions only call
(1) 800-247-2160. Printed in U.S.A. POSTMASTER:
Send address changes to Science News, 231 West
Center Street, Marion, OH 43305. Second class
postage paid at Washington, D.C., and additional
mailing offices. 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)
ISSN 0036-8423

Letters

What interests an owl?

Only if we assume that an owl is more interested in "aiming" at a *sound* cue rather than at a simultaneously presented visual cue can we infer, counterintuitively, that the owls in the Knudsen's experiment "relied on their vision [versus their hearing] to locate the source of a sound" ("Owls give a hoot for vision," SN: 10/21/89, p.263).

If we instead assume that an owl is more interested in aiming at a *visual* cue, then the experimental results imply — not surprisingly — that an owl conditioned to expect a visual cue to appear to the right of a sound cue will subsequently look to the *right* of the source of a sound cue when it is presented, but directly at a visual cue.

Jeffrey D. Mueller
Finksburg, Md.

Leeway for life

In "AIDS Predictors" (SN: 11/4/89, p.298), Daniel F. Hoth, director of the NIAID's AIDS

This Week

- 404 Brain Risk Seen in Sickle Cell Kids
- 404 Study upgrades radiation risks to humans
- 405 Ritual clues flow from prehistoric blood
- 405 Asian roaches enjoying Florida vacation
- 406 Making chicken wire of molecular size
- 406 Cold fusion — or something
- 406 Forcing the details of contact charging
- 407 Voracious turtle grabs a quick bite
- 407 Explaining and exploiting a winter worry
- 407 A perilous passage through volcanic ash

Research Notes

- 412 Biology
- 412 Food Science
- 413 Earth Sciences

Articles

408 The Color of Geometry

Cover: Mathematicians participating in the Geometry Supercomputer Project use computer graphics to help them visualize and study geometric forms ranging from knots to figures embedded in hyperbolic space. The polyhedron shown here represents one way of depicting a particular geometric form in hyperbolic space. The little spheres surrounding the central polyhedron convey additional information concerning the form's mathematical properties. (Image: Geometry Supercomputer Project)



- 414 The Natural Roots of Fiber Optics
- 424 Postponing Red-Cell Retirement

Departments

- 402 Science on the Air
- 402 Books
- 403 Letters
- 416 Science News of the Year
- 426 Semi-Annual Index

Science Service Institution for the public understanding of science founded 1921; a nonprofit corporation.
Board of Trustees — *Chairman*, Glenn T. Seaborg; *Vice Chairman*, Gerald F. Tape; *Treasurer*, Willis Harlow Shapley; *Joseph W. Berg Jr.*; *Edward Bliss Jr.*; *Robert W. Fri*; *David A. Goslin*; *J. David Hann*; *Milton Harris*; *Leon M. Lederman*; *Elena O. Nightingale*; *Ben Patrusky*; *H. Guyford Stever*; *Deborah P. Wolfe*.
Honorary Trustees — *Bowen C. Dees*; *O.W. Riegel*; *John Troan*.
President: E. G. Sherburne Jr.; **Business Manager**: Donald R. Harless.

Pie and other protocols

My wife and I were surprised to learn of the relatively large amounts of residual ethanol present in foods listing distilled spirits among their ingredients ("More than a taste of alcohol," SN: 11/11/89, p.318). Since it is desirable to have independent confirmation of experimental results, we would like to obtain a copy of the protocol for making Brandy Alexander Pie so that we may repeat this crucial study ourselves.

Alan Meeker
Baltimore, Md.

Certainly no true student of the scientific method, as you most clearly are, would attempt to replicate the results of a complex and important scientific work by conducting only one experiment. Therefore, I refer you to that oft-cited volume, the Pillsbury Kitchens' Family Cookbook (1979 edition, Simon & Schuster), in which, I am told, the study's entire series of protocols originally appeared. May you enter into your efforts with spirits abounding.

— P. Young

division, states, "The logic is simple: We know that people without T4 cells die. We know that the less T4 cells you have, the more you are at risk of opportunistic infections. It makes sense to say that a drug which delays or prevents this decline is of benefit to the patient."

I can easily agree with the last part of this statement, but I strongly question the first sentence. As a person with AIDS-related complex (ARC) whose T-helper-cell count has been below 5 per cubic millimeter for more than a year and at 0 per cubic millimeter for the past three months, with few problems with opportunistic infections, I suggest a more positive outlook. Is it possible that other cells in the immune system have redundant qualities and can take over at times of need?

The last thing we need to hear is a death sentence made so final as to not allow a little leeway for life.

Jerry E. Keith
San Francisco, Calif.

DECEMBER 23 & 30, 1989

403