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Cover: Navy researchers have succeeded in controlling the chaotic wavering of a metallic ribbon by judiciously adjusting the magnetic field driving the ribbon's motion. The image on the left shows how slight changes in the magnetic field can shift the position of the computer-generated "chaotic attractor" corresponding to the ribbon's motion; each color represents the effect of a slightly different magnetic field. Such control, focused on a single point in the attractor, enables the researchers to keep the ribbon's motion from changing erratically. The inset demonstrates the possibility of maintaining control even in the face of ambient "noise" and measurement errors. (Images: Naval Surface Warfare Center)



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Letters

Reef richness and risks

In "Bleached Reefs" (SN: 12/8/90, p.364), I was erroneously cited as saying that coral reefs may support more species than all other marine ecosystems combined. What I said was that they may have more species than any other *individual* marine ecosystem.

This is an important difference, because I agree with marine species-diversity authority Howard Sanders in feeling that the two most species-rich marine ecosystems are coral reefs and the deep-water community living at the base of the continental slope. In both ecosystems, the great majority of species have yet to be scientifically described, so it is premature to say which has the largest number. But coral reefs certainly have the highest biomass and productivity *per unit area*. In addition, they are under the greatest threat. Deep-sea communities should be the last to be affected by global change.

The risk at which coral reefs are now placed by the record seawater temperatures of 1990 and preceding years may become irreversible

within a few years unless prompt steps are taken to protect them by halting global warming, treating sewage, reforesting watersheds, halting unsustainable harvesting of corals, reef organisms or sand, and developing mariculture as an alternative to overfishing. Otherwise, tropical marine countries will soon face large economic costs from depletion of their fisheries, reduced nourishment of beach sand for tourism, loss of shoreline protection from hurricanes, and destruction of the capacity to adapt to rising sea levels.

Thomas J. Goreau
President
Global Coral Reef Alliance
Chappaqua, N.Y.

Data differentiation

While MANSCAN images did successfully differentiate among people using varying degrees of short-term memory in a "memory" experiment at EEG Systems Laboratory, these data were not used to predict eventual accuracy of response, as suggested in "Shadows of Thoughts Revealed" (SN: 11/10/90, p.297). Pre-

dictability of performance accuracy was studied in an earlier experiment focusing on visuo-motor responses.

Judy Ihes
Research Neuropsychologist
EEG Systems Laboratory
San Francisco, Calif.

On labels and learning

In his reply to my letter on the origin of seemingly paradoxical behaviors such as altruism (SN: 9/15/90, p.163; 12/8/90, p.362), Tom Cole objected, in effect, that I was sneaking religion in through the back door and that it had no place in a scientific discussion.

It's curious that Mr. Cole could assert so confidently that my views were "obviously based on a fundamentalist interpretation of the Bible," considering that my letter mentioned neither Christianity nor the Bible — and neither did the particular ideas of C.S. Lewis that I paraphrased. Also, Mr. Cole's character-

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A FOREST OF KINGS

THE UNTOLD STORY OF THE ANCIENT MAYA

LINDA SCHELE
AND
DAVID FREIDEL

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Kingship was the primary political and religious institution of the ancient Maya and unified the Maya view of art, politics, war and religion. The Maya were at once highly civilized, skilled in architecture and astronomy, and, to us, violent and barbaric, engaging in ritual bloodletting and many wars.

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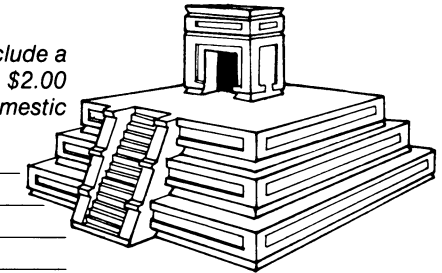
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ization of Lewis makes me wonder how much he really knows about him. Lewis was an eminent professor of English literature at both Oxford and Cambridge, a noted philosopher and a successful author of fiction and nonfiction. He was highly respected for the lucid, rigorous logic of his analytical thought. Although well known as an orthodox Christian apologist, he was *not* a fundamentalist, a creationist or a "young-Earther," as Mr. Cole seems to be using those terms.

Mr. Cole's letter raises a deeper issue, however. It is ironic that someone defending the intellectual virtue of science should display the very same knee-jerk rejection of unfamiliar ideas, and pejorative labeling of those who propose them, that religious fundamentalists are so often accused of. No scientist, even an amateur one, should be so quick to conclude that he has "nothing to learn in the way of science" from anyone, much less from so distinguished a scholar as C.S. Lewis.

Peter H. Shaw
Irving, Texas

When Senator McCarthy wanted to blacklist someone he opposed, the label "communist" was used to silence that person. Apparently, "fundamentalist" is the label now in vogue for that purpose.

Censorship, especially in the Letters section, does not serve the advancement of knowledge. Thank you for allowing your readers the opportunity to hear Mr. Shaw for ourselves and to decide on the validity of his thesis.

John N. Bowman
Macon, Ga.

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