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Letters

Ethics and infertility

"Zona Blasters" (SN: 12/15/90, p.376) describes the use of high-tech equipment to enable sperm of questionable viability to fertilize ova, but blithely dismisses the ethical questions raised. The ethical implications of interfering with infertility are enormous.

Attempting to understand the mechanism by which a sperm penetrates the zona barrier may be interesting science, but utilizing technology to overcome that barrier is very different. Why do certain sperm penetrate the zona barrier? Why do others fail? Is it because there is some characteristic from which the species is being protected? Is there some subtle incompatibility between that ovum and that sperm which we don't understand? Why do certain ova repel all sperm, notwithstanding their apparent viability? Is it because those ova somehow detect that conditions are not favorable to procreation? Two researchers cited in your article respond to these concerns by saying there have been no signs of genetic

abnormality so far. That is a facile answer to a question that can be answered only after many generations have passed. I do not believe that anyone has the knowledge to predict the impact of assisting a sperm to penetrate the zona barrier. It may mean nothing, or it may mean a great deal.

Science and medicine must address the ethical implications of the use of technology at the outset rather than after the damage is done. The difficulty of the questions should not deter the asking, nor allow the blithe answer.

Stuart McElhinney
Morro Bay, Calif.

In a severely overpopulated world, I find it almost obscene that so much effort should be directed toward allowing a few middle- and upper-class couples to have children. There are plenty of children who need adopting, if one is willing to take an older, nonwhite or handicapped child.

Jana Hollingsworth
Seattle, Wash.

Shortcut strategy won't fly

Ivars Peterson's analogy for minimizing the length of networks by adding extra nodes ("Proven path for limiting shortest shortcut," SN: 12/22 & 29/90, p.389) misses the point. No airline will add an extra hub to reduce the travel distance between any two cities. In the example given, the fourth point in the center of the triangle increases the distance traveled between two vertices to $2 \times \sqrt{3}/2 = 1.73$ times the original.

Communications networks differ in two major ways from airline routes. First, air space does not have to be constructed, rented or purchased, unlike communications networks, in which a shorter total length reduces costs. Second, planes fly relatively slowly. An increase of 73 percent in travel time makes a difference to airlines (in terms of costs) and their travelers. Communications networks work with electromagnetic energy — electricity or light. An increase in the travel time

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"A must for all...this is a book to be reckoned with by the cardiac community."
—The New England Journal of Medicine

HEART FAILURE

**A Searing Report
on Modern Medicine at Its Best...
and Worst**

- Revolutionary therapies that work—and drugs that don't
- Behind the scenes in hospitals and laboratories
- Scientific evidence against the massive campaign to lower cholesterol levels
- Undisclosed risks in angioplasty and bypass surgery

Thomas J. Moore

"Heart Failure outrages and shocks the reader with its solid facts, clear writing and effective analysis. It is must reading for anyone who has ever worried about a heart attack."

— Jon Van, *Chicago Tribune*

With tireless research and vivid, true-life descriptions, Thomas J. Moore provides a candid and unsettling look at the nation's \$50-billion-a-year heart-care industry.

Moore takes us inside laboratories and hospitals as they try to cope with their own mistakes. Chronicling the use of procedures such as angioplasty and bypass surgery, he demonstrates the ways that so-called medical miracles can be risky — or fatal.

Heart Failure also explains why the dangers of high cholesterol have been exaggerated and the benefits of medical treatment oversold. Moore's evidence has triggered a national debate about whether we went overboard on cholesterol, a debate that no one can afford to ignore.

— from the publisher

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HeartFail

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between two points is much less important when the information travels at the speed of light.

Ground-based travel is more complex. Reducing the overall network length reduces construction costs, but the increases in traffic can slow the system down. The latter is, admittedly, also a consideration in communications systems.

Gary Martin Cohen
Highland Park, N.J.

As a regular hypothetical flier on your hypothetical Agony Airlines, I was encouraged to hear that their new routing — which can cut the total length of their routes — has increased the distance I must fly from Phoenix to Los Angeles, has put in a midway stopover, and thus has increased the overall time I must spend to make the trip. Good thinking! I'm sure this strategy will win Agony a plethora of new passengers!

Hypothetical progress will never end — particularly when buttressed by a "practical" mathematical proof.

John A. Short
Gibsonia, Pa.

Fond memories?

In "College classes spur lifelong math memory" (SN: 12/15/90, p.375) you report that people who took college math courses showed greater recall of high school math in later years, in comparison with people who took no college math. It is curious to draw the conclusion that learning is better when it occurs in

sessions spaced out over several years. Isn't it more likely that the people who took college math were simply the ones with greater aptitude for — and greater interest in — math?

Michael I. Sobel
Professor of Physics
Brooklyn College
City University of New York
New York, N.Y.

Aptitude apparently played no role in the results, since students with the same high school math grades showed great differences in 50-year math memory depending on whether or not they took college math. Although math interest undoubtedly influences students who take college math, a variety of majors require calculus courses.

— B. Bower

Hustlers: Getting it straight

Your article describing my work ("Glimpses of AIDS and male prostitution," SN: 12/15/90, p.380) was misleading in a few respects. The statement that "hustlers maintain a strictly homosexual orientation" implies that they are exclusively homosexual in preference. In fact, roughly half express sexual preference for men, while the remainder express preference for women or no preference (10 percent), although their clients are exclusively men.

Hustlers' seropositivity rates are actually only about the same as those of the gay community in general. I did *not* say that "almost all the hustlers I've talked to are dependent on intravenous drugs and shoot up frequently." I did say that most hustlers are drug dependent and that over half of my informants in 1989-90 had been involved in

intravenous drug use, and three of them shot up frequently.

Finally, regarding your description of hustlers' clients as "family men": Though many of these clients are family men, the majority are not.

D. Scott Wilson
University of New Mexico
Albuquerque, N.M.

Spiritual violation

I liked Richard Monastersky's "Fingerprints in the Sand" (SN: 12/22&29/90, p.392), describing the use of scientific forensics in investigations of archaeological thievery. However, his explanation of why the looting of ancient sites is a serious problem left out a fundamental argument.

Poachers who rip up burial sites are desecrating the graves of this land's original people. The Indian peoples whose ancestors' remains lie in these graves tell us that their forebears' spirits cannot rest when their burial places are violated. Whether or not this has scientific basis, decent people's spirits should be pained by the thieves' abuse of the beliefs of the indigenous peoples in whose land we are guests.

Shelley Sandow
Forest Park, Ill.

CORRECTION

The name of the UCLA cardiologist cited in "The Safer Sex?" (SN: 1/19/91, p.40) was misspelled in several places. The correct spelling is Steven S. Khan.