

GENERAL SCIENCE

Change Security Rules

Scientists testifying before House subcommittee urge declassifying the project to control fusion reactions for peaceful purposes, and less secrecy for scientific findings.

➤ This country would make more rapid progress toward peaceful uses of the fusion of light elements, a controlled hydrogen bomb, if the project were not behind security bars, three scientists testifying before a House subcommittee agreed.

The solution to developing power from combining hydrogen, helium and other light elements into heavier elements is not expected in the near future, Dr. M. Stanley Livingston, physics professor at Massachusetts Institute of Technology, told the House Government Information Subcommittee.

He said the problem of taming H-bomb reactions is basic scientific research and should not be classified. Dr. L. V. Berkner, president of Associated Universities, Inc., and Dr. Elmer Hutchisson of Case Institute of Technology supported his statement.

The scientists also agreed that the basic strength of the United States is in freedom and progress, not restriction. Excessive military security, they said, hampers the free flow of information upon which progress rests.

Information flow, Dr. Livingston said, is restricted both "into and out of Government agencies." New ideas and new concepts are far more vital than secrets represented by weapons already developed.

Such new ideas come from the interplay and synthesis of many factors, and no one can tell beforehand what information is relevant, Dr. Berkner said.

Bell Telephone Laboratories, it was pointed out, accepted a calculated risk in releasing information about transistors so that many industrial firms could work on them. This move paid off in much more rapid development of the tiny devices that replace vacuum tubes for many applications.

When the results of scientific experiments are locked away and available only to a few others, much effort is wasted duplicating that work in laboratories staffed by scientists without access to classified information.

In time, however, Dr. Berkner pointed out, the work is inevitably duplicated.

Even when results of research "born" classified are removed from security restrictions, they are often out of date or not easily available to other scientists.

Publication in established scientific journals is the best method of informing scientists of new or recently declassified developments, Dr. Hutchisson said, and suggested the National Science Foundation might support such efforts.

The country should take a searching look at the results of its security regulations, Dr. Livingston urged. It would prove advisable

in the long run, he suggested, to substitute security by achievement for security by restriction, which is the basis of present regulations.

To win men's minds, which Dr. Livingston said is the "real struggle" now going on in the world, he suggested it might pay to ask the peoples of the world for their help in solving the problems of controlling H-bomb reactions for peaceful purposes.

Science News Letter, March 17, 1956

PSYCHOLOGY

American POW's Taught To Lie by Communists

➤ AMERICAN PRISONERS of war were actually taught to lie by their Chinese captors.

The method used by Chinese Communists to extort false confessions of germ warfare from American POW's even when they did not resort to beating and other physical torture is explained by Dr. George Winokur, psychiatrist of Washington University, St. Louis, Mo.

The Communists took advantage of well known and internationally known laws of learning, Dr. Winokur found in interviews with returned POW's.

Although the men were not beaten, they were made extremely uncomfortable. The food was either unpalatable or inedible. The weather was cold and there was no heat. They were kept in darkness in vermin-infested quarters.

From this miserable state they were taken into a warm room, given a warm meal and tobacco, and were questioned. At first they were required to write silly and immaterial lies. A man would be required to write that his father was a factory worker when in reality he was a farmer. After the lies were written, the prisoner would be treated kindly for a period. Then the cycle was repeated.

In this way the prisoner found that the hostility of the enemy was reduced when he wrote down lies, however nonsensical.

Then gradually the enemy led up to the false confessions.

The prisoner learned to lie as a protection against intolerable stress. He also inwardly excused his lying by reasoning that it could not aid the enemy to tell the enemy lies of nonsense.

The POW's interviewed by Dr. Winokur had not broken under the strain of their experiences. They were sound mentally and emotionally.

Science News Letter, March 17, 1956

Questions

AERONAUTICS—To what use will the Civil Aeronautics Administration put its electronic computer? p. 169.

ENTOMOLOGY—What insect threatens corn crops in eastern United States? p. 168.

MEDICINE—What are the three top drugs for treating seasickness? p. 168.

How has a "frozen twitch" upset the theory of about how muscles get their energy? p. 169.

PHYSICS—Why is the neutrino the object of an intensive search? p. 171.

TECHNOLOGY—How does interest in automation compare geographically? p. 170.

PHOTOGRAPHS: Cover, pp. 165 and 167, Fremont Davis; p. 163, Sprague Electric Company; p. 170, Ford Motor Company; p. 176, Nadco Sporting Goods Company.

BOTANY

Study Plant Growth in Weather Chambers

➤ TOMATO PLANTS grow best at a night temperature of 64.6 degrees Fahrenheit, Dr. Frits W. Went, plant physiologist at the California Institute of Technology, speaking as a Sigma Xi national lecturer, told the U. S. Naval Postgraduate School Club, Monterey, Calif.

This fact about tomatoes and other important fundamentals about plant growth have been discovered by growing plants under many different artificial climates in indoor weather chambers, Dr. Went said.

In the Earhart Plant Research Laboratory at the Institute, he explained, there are 54 growing test chambers in which discoveries about plant growth have been made. Temperature, humidity, periods and intensities of light, rain, fog, and gas mixtures can be varied to test plant growth.

Growth of tomato plants was measured in these chambers.

Science News Letter, March 17, 1956

Understanding Yourself

By Dr. Ernest R. Groves

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