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**COVER:** The techniques of cryobiology are far from being able to freeze and recover people (or Frankenstein). Yet the medical uses of freezing procedures are increasing. Most impressive is the cold preservation of some blood cell types and bone marrow cells and the destruction of malignant tissue. See story page 250. (Photo courtesy of Jerry Orlinger/Universal Studios)

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**Editorial and Business Offices**  
1719 N Street, N.W.  
Washington, D.C. 20036

**Subscription Department**  
231 West Center Street  
Marion, Ohio 43302

Subscription rate: 1 yr., \$12.50; 2 yrs., \$22; 3 yrs., \$30. (Add \$2 a year for Canada and Mexico, \$3 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. 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) TWX 710-822-9433 SCIEN NEWS. ISSN 0036-8423

# LETTERS

**Nature's engine**

Your article entitled "A Way for Electrons Through the Air" (SN: 8/19/78, p. 116) states authorities as stressing the difficulty of inventing an engine to produce particles of sufficient density and energy for a useful particle beam. Nature has provided us with one. It is the engine that produces the thousands of lightning bolts daily around our earth. An ionized laser path to regions of high potential in the atmosphere could possibly initiate a lightning discharge which would follow the beam path. It probably would prove difficult to find just the right conditions directly in the path of an oncoming missile to neutralize it, but there are other ideas worth considering utilizing this atmospheric potential. Pulsed power generating plants run on lightning bolts, having a continuous output by storing the pulsed power on huge flywheels. For the automotive set, an electric car powered by atmospheric potential following a laser beam through an electric motor to a metallic strip on the highway; a modern version of the trolley car using a laser beam as its trolley.

W. E. Tullos  
Gulfport, Miss.

**Conference commendation**

The article by Susan West on "Negotiating the Ice Age" (SN: 8/19/78, p. 122) is an excellent job for a particularly tough assignment. I was at the meeting and know first hand how difficult it is to get to the substance of a paper when given by the Soviets. She did a good job in the article in highlighting the most significant parts of the meeting, and avoiding the stuff of lesser merit. I point out only one error, namely that Senators Hollenbeck and Harkin are actually Representatives.

Alan D. Hecht  
Washington, D.C.

**So much hot air?**

Although I find von Däniken's extraterrestrial visitation claims somewhat hard to swallow, your reference to Mr. Woodman's proposals about hot air balloons in A.D. 700 (SN: 9/2/78, p. 171) is sheer fairy tale. Employing Mr. Woodman's line of reasoning, we could probably argue successfully for the existence of electrically powered chariots at the time of Ramses II.

How the drawings at Nazca got there is probably not so much a mystery as why they were drawn or, more importantly, who could appreciate them except at an altitude of several hundred meters or higher, especially without the benefit of nearby hill.

Douglas Rousseau  
Worcester, Mass.

**Animal endorphin release**

I read SCIENCE NEWS hoping to absorb by a sort of osmosis the meaning of some of the articles, for I am not a scientist. In running through one of the more understandable items, this one having to do with the placebo effect linked to endorphins (SN: 9/2/78, p.164), I began to wonder whether it might not be useful to study animals as well as humans in connection with endorphins.

It appears to me that other animals than the human ones suffer no "stresses" comparable to those we do in view of our capacity for worrying about consequences and the future. But animals appear to find no relief from severe pain from endorphins that are released "from within." This would lead to the conclusion that either human relief from placebos is psychological or that no effort has been made to induce a placebo effect in animals. A third possibility, which I consider unacceptable, is that the human mind has the capacity for releasing endorphins while the animal mind has not.

I have observed that some injured animals—birds, for example—tend to become calm even to the point of eating in a relaxed manner despite painful injury when their terror of further imminent injury is assuaged by tender, comforting handling. Would not tests for the inner release of endorphins by such animals at such moments be possible?

Martin Panzer  
New York, N.Y.

**He who knows**

Yes, SCIENCE NEWS does have humor!

When M. P. Guillory (SN: 9/9/78, p. 179) corrected Susan West in her apparent misconception that our seasonal changes are due to the varying distances between the earth and sun he said, "Wouldn't it be interesting to be around in 20,000-odd years when the sun will be nearest during the summer?" May I suggest he spend January in the desert of Australia where summer is when the sun is nearest.

He might also ask a professor of English why he should have used "were" instead of "was" when he said... "if the earth's path around the sun was a circle..."

Sure, and that is one way to create humor—to get "he who knows not" to attempt to correct "he who knows not." One reason why I read SCIENCE NEWS from cover to cover regularly is because I, also, am somewhat of a "he who knows not," and I expect what is written there to be written by a "he who knows and knows that he knows," for an ancient Arabian proverb advises "He who knows and knows that he knows is wise, follow him."

William R. Wells  
Oklahoma City, Okla.

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