

A Science Service Publication Volume 129, No. 20, May 17, 1986

E.G. Sherburne Jr. Joel Greenberg Dietrick E. Thomsen

Laurie Jackson

Wendy McCarren Bruce Bower Joanne Silberner Stefi Weisburd Julie Ann Miller Janet Raloff, Ivars Peterson Jonathan Eberhart

Susan Welch Gilday Lisa Davis

Jane M. Livermore Donald R. Harless

Editor Senior Editor/ Physical Sciences Managing Editor

Publisher

Production/Design Director Behavioral Sciences Biomedicine Earth Sciences Life Sciences Policy/Technology

Space Sciences Assistant to the Editor Science Writer Intern

Books Advertising/Business Manager

Copyright © 1986 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., \$29.50; 2 yrs., \$50.00. (Foreign postage \$5.00 additional per year.) Change of address: Four to six weeks' notice is required. Please 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

#### **This Week**

308	A Meltdown But No Melt-Through
308	Will U.S. be first to tax Nobel Prize?
309	A potpourri of earth activity
310	Stringing out a cosmic image, perhaps
310	War-on-cancer numbers
310	New ideas in fighting clots, heart attacks
311	Catching a vivid earful of sound
311	Looking into the eye

### **Research Notes**

Biomedicine 318 319 **Physics** 

#### **Articles**

#### 314 Stalking the Weather Bombs

Cover: Meteorologists are trying to learn how to better forecast Cover: Meteorologists are trying to learn how to better forecast East Coast winter storms that are often called "bombs" because they develop so explosively. This sequence of satellite images, beginning with the top photo on the cover and ending on page 314, shows, at 12-hour intervals, the rapid development of a storm that unleashed 25 inches of snow on the East Coast in February 1983. The reddish areas mark the regions where storm activity was most severe. (Images: Chris Veldon/Univ. of Wisconsin-Madison)



#### **Departments**

307 Letters

Science Service Institution for the public understanding of science founded 1921; a nonprofit corporation. Board of Trustees — President, Glenn T. Seaborg; Vice President, Gerald F. Tape; Treasurer, Willis Harlow Shapley; Secretary, Hilleary F. Hoskinson; Joseph W. Berg Jr.; Edward Bliss Jr.; Bowen C. Dees; David A. Goslin; Milton Harris; Elena O. Nightingale; O.W. Riegel; H. Guyford Stever; John Troan; Deborah P. Wolfe. Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless.

# Letters

# Art and algorithm

Caroline Arnold's comments (Letters, SN: 3/29/86, p. 195) on "Computing Art" (SN: 3/1/86, p. 138) make abundant sense if we are to retain values that invest in a few (I fear, largely self-proclaimed) arbiters' judgments of the aesthetic worth of artistic expression. But I suspect that Russell and Joan Kirsch have something more revolutionary in mind.

Imagine, in a more enlightened era, a potential end-user in the process of commissioning a work of art. He or she is visited by systems analysts to define functional specifications. The most objective criteria (size: fits behind the sofa; color harmony: coordinates with Sears' Autumn Wheat) are easy to come by. But questions of form, content and execution are answered by "I'll know it when I see it."

The principles of structured systems design, of course, demand prototyping. And here is where not one, but a rich variety of expert systems come into play. The user is presented at first with a seemingly random series of visual presentations. Response to these dictates the optimal synthesis of artistic styles employed. And recent advances in catastrophe

theory have suggested that there are equilibrium states in which the ghosts of Pollock and Vermeer can coexist.

Interesting legal questions emerge. If the user, in interface with expert systems, comes up with an algorithm that produces beauty in the eye of any beholder, who has copyrightable interest?

> Arthur F. Jones Minneapolis, Minn.

The job of critics and art historians is twofold: first, to characterize the style of the artist, contrasting it with that of other artists; and second, to give a subjective opinion about the importance of the work. The Kirsches' work in the first area is most welcome. As an artist, I find much of the verbiage of art commentators insufferable. I congratulate the Kirsches for cutting through the suds to bedrock

As Joan Kirsch notes, the analysis works best on 20th-century artists, who come from a reductio ad absurdum tradition. Each exploits a few elements of the visual language, and these become a signature to repeat ad nauseum. (The unkind would say, "A brand-name image builds sales." Others declare that by

limiting choices like a Zen monk, the artist finds an unexpected world to explore.)

I doubt if Kirsch has the exaggerated idea that her analysis will prevent me from loving a particular work, or will help in the subjective 'rating game" of buyers and historians

Gertrude Myrrh Reagan Palo Alto, Calif.

## **Basement dating**

I appreciate your prompt coverage of the shipboard results from Leg 107 of the Ocean Drilling Project (SN: 3/22/86, p. 183). However, you are in error when you state that "scientists dated basalts brought up from Vavilov Basin at about 3.5 million years . . . . " There is no viable technique for dating basalts at sea. The inference that the Marsili Basin basement is younger than Vavilov Basin basement is based on biostratigraphic and paleomagnetic dating of the sediments overlying basement, as well as on interpretation of the regional seismic stratigraphy.

Kim Kastens Co-Chief Scientist, Leg 107 Lamont-Doherty Geological Observatory Palisades, N.Y.

MAY 17, 1986 307