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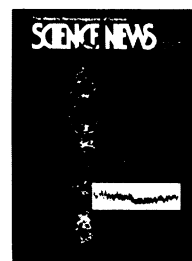
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Cover: Two ways of representing changes in a patient's heart rate during psychotherapy. The boxed heart-rate trace shows the absolute value, in beats per minute, of the heart rate at 1-second intervals throughout a 50-minute therapy session. The vertical pattern, a phase-space plot of the same data, reveals the overall amount of complexity and variability in the patient's heart rate. Research suggests that this cardiac complexity may reflect changes in a patient's mental state during therapy. (Illustration: Dana J. Redington and Steven P. Reidbord/BIOLOGICAL PSYCHIATRY)



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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*.

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Letters

Cannibalism and science

I found the article on prehistoric cannibalism ("The Cannibal's Signature," SN: 1/2/93, p.12) fascinating, but I was appalled at the unscientific assessment by one of White's critics, Paul Bahn. Bahn is quoted as asking, "Do you prefer to imagine your ancestors as people with complex funerary rituals or as bloodthirsty cannibals?"

Since when does what scientists *prefer* to *imagine* constitute any part of an analytic approach? Bahn's seemingly emotional appeal suggests that he may be blinding himself to good data because of personal feelings.

Jerry Treiman
Woodland Hills, Calif.

The only valid "cannibal's signature" is the presence of human tissue in a human gut or coprolite, and as yet we have never found such

a thing in the archaeological record. Marks on bones are far too ambiguous to represent any kind of "cannibal signature."

The study of marks on bones tells us no more than that they were cut, smashed, bashed, burned, or whatever. They tell us *absolutely nothing* about whether their meat and marrow were consumed by human beings. Since there are not 300 different ways of cutting stuff off bones, it is hardly surprising that there are strong similarities between processed human remains and butchered animal remains. But to suppose that identical treatment means identical purpose is logic of the most superficial kind.

Paul G. Bahn
Hull, England

Alien species revisited

John Jacobs' letter ("Going native," SN: 1/9/93, p.19) is an example of the anthropocentric view that has led to the critical loss of

biological diversity that we're facing today.

Invasions and changes in communities are indeed natural processes, but there is nothing natural about the huge number of non-native species that has been introduced to Hawaii in an evolutionary instant. Our intentional and unintentional introduction of species has had far-reaching effects, including the loss of species and processes that we never knew existed.

Our abilities to change the world and to reason carry with them an obligation to safeguard the species and processes with which we share the world.

Gary T. Skiba
Denver, Colo.

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