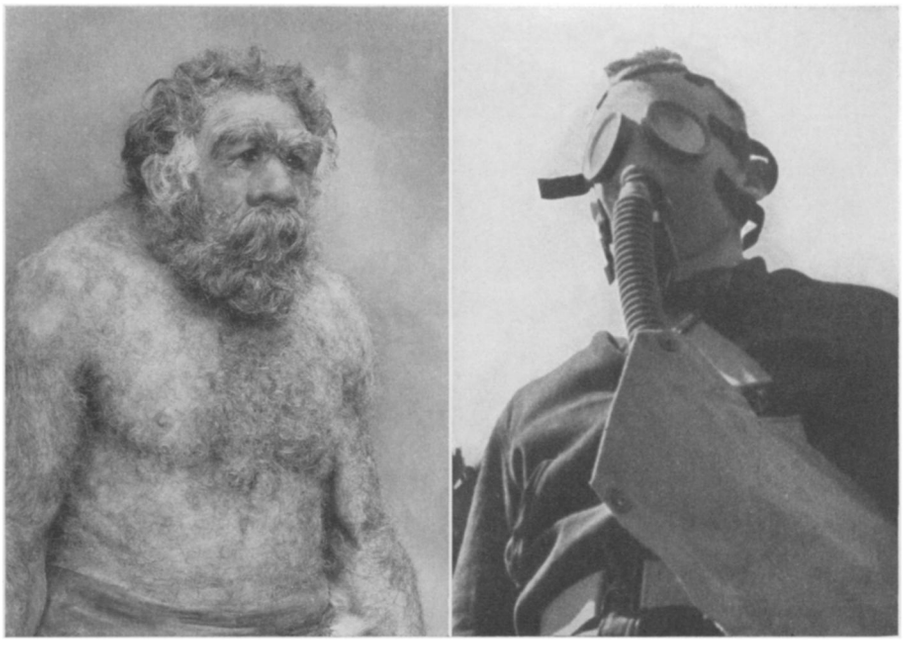
Washington, said just a month before he died in 1937:

"Nothing activates the aggressive instinct more seriously than does war. An orgy of killing lets it loose and it is a good many years before it is ever chained up again."

Many scientists feel that they must take an active part in everyday affairs to protect civilization against the dangers of war. They will agree with Dr. Franklin Fearing, University of California psychologist, who said that psychologists "must step in to control and suppress war propaganda or they will be destroyed. Psychologists cannot afford to leave political and social matters to the non-scientists. The psychologist who must dance to the tune called by politician or industrialist is no more than a serf. That is the condition of many scientists even today."

Scientists are often blamed for their part in making war more horrible as it is made more scientific. New knowledge and inventions add to the frightfulness and destruction of war. To these charges the reply is that war's utilization is a mere accidental by-product of scientific research and invention. The scientist alone can not be expected to control the misuse of his gifts to civilization any more than the cutlery manufacturer can prevent a murder being committed with a butcher knife he makes. But intelligent mankind should be able to prevent civilization from committing suicide with the butcher knife of scientific advancement.

*Science News Letter, September 30, 1939*



***PRIMITIVE***

***Man rose from the cave, and the new war promises to send him back there, perhaps figuratively in loss of culture as well as literally in his air raid shelters. Psychiatrists point out that the man in the gas mask has aggressive and destructive impulses unleashed by war that are as primitive and uncontrollable as those of his stone age forebears. The photograph of the cave man is of an exhibit in the Field Museum of Natural History, Chicago.***

AGRICULTURE

## Wilt-Resistant Alfalfas To Be Ready in 1942

WILT-RESISTANT alfalfa varieties, developed under a long-range breeding program by the U. S. Department of Agriculture, will be available to limited distribution in 1942.

The new alfalfas are being produced by crossing resistant strains, brought from Turkistan by H. L. Westover, with varieties already established in the United States.

Alfalfa wilt began to become a serious problem in this country about 15 years ago. Up to that time, a good stand of alfalfa could be counted on to last from 6 to 12 years without reseeding, but lately the wilt organism has been wiping out alfalfa fields in from 2 to 4 years.

*Science News Letter, September 30, 1939*

PHYSICS

# Beams Of Neutrons Produced By Hole Through Water Wall

### Discovery Expected To Be of Great Aid in Study of Transmutation of Matter and Artificial Disintegration

BEAMS of piercing neutron particles are now being produced at the department of physics at Cornell University in an experimental advance which will be of great aid to all scientists studying the transmutation of matter, artificial disintegration, and other tricks of the atom smashers' art.

Prof. R. F. Bacher of Cornell and Dr. D. C. Swanson, now at the University of Florida, report in the *Physical Review* (Sept. 1) that by placing a thick wall of water around a source of neutrons and then putting a "hole" through the water by means of a tube they have achieved a distinct collimation of their neutrons into a beam.

Neutrons, because they lack electrical charge, easily penetrate into any atoms with which they come in contact. Previous attempts to produce a beam of them have only been partially successful. And yet such beams have been greatly needed to improve the geometry of many nuclear experiments in which scattering occurs and cross sections of atoms for neutrons of different energies can be determined.

Many of the experiments in nuclear physics require well defined beams of particles just as spectroscopy requires well defined beams of light rays. Much of the early work in nuclear physics, for it has really been in quite a primitive stage of development, was done in experiments that in spectroscopy would have been equivalent to working with very coarse slits in a spectrograph.

The new beam technique of Prof. Bacher and Dr. Swanson does not yet attain perfect results in producing a true, collimated beam but it does produce much better results than hitherto.

*Science News Letter, September 30, 1939*