

# SCIENCE NEWS®

The Weekly Newsmagazine of Science

Volume 156, No. 12, September 18, 1999

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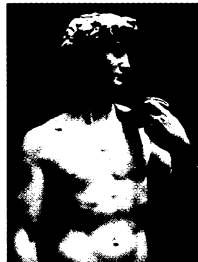
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**Cover:** Michelangelo's "David" is moving into virtual reality. Computer scientists have constructed detailed, three-dimensional models of several sculptures. Such models stretch the abilities of computers, and they can help art historians visualize works under various conditions. **Page 184**  
(Photo: Galleria dell'Accademia, Florence/SuperStock)

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## Letters

### Gut feelings

In response to the article "Emotional judgments seek respect" (SN: 7/24/99, p. 59), I submit that a "gut feeling" is the result of the non-conscious process detecting a threat that the conscious process has not detected. Because of the isolation between the two processes, direct communication is not possible. By triggering an emotion, the nonconscious process is, in essence, waving a flag to get the attention of the conscious process. I have, at times, regretted ignoring a gut feeling, and I suspect that I am not alone.

*Francis E. Kent  
Four Lakes, Wash.*

### The dirt on CO<sub>2</sub>

Just a quick comment on your article "Carbon dioxide shakes off its pursuers" (SN: 7/24/99, p. 54). While it certainly seems unlikely that North America would have a monopoly on carbon sinks, the time frame of the original Princeton study, 1988 through 1992, did grab my attention.

At that time, conservation-compliance regulations in the United States and relatively

warm and dry weather conditions in the northern corn belt led to sharp decreases in tillage and corresponding increases in surface residue on farm fields. Also, farmers were making significant cuts in nitrogen-fertilizer use, which might have slowed the breakdown and release of carbon from crop residues. And acres had not yet begun to be released from the Conservation Reserve Program to be burned off, tilled, and brought back into crop production.

*Fred Wirtz Jr.  
West Bend, Iowa*

**I am disappointed** by the implications of your article. First, despite political rhetoric to the contrary, there is no logic in the notion that identifying the missing sink in the global carbon cycle would justify the United States' failing to decrease emissions (as suggested by the quote from Richard Houghton). Regardless of where the unaccounted-for carbon is going, the level of atmospheric carbon dioxide continues to rise, the United States is a huge contributor to that rise, and reducing emissions cannot help but counter future increases.

Second, the statement that modern agricultural practices have stored extra carbon in soil, reinforced by the photograph accompanying the article, is simply not true. Research has shown that conversion of land to agriculture typically produces a 20 to 30 percent drop in the organic content of the soil and that continued agricultural use of the land does not restore the lost organic matter. Practices such as tilling and the addition of large quantities of nitrogen fertilizers promote decomposition of soil organic matter. In addition, continued loss of huge volumes of topsoil through erosion further reduces the organic matter contained on our agricultural lands.

Contrary to your reporting, modern industrialized agriculture is a net cause of the carbon dioxide problem, not a cure.

*Steve Trudell  
Seattle, Wash.*

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