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**Cover:** This official Japanese government poster, widely used in subway and train stations, illustrates part of the country's nuclear dilemma — how to promote public acceptance of reactors in the face of expanding energy needs and rising international opposition. The characters read: "Not interested? Nothing to do with you? Energy is running out. We must provide our own alternatives. Atomic Power Day, Oct. 26." See story p. 394. (Poster: Science and Technology Agency — Japan)

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# LETTERS

## In your heart you know who's right

I read your article, "The bypass boom" (SN: 5/13/78, p. 314). Part of my job is to extensively read in the field of heart surgery. Your article is the most complete, unbiased and fair article on this subject which I have read so far. I found only one important omission. It appears on the very bottom of page 315. You state, "After three years, 87 percent of the medical group and 88 percent of the surgical group were alive." This is true, but you neglected to point out that approximately 16 percent of the medical group dropped out of the medical group and were operated on. Had these not been operated on, the medical group might have fared far worse.

I would like to add something to the last word in the article where Mock says, "They may think in their hearts they are really doing the best thing, but it's not proven." The same might be said of physicians who do *not* refer patients for heart surgery.

*Kenneth L. Kayser, P.E.*
*Milwaukee, Wis.*

## Diesel dream car problem

Janet Raloff's article "Shaping an improved diesel" (SN: 5/27/78, p. 345) brings bright hopes for energy savings, but in a different manner than that proposed by University of Rhode Island's Engineering Department. The Triangular Quadratic Expander turns out to be a truly revolutionary compressor for such applications as air compressors, heat pumps, refrigerators, Brayton cycle engines, and even diesel engines (but not the one proposed). A Triangular Quadratic Compressor makes great energy savings possible because (1) The volume of the triangular chamber contracts as the square of the hedron motion. (2) Simultaneously, the active working surface area decreases proportional to the hedron motion. (3) Although the (isothermal) compression pressure increases as the square of the hedron motion, the energy required is only proportional to hedron motion times the (decreasing) active working area times the pressure, which is the same as the energy required for a piston compressor whose pressure is only proportional to the cylinder contraction. This is a real breakthrough in compression technology.

For URI's TQE diesel, however, this means bad news. Working the process in reverse, as an expander, the varying area of the active working surface under approximately constant pressure conditions of diesel combustion, only one-half of the working surface (on the average) is available for doing useful work. This more than outweighs the advantages, based upon quadratic expansion alone.

*Raymond G. Spinnett*
*Santa Ana, Calif.*

## Congratulations!

Joan Arehart-Treichel, SCIENCE NEWS Biomedicine Editor since 1971, received honorable mention in the Claude Bernard Science Journalism Awards for her story "Laetrile: The Science Behind the Controversy" (SN: 8/6/77, p. 93).

The awards are presented by the National Society for Medical Research "for science writing which has contributed significantly to public understanding of experimental medicine including basic research in the life sciences."

## The hole story

With regard to my letter of skepticism on black holes (SN: 5/6/78, p. 291) and H. R. Rymer's criticism (SN: 6/3/78, p. 355) permit me a few more words, then *finis*.

The late Donald Menzel, an astronomer of high repute, once demonstrated during a lecture at the Naval Observatory in Washington, D.C., that equations derived for black hole mechanics were *mathematical* not *physical* ones. Accordingly, one can pump anything into the equations to get any result depending on one's bias.

Menzel intended to publish a paper on his lecture and send me a copy. Unfortunately he was called to the other side of space. If Menzel's paper was published, or if anyone knows the whereabouts of the paper, I am sure SCIENCE NEWS would be interested in seeing what Menzel had to say about black holes. Menzel, like myself, was skeptical on black holes — as are a number of old-time pragmatic astronomers.

First we had black holes, then came white holes, and the latest worm holes. What next — blow holes?

*Ray Benton*
*Baltimore, Md.*

## Strabismus and surgery

In a recent SCIENCE NEWS is a story on the major causes of blindness in which amblyopia and strabismus are discussed (SN: 5/20/78, p. 328). It was reported that "some ophthalmologists advocate surgery early in life for this condition, others do not." Since amblyopia is a functional disorder of sensory input to the brain due almost entirely to unfavorable competition of the amblyopic eye with the fellow eye, surgery has no place in its therapy. Strabismus, which is associated with about one-third of all amblyopes and which ophthalmologists like to treat with surgery, is usually cured without the surgery if the amblyopia is properly and fully treated with visual therapy. Early detection of strabismus and amblyopia is highly desirable, but surgery is only rarely needed in the therapy of either.

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