

● RADIO

Saturday, June 1, 1957, 1:45-2:00 p.m., EDT. "Adventures in Science," with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Dr. Melville H. Manson, scientific director, Muscular Dystrophy Association of America, Inc., New York City, will discuss "The Facts of Muscular Dystrophy."

PUBLIC SAFETY

Highway Deaths to Be 51,000 a Year in 1975

► ACCIDENTS on the highway will take a toll of 51,000 lives in the year 1975, Dr. S. T. Hitchcock, chief of the division of highway transport research, U. S. Bureau of Public Roads, told the Population Association of America meeting in Philadelphia.

The mileage of roads and streets in this country has remained constant at about 3,300,000 since 1920 and probably will not change appreciably by 1975.

But with the population of the country increasing to an expected 220,000,000 from 164,000,000 in 1955, there will be many more families, automobile drivers and cars to crowd the highways.

Dr. Hitchcock expects highway travel to be about 1,119 billion vehicle-miles in 1975.

Science News Letter, May 25, 1957

MEDICINE

Smog Doubles Chances Of Lung Cancer in Mice

► SMOG-BREATHING MICE can get up to two and one-half times as many lung cancers as those breathing "washed" laboratory air, Dr. Paul Kotin, pathology professor, University of Southern California, Los Angeles, reported at Yale Medical School, New Haven, Conn.

A third group of mice was exposed to day-to-day Los Angeles air and developed one and one-half times as many lung cancers as those who breathed the clean air, he said.

Results of a five-year study of the effects of air pollution on lung cancer at the University of Southern California School of Medicine show that a complex mixture of irritants in the air produces lung cancers in experimental animals, Dr. Kotin reported.

"By and large, it is also unlikely that a single agent produces lung cancer in man," he said.

Abnormal changes in the lining of the lungs can be found after a few months in experimental animals. Some of these changes resemble those that are thought to forecast the approach of lung cancer.

Similar rapid changes can be expected in human lungs, with many air pollutants combining to make the lungs more susceptible to cancer in a shorter time than previously believed, the pathologist warned.

Science News Letter, May 25, 1957

PSYCHOLOGY

Drugs Slow Reactions

► TRANQUILIZING drugs have been very useful in reducing the fears of the mentally ill. But, if given more normal persons, the drugs may prevent them from acting to save their lives when faced with danger.

This was brought out by reports presented to the Midwestern Psychological Association meeting in Chicago, describing experience with laboratory animals.

What happens when rats are fed the tranquilizer meprobamate was reported by Dr. Howard F. Hunt and John A. Harvey, psychologists of the University of Chicago.

In the laboratory, a state in animals similar to anxiety in humans is produced when a clicking noise is followed by an electric shock to the animals' feet. Soon the sound of the click alone will make them cower in fright.

If, however, a rat is given meprobamate, it takes more repetitions of the click and shock to teach it fear and then it reacts less emotionally.

The ability to learn and respond to small fears is important in daily life in order to stay alive, the psychologists pointed out. If you see a car speeding toward you on a side street, you must be scared enough to move hurriedly out of the way.

A similar effect on rats of another tranquilizer, chlorpromazine, was reported by Dr. George William Lewis of Purdue University.

The rats in Dr. Lewis's experiment were first trained to avoid an electric shock by jumping a barrier when a warning light was turned on. The animals were then divided into three groups. Two of the groups were given doses of chlorpromazine; one group had a mild dose and the other a heavier one. The third group was given only distilled water.

The gross body movements were greatly reduced in the animals receiving the tranquilizer, with the greatest effect in those receiving the larger dose.

Various fear responses were not lost, however, Dr. Lewis reported.

In human terms, this would mean that you might still feel scared when you see a car speeding toward you, but the fear would not make you run.

Fish Become Emotional

► A GOLDFISH, which has no true cerebral cortex, can nevertheless avoid an electric shock by learning to become "emotionally" conditioned by a warning light.

Experiments showing this were reported to the Midwestern Psychological Association by Drs. Leon S. Otis, State University of Iowa and Jean A. Cerf, University of California Medical Center.

The goldfish were first taught by giving them a momentary shock following the turning on of a light shining through the

milk-glass bottom of their tank. Turning on the light then caused a marked reduction of breathing and heart rate in 29 out of the 37 fish.

Then the fish were put into a tank with two compartments. An over-head light lighted first one compartment and then was moved to the other. If the fish did not move within 15 seconds to the lighted compartment the shock was turned on until they did move.

The fish learned, in spite of their lack of cortex, to avoid the shock.

Science News Letter, May 25, 1957

PUBLIC HEALTH

False Radio and TV Ads Spotted by Public

► RADIO AND TV fans are the chief investigators for the Federal Trade Commission's (FTC) new unit to monitor all radio and TV commercials for false advertising.

The unit was set up by the FTC in October, 1956, and has issued its first complaints against three national distributors of preparations claiming to be arthritis and rheumatism medicines. The charge is that none of the advertised products is an adequate, effective or reliable treatment.

Each year about 3,400 complaints are received from the public, the majority of them about false advertising in all media. From these the FTC investigators get the major number of the claims they study, although the FTC investigates some of its own cases.

A "substantial" number of the complaints relate to medical and drug products and some of them are quite difficult to handle, said T. Harold Scott, director of the new monitoring unit. The added problem in the medical field is that the FTC is concerned about what a particular product will do in a human being, and this is not always as easy to tell as it is with other types of products.

Much of the investigation of medical products is done by the FTC's division of scientific opinions, headed by Fred Irish, a former Food and Drug Administration official. False advertising about drug products is probably more difficult to investigate now than it used to be because new products involve new ingredients, Mr. Irish reported.

Not too much is known about them, he said, and a considerable amount of research is needed to see if they do what is claimed by the advertiser.

If the advertising sounds suspicious and there is enough evidence to warrant it, a complaint is issued to the advertiser and he is summoned to a hearing at which both the FTC and the advertiser can air their cases. The initial decision is made by an FTC hearing examiner. This initial decision is subject to review, change or adoption by the full five-man commission.

Science News Letter, May 25, 1957