

GENERAL SCIENCE

# Physiologist Named President Of American Association

Prof. Walter B. Cannon Noted for Research on Glands And Active in Fight for Freedom of Scientific Work

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**S**Ocially conscious scientists, who represent a rapidly growing wing of organized researchers, now have among their number the president of the largest general scientific organization in the United States, the American Association for the Advancement of Science.

He is Prof. Walter B. Cannon, eminent Harvard physiologist, elected at the Richmond meeting of the A.A.A.S.

Actively identified with the campaign to send American doctors, nurses and medical supplies to war-torn Loyalist Spain, Dr. Cannon is co-chairman of the North American Committee to Aid Spanish Democracy and the Medical Bureau to Aid Spanish Democracy, leading pro-Loyalist groups. He has joined in militant anti-fascist activity since he became chairman of the Medical Bureau when it was founded in November, 1936.

Dr. Cannon, who is 67, is an international figure in the world of science. Since 1897, the year after he graduated from Harvard but before he finished his medical course, he has done outstanding original work in the field of physiology.

He has made important contributions to knowledge of digestion, the nervous system, the ductless glands and the effects of emotion upon bodily processes.

He showed that in rage, fear or anger, the emotions which prepare the animal for flight or fight, the digestive and sexual functions are immediately inhibited and the adrenal glands pour into the

blood large quantities of one of their hormones, adrenalin or epinephrin. As a result of this adrenal action, sugar is mobilized from its storage place in the body to counteract the effects of muscular fatigue, and the clotting time of the blood is speeded up. All this instantaneous preparation gives the animal or man a "wonderful capacity for offense, defense, flight, and repair of injured tissues."

During the World War, Dr. Cannon, working with another physiologist, developed the gum acacia treatment of shock.

Since then he has discovered a new hormone, sympathin, which is produced by smooth muscle, and has an effect on the body similar to epinephrin.

Recent investigations have been on the sympathetic nervous system and on high blood pressure.

Besides conducting original scientific investigations, Dr. Cannon has been a leader in medical education and in the fight for the freedom of medical research.

His term of office as president of the A.A.A.S. follows that of Prof. Wesley C. Mitchell, Columbia economist, the first social scientist in many years to head the A.A.A.S. The elections of both men call attention to the significant advance in scientists' interest in every day affairs and in what the world does with their inventions and discoveries.

A close friend of Premier Juan Negrin of Loyalist Spain, Dr. Cannon has served

the Loyalist aid organizations actively. He is also chairman of the Boston Chapter of the national organization of which he is one of the heads. Speeches by him on behalf of the Loyalists have received wide circulation in pamphlet form.

A recent gift of nicotinic acid, new pellagra treatment, to Premier Negrin, though paid for by 39 scientists, was sent in Dr. Cannon's name. Premier Negrin is also a well-known physiologist. The nicotinic acid gift provides the first occasion on which the treatment, which has thus far given encouraging results, is being tried on a large scale. Pellagra is a diet deficiency disease, common in America's south and from which thousands of Madrid residents are suffering.

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## Dangers Seen in Applying Science to Human Affairs

**A**S the economic and political conditions of the world become more disturbed, there is a tendency to look more and more to science for factual and social guidance. In many cases, especially where sharply delineated areas of non-emotional activity are concerned, scientific facts and procedures are directly helpful and pertinent without any major dangers.

The world has seen some shocking misinterpretations or perversions of science, such as the race doctrine of the Nazis, the misconception of thermodynamical principles called technocracy, the empirical materialism that flourishes in Moscow, and the more wide-spread idea that Darwin's "survival of the fittest" justifies war.

There has been great concern in scientific circles over such dangers, coupled with a feeling that scientists themselves should do something about this problem of science's social aspects. Aside from the scientists who are emphatic and adamant in holding to the idea that science should not concern itself with applications or difficulties in politics, religion, etc., there are also highly competent experimentalists who feel strongly that in social application scientists should be sure that haste is made slowly.

This viewpoint is put neatly by Prof. G. A. Boutry of Paris, who contends that a proposed scientific experiment must be considered in the light of whether it has any limitations, whether it can be stopped and started again at will, and whether it will endanger in any way the human commonwealth already acquired.

