GENERAL SCIENCE

Honesty Is Automatically Enforced Upon Scientists

False Ideas in Chemistry or Physics Result in Elimination of Perpetrator, Says Noted Astronomer

THE SCIENTIST is more honest in his work than is the politician because lack of morality in science is likely to destroy the experimenter, declared Dr. Harlow Shapley, director of the Harvard College Observatory and vice president of Science Service. It is perversion of international morality, he believes, not of gadgetry, that has resulted in the epochal decay of present-day society.

Dr. Shapley's statement was issued in explaining the purpose of a Conference on Science, Philosophy and Religion to be held in New York on Sept. 9.

"Morality in physics and chemistry is to some extent forced," he said. "The scientist, naturally, is as human in his irrationality as others. Survival, however, requires a kind of honesty. The unmoral experimenter poisons himself or blows himself up.

"If only a false economic doctrine, while still prenatal, would also electrocute its progenitor! Or an education schism backfire during fabrication and reduce its advocate to impotent illiteracy and confusion!"

Closer Contacts Urged

A closer communion between the physical, psychological and social sciences was urged by Dr. Shapley as a means toward development for the social and psychological sciences of "a logical and rigorously experimental method similar to that which has brought such achievement in the physical sciences."

"The value of these methods," he said, "are well-publicized by the success of everyday tools. You rely on your electrical refrigerator, designed by the engineers; but you trust mighty little your politicians and diplomats. Thousands of people ride in automobiles with complete confidence in their mechanism. They worry not at all about the engine; reserving their anxiety for the unverified assertions of their congressman, for the economic system, for the treachery of man in fields where a forced morality does not exist."

"If we are to escape descent into darkness," he declared, "the scientist must join forces with other intellectual leaders, because on the advances in the educational, social and political fields, does the advance of our science depend. The September Conference on Science, Philosophy and Religion is an effort in just this direction. Those of us who projected the Conference hope that from it will come a better understanding between the different fields of learning that we represent, as well as a dynamic restatement of the rights of man and the democratic way of life."

Science News Letter, August 31, 1940

● RADIO

Mr. Oren C. Durham, chief botanist of the Abbott Laboratories, will talk on the prospects for the 1940 hayfever season, as guest speaker on "Adventures in Science" with Watson Davis, director of Science Service, over the coast to coast network of the Columbia Broadcasting System, Thursday, Sept. 5, 4:00 p.m., EDST, 3:00 EST, 2:00 CST, 1:00 MST, 12:00 PST.

Listen in on your local station. Listen in each Thursday.

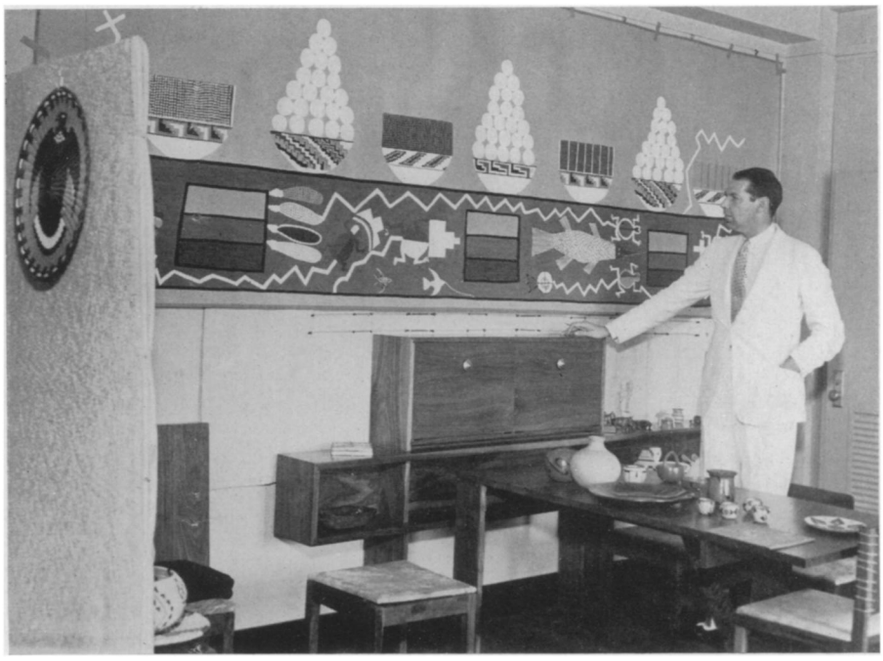
ARCHAEOLOGY

Murals 30 Layers Deep Found in Indian Ruins

EVOLUTION of some of the oldest mural art in the United States revealed by recent excavations at Indian ruins in Awotovi, Arizona, will be shown for the first time to modern America in an exhibit being prepared in Washington, D. C.

Life-sized, colorful copies of the paintings which inspired generations of Indians, as they held ceremonies in their religious chambers, are being completed at the Office of Indian Affairs, under direction of René d'Harnoncourt, specialist in Indian arts.

