

SCIENCE NEWS®

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Incorporating Science News Letter

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COVER: Fracture from the magnitude 7.5 Guatemala earthquake of Feb. 4, 1976, crosses soccer field near Gualán. The quake caused continuous ground breakage for 230 kilometers along boundary between North American and Caribbean crustal plates, the most extensive surface faulting in the Western Hemisphere since the 1906 San Francisco earthquake. Study of the faulting has directly confirmed deductions based on plate tectonics theory and provided evidence that northern Central America is being torn apart by differential motion within the Caribbean plate. See p. 234. (Photo: George Plafker, U.S. Geological Survey/Science)

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LETTERS

Computers in cryptography

Michael Guillen's article on the use of computers in cryptography (SN: 9/18/76, p. 188) was extremely interesting, informative, and very enlightening in its coverage of a too often neglected field of interest. As pointed out by Mr. Guillen, cryptography is not merely a mathematician's fanciful toy or the school child's amusement, but has, is, and will continue to be of prime importance to both our national security and international well-being.

I was dismayed, however, by Mr. Guillen's failure to provide his readers with reference from which to seek further information. Possibly the best history to date is David Kahn's *The Codebreakers* (available also in paperback). Likewise, for those who might wish to try their hand at cryptography, there is, among others, The National Puzzlers' League (publishes THE ENIGMA, for further information write: Mary J. Hazard, 600 Seneca Parkway, Rochester, N.Y. 14613).

Terry W. Harmon
Granite City, Ill.

The cover of your Sept. 18 issue was a good example of cryptography but the choice of message was in poor taste.

Many young people in our offices and schools read your magazine and it seems as though you are employing the same tactics as the rest of the media use, that of violence and use of extremes.

In the future please be more professional.

Mrs. Joseph P. Giardino
Gloversville, N.Y.

The article by Michael Guillen on "Automated Cryptography" was interesting.

It was somewhat surprising that the author failed to mention the random key. He suggests that amateur communications become unbreakable only through complications so severe as to make them impractical. On the contrary, the random key is available to the rankest beginner, and is unbreakable by any mathematical method. (See my book *Code Games*, p. 87.) If a computer can render a purely random number, then it can use this method, too. If the number is not truly random, it may be so sufficiently to defeat the attack of a rival computer, limited by time and capacity. Expanding a mathematical formula is not random.

Norvin Pallas
Cleveland, Ohio

Through the neutrino sea

Mr. James Edmonds's letter on neutrinos and gravity (SN: 5/29/76, p. 339) and the two articles to which he referred have inspired me to take poetic license with a hypothetical question, that is, whether the ether might some day be resurrected, not as the static all-pervading goo envisioned by 19th-century experimenters, but as a dynamic ocean of c-velocity neutrinos from all the galaxies in the universe:

Without neutrinos' steady strum
How could there be continuum?
In going through worlds they're slowed, you see,
And that's why we have gravity!

Without neutrinos' steady strum
On every little atom
Inertial frames would disappear
You'd never know you had 'em!

Without neutrinos' steady strum
Through Michelson's equipment
No beam could reach the finish line;
No way to make the shipment!

Theo. A. Reichardt
La Mesa, Calif.

The reluctant mind

The subject raised by R. S. Potts in his letter in SN: 9/18/76 concerning teleological language in biological writings is very suggestive. He scolds you for allowing in the article "Clean Crabs" (SN: 7/10/76, p. 28) such statements as: "The parasite appraised the crabs . . . then realized that they had evolved too far away physiologically. . . ." One notices similar language often. "Nature has provided a way," "Nature sees to it that," and similar phrases occur rather frequently. So SCIENCE NEWS is by no means the only transgressor. What interests me in all this is that such language suggests that the persons who write it do not really believe everything that their minds tell them that evolutionary formulations require them to believe.

David McCarty
Callaway, Va.

Mercury matters

In a recent *Astronomy* note about a way to determine the extent of a liquid core within Mercury (SN: 9/11/76, p. 169), the reference "88-day rotation period" should have said "88-day libration period" (Mercury's rotation period is 56 days). Also, the type of spacecraft mission needed for the study is an orbiter, not a fly-by.—Ed.

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