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Cover: To make chemical elements heavier than uranium, the heaviest found naturally on earth, scientists strike together nuclei of lighter elements in the hope that they will fuse. Out of the cornucopia symbolizing this technique pour the elements with atomic numbers greater than 100. (Illustration adapted from a reprint of a paper by George N. Flerov supplied by the Joint Institute for Nuclear Research in Dubna, USSR)



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## Letters

### The world according to Gaia

Altruistic behavior by organisms is not a necessary part of Gaia hypothesis ("The Plankton-Climate Connection," SN: 12/5/87, p.362). We all know that in societies governed by free enterprise people work for selfish aims, yet produce the highest standard of living on earth for everybody. Why can't each constituent species of Gaia pursue its selfish aims and still benefit the aggregate of life?

*Andrejs Baidins  
Wilmington, Del.*

**Richard Monastersky's** straight and fair way of presenting Gaia as a theory up for trial was particularly pleasing. The more bricks thrown at it the better; some of them may be pure gold.

The only serious omission was no mention of the German scientist M.O. Andreae. Andy Andreae, when he was at the Florida State

University in Tallahassee, was the first and only scientist to take my DMS measurements seriously, and his careful and accurate measurements of the sources of this gas in the world oceans gave us the base data we needed for the plankton-climate connection.

*Jim Lovelock  
Launceston, Cornwall  
England*

### Protective plowing

The extent of soil erosion is not a function of organic versus nonorganic agriculture ("Keeping topsoil down on the farm," SN: 12/5/87, p.357), but a function of soil management. In the unglaciated area of the upper Midwest, and Houston County more particularly, the moldboard plow, which exposes raw soil to the elements, has been replaced by the chisel plow, which leaves a high percentage of crop residue as protection while allowing a higher rate of moisture absorption. Tillage is done on the contour. Most farms in the area have livestock. This provides a financially

viable use for the legume crops grown with a rotation of corn, oats and alfalfa. The livestock manure adds fertility, tilth and organic matter, and commercial fertilizer is used where soil tests recommend. With this type of management, crop yields are very high, soil fertility is increasing and soil erosion is controlled.

*Joe Doucet  
President, Houston County Cattlemen's Assn.  
Caledonia, Minn.*

### The far side

Steve Eisenberg's article on the Galileo spacecraft ("Jupiter orbiter to launch in 1989," SN: 12/12/87, p.371) contained several errors. First, the spacecraft will not "fly around Venus and then twice around earth." It will swing by those two planets for a gravity assist toward Jupiter. Second, the spacecraft will make the first-ever near-infrared maps of the moon's far side — not its "dark" side.

*Jon Alexander  
San Francisco, Calif.*

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