Twenty to thirty layers of paintings were detected on some of the buried walls, when archaeologists of Harvard University's Peabody Museum probed the art history preserved by the Indian custom of over-painting their ceremonial wall decorations. Mural art in prehistoric United States country is shown evolving from simple lines and figures to beautifully composed pictures. So vivid and



ARTIST UNKNOWN

One of the elaborate ancient Indian murals, as prepared for showing at the Museum of Modern Art. Colors and design are very much like those in present-day Indian work. Examining the picture is Rene d'Harnoncourt.

real in appearance are some of the Indians portrayed on these walls that archaeologists can point out detail after detail of costume and belongings, known by other lines of evidence. Even the possibility of identifying some of the old figures with modern ceremony and everyday customs of Hopi Indians has been seen by the Harvard archaeologists.

A series of eight murals, Mr. d'Harnoncourt said, will be a feature of a comprehensive exhibit of America's Indian art, ancient and modern, to be shown to the public at the Museum of Modern Art in New York, in January.

Science News Letter, August 31, 1940

PUBLIC HEALTH

War Menaces Europe With Several Deadly Epidemics

Shortages of Food, Fuel, Medicines and Sanitary Supplies Cause Grave Concern to Health Authorities

EUROPE'S chances for escaping war-born diseases this winter are not too bright. Like the prospects of famine, a hazardous health situation hangs on some vital "ifs."

If this winter proves severe, as last winter was, fuel shortages will join forces with weather to promote disease. Supplies of fuel for household heat are expected to be even shorter than last winter. A mild winter would minimize misery from this cause, but cold waves would render people already weakened by malnutrition and other war experiences a ready prey to disease.

If health and sanitation services disrupted by war are not resumed, with sufficient medical supplies, there will be weak spots in health defense where trouble may spread. Speed with which French refugees are returned to their homes is important for health. Pneumonia and other respiratory diseases are rated as the chief risk which Europe's population faces, as conditions are now. Tuberculosis is likely to take heavy toll, if the work of careful organization is undone, and masses of people are permitted to spread the disease through overcrowding, and other poor living conditions.

If Europe is acutely short of food supplies, as some observers claim, or if Nazi Germany will not share and apportion supplies equably, a train of well-known malnutrition evils is in store.

Another "if" in the food situation concerns transportation. Food en route from one area to another may be delayed or cut off by transportation breakdowns, all too frequent. If this occurs widely, due to fuel shortage or slowness to resume and repair transportation services, even food available will not be used to best advantage to nourish hungry people.

So far as epidemics go, this war has thus far — fortunately — failed to make sensational history. Typhus has been endemic in Poland and the Balkans. There is always some typhus in eastern Europe. The experiment in which several thousand doses of two new American-developed vaccines were given in Hungary and Rumania, to test their effectiveness as protection against the fever, has been hampered by political changes in Rumania. Since the area of Rumania where the tests were made has since become subject to Soviet Russia, the physicians in charge have presumably withdrawn. But in several months, a report of the effectiveness of the vaccines is expected to come from the Hungarian group.

Science News Letter, August 31, 1940

ORNITHOLOGY

Starlings Show Sex Change in Autumn

FEMALE British starlings "go masculine" in autumn, Dr. W. S. Bullough and R. Carrick of the University of Leeds have reported. Singing, and a yellow beak, are distinctly male characters, dependent on the secretion of male hormone by the male sex glands.

Yet in late October, female starlings' bills turn yellow and their owners begin to sing, continuing through November, when they stop singing and their beaks resume the natural dark color. Apparently during this period their ovaries are secreting the male hormone.

Female starlings from continental Europe, some of which are always present in the British Isles, do not have this period of temporary masculinity.

Science News Letter, August 31, 1940

ARCHAEOLOGY

Chemical Spray Facilitates Reading of Ancient Tablets

SCHOLARS can now read cuneiform tablets of the Babylonians in one-tenth the time formerly required, thanks to a simple trick of blowing powdered ammonium chloride on the ancient surface. The process, introduced by Dr. Neilson C. Debevoise, research associate of the Oriental Institute of the University of Chicago, is finding extensive use at the Institute for reading and photographing writings on clay.

While almost everything that the ancients wrote on clay has been preserved, the surface of business documents, letters, and other "papers" is usually discolored.

To aid in reading, Dr. Debevoise pointed out, a slanting light is thrown across a tablet. Although this brings out the wedge-shaped characters, it is still often impossible to read the writing because of the discoloration.

"The great advantage of the ammonium chloride, which condenses when it is blown across a tablet," he explained, "is that it provides a dull surface of an even color, so that a tablet may be read with ease or a photograph made of very low relief."

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POPULATION

Netherlands Indies Seen As Gravely Overcrowded

ADDED on to much-advertised war troubles, millions of natives of Netherlands Indies are heading toward a serious internal situation, the result of overcrowding.

So dense is the population of Java, that the world's only agricultural areas rivaling this island's crowding are the Nile valley, parts of the Ganges valley, and some regions in China, says a report in the *Population Index,* issued by Princeton University's School of Public Affairs and the Population Association of America. A 1930 census showed 817 persons per square mile, with 1,274 in the densest area. At the present rate of growth, by the year 2000 Java, including its close-linked neighbor island, Madura, will be thronged with 116,000,000 people which the population experts flatly call "an impossible figure." Actually, before that time, population increases will probably force down the living level, so that from bad living conditions rates of disease and death will rise.