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E.G. Sherburne Jr.
Patrick Young
Laurie Jackson
Janice Rickerich
Bruce Bower
Richard Monastersky

Bruce Bower Richard Monastersky Janet Raloff Kathy A. Fackelmann, Rick Weiss Ivars Peterson Christopher Vaughan

Jonathan Eberhart Susan Arns Charles E. Knox, Ingrid Wickelgren Wendy McCarren Donald R. Harless Publisher
Editor
Managing Editor

Production/Design Director Behavioral Sciences Earth Sciences Environment/Policy Life Sciences/ Biomedicine Mathematics/Physics Physical Sciences/

Trystal Sciences/ Technology Space Sciences Assistant to the Editor Science Writer Interns

Books/Resource Manager Advertising/Business Manager

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Cover: This computer-generated picture, known as the Ikeda map, is the result of substituting an initial value into a mathematical expression modeling the action of an optical switch, computing the answer, then substituting that answer back into the expression, and so on. Such an iterative process generates a sequence of dots — an orbit — that jumps about randomly, creating the pattern shown. A team of mathematicians has now worked out a way to tell when such "chaotic" orbits follow a true path and are not solely due to the accumulation of computational errors. (Image: C. Grebogi, E. Ott, F. Varosi, J.A. Yorke/University of Maryland)

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Letters

Groovy idea

"Ancient tooth grooves: Take your pick" (SN: 10/8/88, p.237) presents the mystery of the cause for the tooth grooves observed on fossil teeth. I have an idea.

Have you never, while hiking the hot, dusty trail, picked up a small stone and sucked on it because your Scout leader once told you that sucking on a stone would keep away thirst? Imagine now the Neanderthal on the go who doesn't have time between hunting and gathering to stop and drink. Practicing the "stereotyped activity" of a stone in the mouth could have formed the "polished grooves" described by the researchers.

Victoria A. Wills Newport Beach, Calif.

Obese increase

I am puzzled by the statements in "Young Hearts" (SN: 10/8/88, p.234) that "obesity in U.S. schoolchildren is increasing" and "children are classified as obese if the measurement of skin thickness...ranks in the upper 15 percent for their age and height." How can

the rate of obesity be increasing if it is defined as the top 15 percent of a group?

Payne Freret Los Altos, Calif.

You are right: This paragraph could be much clearer. The base year is 1963, and the percentage increases relate to how many children fit the 1963 definition of obesity in 1980.—the editors

HIV screening: Scientific or social?

SCIENCE News' coverage of AIDS has been among the best available. You are to be congratulated for this, especially now that much of the media seems to consider it old news.

However, I must point out that "Truth in testing" (SN: 10/15/88, p.244) misses the most important reason why widespread screening for HIV antibodies is counterproductive. Most gay people are practicing safe sex anyway and do not wish to know their HIV status. Knowing of infection would only result in unnecessary stress, possibly worsening an already compromised immune capability. These people will avoid checkups, hospital admissions and other situations in which they might be tested. Thus the group most at

risk would be left out of the sample and effectively banished from the health care system

Even if the rate of false positives is as low as you suggest and the cost is only \$19 per person, routine testing makes no sense. As the President's Commission on AIDS discovered, research and education are better ways to spend the money. The "debate" about widespread screening is no longer so much a scientific debate as a forum for those who would like to identify and isolate members of the affected groups for reasons of prejudice.

Philip Bockman

New York, N.Y.

Results defended

In "Results disputed" (Letters, SN: 10/15/88, p.243), Donald Moores of Gallaudet University attacked results obtained by Geers and Moog in an NIH-contracted study of deaf adolescents. The Geers/Moog study, described in "Sound advice for deaf learners" (SN: 7/30/88, p.21), evaluated a group of 100 orally educated students from programs throughout the country and found that, as a

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