

U.I. Experts Believe

Small H-Bomb War Could Bring 'Creeping Suicide'

The human race might be touched by "creeping suicide," which could wipe mankind from the earth 1,000 years from now, as a result of even a "small war" fought with hydrogen bombs in some remote corner of the globe, according to two U. of I. professors.

Dr. Eugene Rabinowitch of the botany department and Dr. Henry Quastler of the physiology department say that the least understood and perhaps most dangerous aspect of the hydrogen bomb, if it is ever used, is the long-range damage to heredity which could be caused by radioactivity.

Their explanations enlarge on statements made by Dr. Rabinowitch, editor-in-chief of The Journal of The Atomic Scientists, in an editorial appearing in a recent issue.

"We don't know how much radioactivity it will take to make any sizable change in heredity—in the kind of children that would be born in future generations," Prof. Quastler says. "But we do know that radioactivity will have some effect."

The danger, he says, "is that the amount of radioactivity will increase each time a new hydrogen

comb is exploded—and the radiation effects will disappear only very slowly over a period of hundreds of years.

"These radiation effects will be carried around the globe and could have disastrous effects thousands of miles away in countries untouched by war itself. The damage to heredity may not show up for many generations but it will be carried on and on."

"The danger is that we can contaminate the atmosphere so that every part of the land and air and ocean will eventually be affected.

And, as Prof. H. J. Muller of Indiana University has pointed out, the amount of radiation the individuals then living could easily take in their stride may not be tolerable for mankind as a whole. In other words, the individual exposed to it may survive and even have normal children, but a few generations later the trouble may start showing up.

"It would be possible to explode enough hydrogen bombs for mankind to commit a creeping suicide: The generation alive at the time may survive, and its children and their children, but the eventual fate of mankind would have been sealed and nothing could be done about it."

The same kind of warning comes from Prof. Rabinowitch.

"The real threat from the use of hydrogen bombs," he says, "is the danger of long-range damage to the hereditary endowment of the human race. This could be caused not by a local and transient accumulation of highly-radioactive materials, but by exposure of whole nations and continents to a weak, but widely-distributed and persistent, radioactivity."

Prof. Rabinowitch believes this danger may be even more serious than the immediate destruction from blast and the damage from near the site of a bomb explosion.

Three effects of radiation on heredity are listed by Prof. Quastler.

1. The lethal, immediately death-dealing effect, which would result in such damage as abortions, but would not linger in future generations because the progeny would not survive.

2. A hidden effect that would

affect certain traits which parents hand down to their children. Trouble would result here only when two people with similar damage mated and had children. The effect is somewhat like that caused by in-breeding.

3. A long-range effect—and this is the real danger—of increasing the "genetically-underprivileged," the persons with mental imbalance, the frail and weak, and the persons with high susceptibility to disease. This danger was forcefully pointed out by Prof. Mueller even before the H-bomb was developed.

Quastler cites cancer incidence as a possible example of the third effect. "Cancer," he says, "is one disease closely connected with radiation. If all that radiation damage did was to increase cancer incidence by a large amount, you can see what a tremendous burden this could be on the human race."