



GENERAL SCIENCE

Poets Inspired Discoveries, Particularly Aviation

And Science Stimulates Imagination, Says Dean Nicolson;
Huxley Visions an After-the-War World in Unity

POETS and prose writers anticipated and inspired men of science to make some of their most important discoveries, particularly in the field of aviation, Dean Marjorie Nicolson of Smith College declared in delivering the annual Phi Beta Kappa address in connection with the meeting of the American Association for the Advancement of Science at Columbus.

"Imagination anticipated for hundreds of years the possibility of flight, before science did anything about it," Dean Nicolson declared. "The new interest in aviation which finally resulted in the invention of the heavier-than-air machine developed, not as a separate chapter in the history of science, but under the stimulus of astronomy.

"It has not been pointed out that the real reason for the stimulation of interest in aviation in the seventeenth and eighteenth centuries was the desire of men to find a means of flying to the moon. This theme is tied up with the long tradition of a belief in the inhabitation of other worlds. The excitement which was occasioned by Orson Welles' broadcast in 1938 on this same theme indicated

how vital the theme is in human imagination."

Dean Nicolson's researches upon the interrelations of science and literature refute the common point of view that science has had an adverse effect upon literary imagination. She expressed disagreement with the idea that science has cramped imagination. The people who hold this point of view, she explained, seem to feel that the fields of the sciences and the fields of the humanities have grown so far apart that there is little relation between them.

"Exactly the opposite has been true," Dean Nicolson said. "In the period in which modern science emerged, 300 years ago, there was an immediate effect upon literary imagination. In the science of astronomy, the work of Galileo in 1610 awakened an immediate response in poets and prose writers. Telescopic observations had an effect upon a number of major poets, including Milton. Some phases of microbiology had similar influence, producing the same immediate response in literary imagination among many popular writers, including Swift in 'Gulliver's Travels'. In many other

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instances, men of letters reflected in their work the stimulus of new scientific ideas."

Science News Letter, January 13, 1940

"Blueprint for After War"

A POST-WAR world from which mammoth armed nations shall have disappeared like the over-muscled, under-brained dinosaurs of old was forevisioned by Dr. Julian Huxley, noted English zoologist and grandson of the great friend and champion of Darwin. Dr. Huxley, who is secretary of the London Zoological Society, spoke on an exchange arrangement known as the British and American Association Lectures.

After the war, change is inevitable, the speaker declared, and he insisted that stubbornly conservative resistance is "not only useless but immoral." Nevertheless, change cannot come as quickly as some impatient men may demand:

"The zeal of the revolutionary for getting rid of the old system root and branch is thus likely to be wastefully destructive and in the long run to delay progress."

However, although the great power-states must go like the dinosaurs, a development of small, flexible nations like the mammals that followed the dinosaurs was not foreseen by Dr. Huxley. Such particularism is precluded by the complexly integrated state of human society all over the world. He visioned a federal system for world peoples, beginning probably on the basis of great regions but aiming eventually at complete world unity.

Throughout, Dr. Huxley cautioned against haste. He does not believe that Europe, for example, is yet ready for as close a union as that of the United States, but he does feel that something closer than the present League of Nations organization is essential. He pic-

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tured a League having its own administrative set-up, its own budget, its own armed forces, and especially an organiza-

tion for the promotion and application of scientific research.

Science News Letter, January 13, 1940

PHYSICS

Water Obtained Solidified In The Form of Glass

Thin Stream Passed Between Metal Disks Chilled To Liquid Air Temperature in Novel Experiment

WATER solidified in the form of glass was described by Dr. B. J. Luyet of St. Louis University before the American Association for the Advancement of Science in Columbus.

Dr. Luyet passed a thin stream of water from a pipette between two metal disks chilled to liquid air temperature. One disk was fastened behind the stream and the other disk was driven against the stream by the spring of a toy pistol. Thin layers of solid water were thus obtained. When removed to a Nicol analyzing microscope apparatus using polarized light, the frozen films stayed dark between crossed Nicols until the stage of devitrification occurred as the temperature rose.

Science News Letter, January 13, 1940

Thin Films on Lenses

THIN FILMS of evaporated metallic fluoride on an f:2 camera lens increase the speed of the very fast lens by a factor of two, Dr. C. Hawley Cartwright of Massachusetts Institute of Technology told the physicists.

At the same time, he said, the troublesome "ghost" images which occur under adverse lighting conditions disappeared.

The increase in lens speed is rather subjective, he pointed out, for the added transmission of the lens is accompanied also by more contrast and by an observable increase in detail in the picture.

Science News Letter, January 13, 1940

Rouge Becomes Shutter

MOST remote from Milady's thoughts as she applies rouge to her face is the experiment reported to the meeting of the American Physical Society in which rouge is heated to increase its ferromagnetism and then used as a shutter to govern intensity of a beam of light.

Prof C. W. Heaps of the Rice Institute, Houston, Texas, took ordinary rouge,

heated it, and then stirred the powder in water or oil.

Held in suspension, the magnetic rouge particles have at first a random sort of orientation. If a small hand magnet is brought near the container, however, the little rouge magnets line up. If their long axis is at right angles to a beam of light, the intensity of the light will be greatly diminished. If the hand magnet is moved so that it orients the rouge magnets parallel to the light beam, the light transmission is increased. Prof. Heaps was thus able to make a light shutter which can be controlled by the strength of the magnetic field.

Science News Letter, January 13, 1940

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Although the work was done on a low animal form, it represents, Dr. Welsh said, a definite step toward explaining the causes and nature of human sleep, one of science's major mysteries.

Nervous activity, gland secretions and general metabolism are interlocked in a complex chain of events to cause the daily color or pigment changes in the eye of the crayfish, Dr. Welsh found. This daily color change is a typical daily internal animal rhythm.

Many studies of persisting 24-hour animal rhythms have been made previously but this research on the crayfish has provided the first satisfactory experimental evidence of a complete internal series of events capable of keeping such a cycle in operation.

Science News Letter, January 13, 1940

Snakes Have "Ersatz" Eyes

THE EYE of a snake is an "ersatz" organ, declared Dr. Gordon L. Walls of the Wayne University College of Medicine, speaking before the American Society of Zoologists. Snakes are known to have evolved from lizard ancestors, and