It is evident that caution is necessary,

## Urges Spirit of Truth Seeker

*Dr. Walter B. Cannon, Harvard physiologist, elected president of the American Association for the Advancement of Science at its Richmond meeting, issued at the request of Science Service the following inaugural statement, to his fellow scientists and the public:*

"Thousands of teachers and investigators in all aspects of scientific endeavor have abundant opportunities for diffusion of the spirit of the truth seeker—a spirit much needed in our distressed world. It stands for tolerance as opposed to bigotry, for the welfare of all mankind as opposed to exclusive national and racial interests, for fighting the foes of humanity—misery, ignorance and disease—as opposed to human slaughter by human beings who abominably pervert scientific discoveries. I honestly express the hope that the coming year may see both noteworthy progress in science and a wider spreading of the scientific spirit."

Prof. Boutry observes. The experiments of a mathematician are dangerous only to his paper supply. Those of a physicist or chemist may raise the roof of his laboratory and reduce him to small particles. Those of a biologist or pathologist may be fatal to thousands of people. Wars have shown that mistakes in the

science of ruling nations have led to the death of millions and the misery of generations. They may be dangerous to the spiritual qualities of mankind, about which we know next to nothing.

All of which are good reasons why careful and competent studies of social relations of science should be pursued.

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MENTAL HYGIENE

## Must Work Fast To Beat Forces Returning Us To Middle Ages

### Scientists Warned at Mental Health Symposium That Psychiatrists Should Unite With Social Scientists

**S**CIENTISTS studying the conduct and mind of man must push their work forward fast if they are to outdistance the "forces that now threaten to herd us back into the middle ages."

With this warning, Dr. Harry Stack Sullivan, President of the William Alanson White Psychiatric Foundation, Washington, D. C., summarized the reports at a special session of the Symposium on Mental Health held in connection with the meeting of the American As-

sociation for the Advancement of Science in Richmond.

"We have come a long way indeed," said Dr. Sullivan, "from the days, now reappearing in Europe, when everyone had to subscribe to an official account of what is right to believe and proper to do."

"The spirit of free inquiry is especially profitable in terms of human happiness when it brings about the union of the psychiatric and the social sciences.

"Man is far more a product of culture, of the forces that make up civilization, than is he a creature of the natural science.

"We need to know all that we can learn about his heredity, physical make-up, nutrition, and physiology. But even more important in these days of alarm and excursion, of international misdemeanor and crime, we must hurry to an understanding of man living as a person among others."

Neither psychiatry alone, nor the social sciences alone can hope to solve current urgent problems, Dr. Sullivan said.

"By a pooling of techniques, however, and a redefinition of fields, a great deal can be accomplished quickly," he said.

### Bodyguards To Be Obsolete

**P**ROPHECY that political leaders armed with bodyguard and machine gun will some day be as obsolete as is now a physician loaded with ropes and manacles for restraint of disordered minds, was voiced by Dr. Harold D. Lasswell, of the University of Chicago and the White Psychiatric Foundation.

Manacles and ropes were discarded by the psychiatric pioneer, Dr. William Alanson White, when he saw that force was a substitute for thought.

This has now become a truism in the hospital. The attitude may become more general among leaders in business and party life, Dr. Lasswell said.

"Methods can be perfected of exploring the distribution of discontent among large numbers of persons, and of controlling such reactions," he declared. "Too often it is true that responsible leaders are stamped by their personal anxieties, into costly and dangerous means of coping with collective insecurities."

Propagandists are useful to both leaders and followers, Dr. Lasswell said.

"When the Great Depression struck, millions of people were cast into the discard heap of the unemployed. These millions had been educated to have faith that the world would reward them if they worked. Propagandists diverted their aggressions away from themselves and supplied a new sense of self-esteem by absolving them from blame, and encouraging them to take a hand in the preparation of a better world.

"Isolated crimes against persons and property were reduced by enabling the masses to discharge their insecurities in parades, meetings, and discussions."

The propagandists, catering to the



#### THIAMIN

The chemical model of vitamin B<sub>1</sub> is here being shown by F. J. Ruland (left) and W. O. McCarthy to Miss Alys d'Avesne at the Merck and Company exhibit at the meeting of the American Association for the Advancement of Science. Above may be seen part of a photomicrograph of the crystals themselves.