

## PHYSIOLOGY

# Immortality by Freezing

While the possibility of physical immortality by freezing has been predicted, some scientists question the desirability of prolonging life forever—By Faye Marley

► THE PROSPECT of immortality for the body through freezing, now receiving wide publicity, leaves some people cold.

For example, the geneticist, Dr. Herman J. Muller, Nobelist at Indiana University's department of zoology, Bloomington, told SCIENCE SERVICE he could not agree that such immortality was desirable.

Neither could Dr. Muller accept the possibility of overcoming the damage that would come from freezing the body as suggested in the book, "The Prospect of Immortality," by Robert C. W. Ettinger, a physicist teaching at Highland Park Junior College, Highland Park, Mich.

The thesis of Mr. Ettinger's book, first published privately in shorter version a year ago, is that it is possible right now to preserve dead people indefinitely with essentially no deterioration.

"If civilization endures," Mr. Ettinger said, "medical science should eventually be able to repair almost any damage to the human body, including freezing damage and senile disability or other cause of death."

Dr. Muller's view is that the successful revival of frozen bodies in the next few hundred years is not likely enough to make the effort worthwhile.

It should be more readily possible 300 years from now, he observed, "to use both genetics and methods of treatment of the developing individual as well as improved educational methods to produce better people than to reform revived individuals whose past was in an earlier age."

Because the personalities of the frozen people would have "to be wiped so clean that they would be virtually new people anyway," he asked, "why not have people actually new instead?"

He admitted that he would get a kick out of being able to see what happens from time to time in the far future, but he does not think all the fuss of keeping his body in the meantime and then reviving him would be worthwhile.

"It seems to me that we would be extremely selfish in a misguided way to want to intrude upon these later generations," he said. "Moreover, I think they would quietly wipe us away, and we, of course, would never know the difference. I would not blame them a bit for this."

Another scientist interviewed, Dr. H. T. Meryman, one of the "fathers" of cryobiology, agreed with Dr. Muller on the undesirability of physical immortality. But neither of these scientists would say that eventually humans could not be successfully frozen and revived, if very special techniques were followed.

Freezing tissue today and reviving it is possible, but this is a far cry from freezing and reviving an entire body, they pointed

out. Dr. Meryman said it should not be thought that it would be possible now to put a body into a freezer and revive it later.

"When biological science achieves the technology for freezing and reviving human beings," Dr. Meryman said, "it will have cured all the diseases, and there will be no need of the freezing."

Dr. Meryman, who is in the department of biophysics at the Naval Medical Research Institute, Bethesda, Md., believes that the prolonging of human life forever should not be the ultimate goal of health research.

He sees the ultimate goal as the relation of all the natural sciences in a single system. Chemistry and physics are now being applied to biology, he said, and the computers of the future will be unlimited in their complexity.

Mr. Ettinger said his book has attempted to answer the inevitable practical questions that arise concerning such problems as population explosion. Regardless of his predictions on the possibility of physical immortality by freezing, birth control must be practiced to limit the numbers of persons on earth, he said.

"The Prospect of Immortality" (Doubleday and Company, Inc., New York, \$3.95) also will be published in France.

• Science News Letter, 85:389 June 20, 1964

## PUBLIC HEALTH

## Third of British MD Deaths Due to Smoking

► WELL OVER a third of deaths among British physicians have been linked to their smoking habits.

A ten-year study by Dr. Richard Doll and Sir Austin B. Hill of London, shows that of 4,597 doctors' deaths, 1,775, or 39%, were related to smoking.

Previous Doll and Hill reports were widely quoted in the U. S. Surgeon General's Smoking and Health report.

The report in the British Medical Journal, May 30, 1964, said lung cancer can be caused by pipe smoking, although not as frequently as by cigarette smoking.

High blood pressure was not linked to smoking, but coronary heart disease showed a relationship. This study was based on a short, simple questionnaire sent to 59,600 British doctors.

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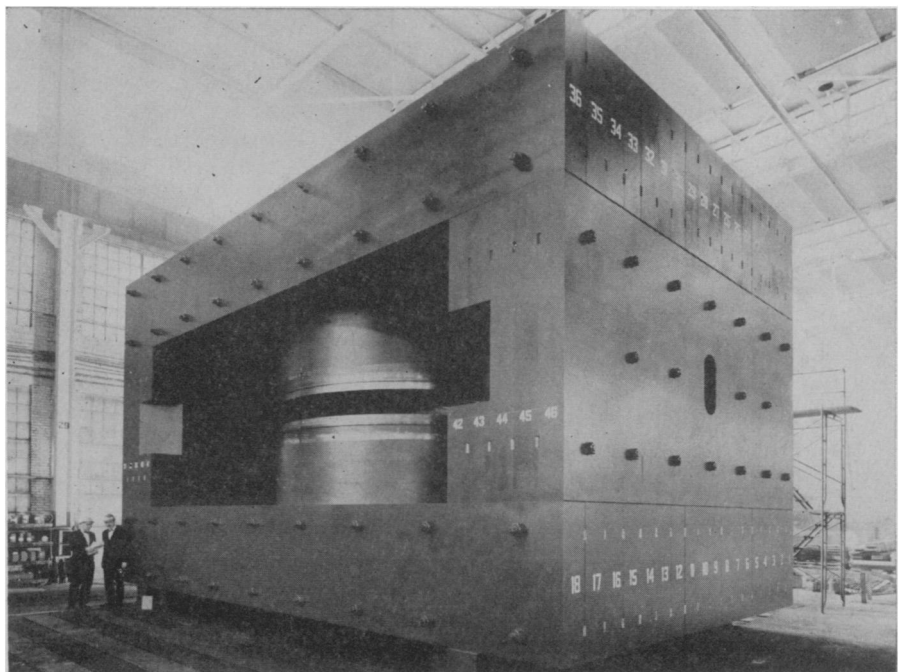
## PHYSIOLOGY

## Deaf Persons Free From Seasickness

► PEOPLE who have lost their hearing and sense of balance from spinal meningitis do not suffer from seasickness, according to a recent ten-day naval experiment in the waters around St. Pierre Island, a French island off Newfoundland.

Even the sailors became seasick in the rough waters, which sometimes rose in 40-foot waves. None of the 31 deaf persons in the Canadian experiment became sick, however.

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Bethlehem Steel

**HEART OF AN ACCELERATOR**—The largest and heaviest magnet core ever made by Bethlehem Steel Company, 36 by 21 by 19½ feet, will serve as the heart of a high-energy proton accelerator under construction by the Catalytic Construction Corporation, Philadelphia.