

SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication
Volume 132, No. 22, November 28, 1987

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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. 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

Creating a Venus

Thank you for continuing to cover mathematical as well as physical science news. The story on homotopies of Boy's surface ("Twists of Space," SN: 10/24/87, p.264) was particularly delightful, thanks to the superb new graphics.

I would like to point out one error and one omission in this story. Reporter Ivars Peterson gives the erroneous impression (due to an ambiguous "It" reference) that the Etruscan Venus form "can be created by gluing together two Möbius strips." It cannot; that is how to create a three-dimensional Klein bottle, and the Etruscan Venus — like all the other surfaces shown in the article — is a shadow of a four-dimensional Klein bottle. The Etruscan Venus form is thus in no way distinguished from the others by this property, or else there would not exist the possibility

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Cover: Scientists are trying to learn the fundamental rules that dictate the three-dimensional structures of proteins. Using computer imaging, they are learning how to design biologically useful proteins that might not otherwise occur in nature. Here, a molecule of the cancer-killing drug methotrexate (green skeletal structure) is shown nestled in the active site of an enzyme critical to cell reproduction. (Image: Computer Graphics Laboratory/UCSF)



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Misguided loyalty?

Your story on the Woodruff-Teller controversy over the viability of X-ray lasers ("Star Wars Lasers: A Question of Technical Integrity," SN: 10/31/87, p.276) is some evidence that scientists are not immune to two disturbing tendencies now widespread in other professions.

One is a tendency for loyalty to an intellectual ideal to become transmuted into political attachment to institutions supposed to embody that ideal. In lawyers, a commitment to the ideal of law becomes an instinctive allegiance to lawless judicial institutions. Similarly, Dr. Woodruff's dedication to science seems to have made him reluctant to betray an institution even when it engages in suppression of scientific truth.

Matters are made much worse when these parochial professional allegiances are cou-

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