

## Reversing the irreversible

It is estimated that 10 million men and women throughout the world have been sterilized. About two million living Americans have had the operation, and a minimum of 100,000 a year are having it.

The Association for Voluntary Sterilization in a survey found that 96 percent of 15,000 who had the operation were satisfied. But for the remaining four percent, predominantly women, the depressing belief is that sterilization is irreversible.

"Generations of medical students," says Dr. Geoffrey F. J. Williams of Bronglais General Hospital, Aberystwyth, Wales, "have been told this."

But it isn't so, says Dr. Williams. In the April 19 issue of THE LANCET, he reports 63 live births following operations to reverse sterilization, called tubo-uterine implantation. Three of the births followed his own operations and the others were reported by British gynecologists replying to a questionnaire.

Aside from removing the womb or ovaries, sterilization in women is achieved by tying or cutting the fallopian tubes, which conduct the egg from the ovary to the uterus. In reversing the process, the tubes are reconnected. Polyethylene tubing was used in most cases to form a splint, which is removed after the wound heals.

In the U.S., Dr. Louis M. Hellman, professor and chairman of the department of obstetrics and gynecology at State University of New York in Brooklyn, says he has performed the operation to reverse sterilization, and that he believes it is having about 50 percent success, if the fallopian tubes were not damaged when the sterilization was done.

One of Dr. Williams' patients had been sterilized by physicians in Nazi Germany at the age of 14. The others had remarried and wanted children by the second husband. A fourth patient is not yet pregnant, but her tubes are sufficiently normal to make conception possible. Among physicians questioned in Britain, 115 had performed the operation.

There is considerable danger of tubal pregnancy, in which the fetus is located in a tube rather than in the uterus, and Dr. Williams says this should be explained carefully to a patient and her husband.

"If the risk is still acceptable," the physician points out, "they must be prepared to seek expert advice as soon as symptoms arise or a period is missed."

Another danger in those who carry a

fetus to full term is that there is a possibility of the uterine scar rupturing at birth.

The mode of delivery must be left to the individual obstetrician. There were 28 vaginal deliveries among the live births reported. Among the cesarean births, there were complications in three, but no deaths.

Dr. Williams says the number of sterilizations in Britain appears to be increasing, and the average age at operation is probably falling. Among these women some have bitter regrets, and a fairly large percentage of the others want to reverse the decision.

SST

## Down on its uppers

Cries of financial woe are becoming increasingly monotonous as Vietnam drags on and the dollar continues to inflate, but in the case of the supersonic transport, by last week money had become just about the whole story. It is virtually inevitable that the SST will fly sooner or later; the major question now is the matter of who will pay to get it off of the drawing boards and into the air. The Federal Government appears to be backing off.

The paperwork, says the Boeing Company, which has produced tons of it since it was picked nearly two and a half years ago to build the plane, has gone as far as it can without some real, flying prototype aircraft to verify the design. Even if prototype construction begins now, production versions would not go into commercial service until at least 1978, and possibly later.

Beginning construction on the two prototypes presently planned would cost an estimated \$212 million in fiscal 1970, a sum President Nixon is reluctant to lay out. The elaborate existing SST financing plan calls for the Government to get all of its money back as the planes are sold, but that does not make the dollars any easier to come by now. As a result, the SST was one of the most conspicuous absences when the new President's revision of the Johnson budget was submitted to Congress (SN: 1/25, p. 91).

At the end of March, Transportation Secretary John A. Volpe sent his recommendation to Nixon, after hearing reports from a variety of SST committees (SN: 4/5, p. 329). That recommendation was believed to have favored going ahead with the prototypes; in other words, spending the \$212 million.

But President Nixon reportedly has



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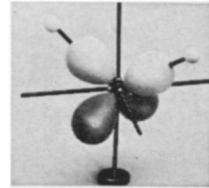


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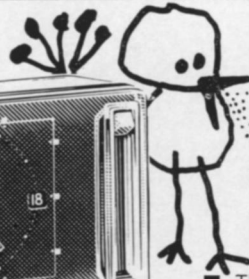
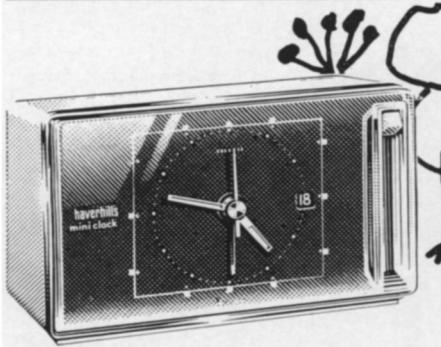
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passed the buck back to Volpe, in hopes that some less painful form of financing can be found. In response to this, a meeting was held with representatives from Boeing, General Electric (builder of the SST engines), the Air Transport Association representing the airlines, the Federal Aviation Administration and Rep. Dan Kuykendall (R-Tenn.), a member of the transportation and aeronautics subcommittee of the House Commerce Committee, to explore viable alternatives. A number of proposals were discussed there, and are also being pursued in other quarters.

One idea is the formation of a Government-backed public corporation, something like the Communications Satellite Corp., financed by the sale of securities. This might be a subsidiary of Boeing, or of a multi-company consortium, or it could be an autonomous venture which would make financial arrangements with Boeing.

A refinement of this proposal would be a public corporation formed to handle the financing only from the prototype stage on, with the Federal Government footing the yet-outstanding bills up to that point.

Another possibility under discussion, but expected to meet heavy resistance from the airlines, is that the airlines would borrow the necessary funds, with the Government insuring 90 percent of the loan. But the airlines have already poured almost \$60 million in non-returnable risk capital into the SST, above and beyond their down payments for the aircraft-to-be; in addition, they are further stretching their credit to pay for the upcoming jumbo jets such as the Boeing 747 and the Lockheed L-1011, all of which will be in service years before the SST.

"I personally doubt that the money is available in the airlines," says an Air Transport Association official. "You can't squeeze blood out of a turnip."

If a public stock sale is thought unlikely to be successful, and the airlines will not agree to borrow the money, a combination of companies might join together to borrow the funds, again with the assurance of the 90 percent Federal guarantee. It is even conceivable that Boeing might be convinced to do so, since Boeing has the most to gain, although such additional expenditures of hundreds of millions of dollars could mean that profits might not start appearing until years after the planes begin service.

There are still technical objections to the plane—a major one is ground noise around airports—but if the economic problems can be unsnarled, the SST is likely to go ahead, its sonic difficulties either solved by engineers or grimly borne by the public. ◇