GENERAL SCIENCE

Normal Persons Taught To Have Hallucinations

After Training Period During Which Tone Is Sounded At Regular Intervals, You May "Hear" It in Silence

PERFECTLY normal persons can be taught to "hear things" where there is no sound, psychologists were told at the meeting of the American Association for the Advancement of Science in Dallas.

Details of how hallucinations can be produced by the simple form of learning known to psychologists as "conditioning" were reported by Prof. Douglas G. Ellson, of the University of Mississippi.

Nearly half (42.9%) of a group of subjects taking part in Prof. Ellson's experiment under the most favorable conditions, learned to hear a tone when it was not being sounded. They had been prepared to "hear" it by a learning period during which the tone was sounded regularly every 30 seconds for 30 repetitions.

When the actual sounding of the tone was introduced and ended gradually, the subjects tended to have the hallucination of a tone after it had ceased to sound. If the start and termination were abrupt, however, only a few (8.5%) developed the hallucination.

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New Science Born

A BRAND-NEW science, paleogrostology, or the study of ancient grasses, made its bow at the meeting, when Dr. Maxim K. Elias of the University of Nebraska presented the results of his long study of fossil seeds found in the same rock strata of the West that have yielded the bones of early forms of horses, camels and other herbivorous animals that lived on this continent in the Tertiary geologic period.

Seeds proved the most dependable plant parts for identification of these ancient grasses, Dr. Elias found. Earlier identifications of leaves and other vegetative parts have sometimes described as grasses plants that are not grasses at all.

Examination of fossil grass seeds from successive strata of rocks yielded evidence that climates of the ancient West went through slow swings from dry to moist and back to dry again, many times. Interesting also is the change in the types of teeth in the jaws of herbivorous animals after the evolution of the grasses began. These long-extinct hoofed creatures readily took to the food-plants which have been the mainstay of their families ever since. Their evolution was strongly influenced by the evolution of the grasses, and in their turn the animals also influenced the development of distribution of prairie vegetation.

Science News Letter, January 3, 1942

Tooth Decay Still Riddle

DISCOVERY that people whose drinking water contains fluorine have less tooth decay than the rest of us has only partly solved the riddle of how to prevent tooth decay, it appears from the report of Dr. Philip Jay, of the University of Michigan School of Dentistry.

Adding fluorine to community water supplies in order to prevent tooth decay is not advisable on the basis of present knowledge, Dr. Jay emphasized.

He reported studies showing that fluorine in the drinking water may prevent decay by preventing the growth of mouth bacteria associated with tooth decay. Examination of 2,100 children showed that the number of these bacteria in the children's mouths are "remarkably low" in communities where the drinking water contains fluorine.

These studies also showed that it is the water supply and not the mineral content of the fruits and vegetables grown in these areas that is responsible for the relative lack of tooth decay or caries.

"Further studies must be conducted," Dr. Jay stated, "before this caries-inhibiting phenomenon is fully understood."

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MEDICINE

To Study the Nose As an Air Conditioner

AN ALL-OUT attack on the common cold and other respiratory diseases has been launched at the University of California Medical School.

Under the direction of Dr. William J. Kerr, professor of medicine, a group of ten doctors in a mass assault on every angle of this multiple menace will study respiratory diseases including those caused by bacteria and viruses (ultramicroscopic disease agents), and the head, throat and chest maladies caused by allergies and other identifiable agents.

The body's defenses against colds, including the efficiency of the human nose as an air-conditioner, will be analyzed. Some doctors believe that a nose subjected to violent changes from warm to cold air sometimes fails to rally from such shocks sufficiently to carry on its air-conditioning service, and that a cold results.

The relation between overcooling, atmospheric conditions and sudden temperature changes to cold-catching will be studied in a specially built room, large enough to accommodate six persons, in which temperature and humidity can be changed rapidly to any desired condition.

Experiments conducted in the same university and reported a year ago indicated that mere proximity to an infected person will not necessarily spread a cold to others. Subjects with colds were shut in the same room with well persons for as long as six days without transmitting the disease. Dr. Kerr and his staff will deliberately attempt to transmit a cold from one person to another so that they may trace the infection route that apparently makes colds epidemic at times.

Science News Letter, January 3, 1942

PUBLIC HEALTH

Cholera Possible in Japan If Crowded Cities Are Bombed

EFFECTIVE bombing of Japan's crowded, inflammable cities might easily give rise to an epidemic of the deadly Asiatic cholera, U. S. Public Health Service epidemiologists believe.

Two cases of cholera in at least one Japanese province (Taiwan) have been reported to the Public Health Service this year, and it is believed many more occurred. Cholera prevails in the Far East but there is none in the United States.

Cholera is spread by eating raw foodstuffs and drinking water infected with the microscopic curved rods which are the cholera germs. Normal supervision of these sources would be disrupted by severe bombings of Japanese "paper" cities.

A far higher number of people would be made homeless in Japan by bombings than in this country where living quarters are less crowded and more durable.

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