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## Letters

### Searing indictment

The smoke of your article on pollution from charbroiled meat ("Cholesterol: Up in Smoke," SN: 7/27/91, p.60) obscures a more important concern: the effect of that picnic flavoring on our bodies.

Oven broiling liquefies and drips away meat fat, whereas charbroiling also combusts and pyrolyzes a portion of it. Char organics and pyrolysis products are known for their unhealthful character. These compounds rise up with the smoke and are condensed onto and absorbed by the meat. The more one charbroils meat, the more hazardous it becomes.

Yes, carrot salad would be better for us.  
*Charles A. Thomas*  
*Pittsburgh, Pa.*

In her discussion of meaty air pollution, Janet Raloff might also have mentioned that modern intensive farming methods of raising animals for meat are a major source of water pollution, and that the consumption of meat is

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Cover: Researchers have discovered that by marrying classical concepts with quantum mechanics, they can obtain useful insights into atomic and molecular behavior, even when the underlying classical mechanics is chaotic. Here, an electron ricochets like a billiard ball through a two-dimensional crystal of "atoms" (black disks). In this situation, an electron can follow a periodic (blue) or chaotic (red) trajectory. The background colors represent a solution of the quantum-mechanical equation predicting this system's behavior. (Illustration: Eric J. Heller/University of Washington)

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a major source of "body pollution," contributing to heart disease, cancer and diabetes. By the time you factor in the heavier burden imposed on our soil and water resources by meat production compared with vegetable production, Ms. Raloff's suggestion of tabouli and carrot salad sounds better than ever.

Given the increasing pollution of our oceans, however, I'll pass on the poached salmon.

*Bina Robinson*  
*Swain, N.Y.*

### Family factors

Before we equate quality daycare with better emotional well-being and behavior, and with a greater likelihood of participating in school programs for the gifted ("Infant daycare: Nothing beats quality," SN: 8/24/91, p.118), I would suggest considering some other factors: What are the intellectual levels of the parents of these children? How do these parents handle their offspring in the hours outside of daycare? What are the levels of maturity of these

parents? We might then get a more complete picture.

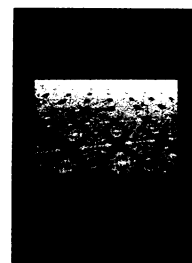
I think all children should receive top-quality daycare and general educational services.

*Evelyn M. Cohen*  
*Lecturer, Dept. of Curriculum & Instruction*  
*McGill University*  
*Montreal, Quebec*

### Vibes from the '60s

Talk about reinventing the wheel! The definitive article on the general topic of "Shaking up powder physics" (SN: 7/27/91, p.59) was published more than two decades ago: "Sand Compaction With Vibratory Rollers," D'Apollonia *et al.*, ASCE JOURNAL OF SOIL MECHANICS AND FOUNDATION ENGINEERING 95 (SM1), p.264 (1969). This article explains why vibration at near 1-g acceleration works better, compared with higher or lower accelerations.

*John K. McDonald*  
*Soil Engineer*  
*Portland, Ore.*



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