PSYCHOLOGY

Remember Seven Items

THE AVERAGE MAN can remember accurately only seven items on a list heard for the first time, Dr. George A. Miller, an associate professor of psychology at Harvard University, reports.

In an attempt to break through man's "memory barrier," Dr. Miller found men become confused when they try to tell the difference between seven different degrees of any simple sensory magnitude, such as the brightness of light or the loudness of sound.

They make similar errors if they try to recall more than seven items on any list heard for the first time.

It is only coincidental, the Harvard psychologist suggests, that the memory limiting number is seven, but it may explain why the number seven appears so frequently in man's history.

He notes the seven days of the week, the seven deadly sins, the seven ages of man, the seven wonders of the world, the seven notes on the musical scale, and the seven seas.

Dr. Miller believes man's limited memory is caused by something "built into us," either by learning or the design of the nervous system.

To overcome the limitations, he suggests man organize "bits" of information into "chunks" of information. For the husband-shopper, this might mean remembering that he has to buy dairy products, meat and vegetables, and then recalling items like milk, eggs and butter and pork chops and ham for each "chunk."

Another outcome of the study carried out for the Office of Naval Research was finding that the chosen memory recording process may determine the kind of mistakes made.

Dr. Miller explains that, when we witness some event we want to remember, we make a description in words of it and then remember our word picture. When we recall the particular event, we recall the word recording we happen to have made.

This recording in one's own words, Dr. Miller states, depends on the person's whole life history.

Science News Letter, December 31, 1955

ENTOMOLOGY

Breezes Bring Insect Pest

AN AIRBORNE INVASION into the United States by the world's worst cotton pest may be a regular occurrence, with winds from the Bahama Islands carrying the pink bollworm moth across the ocean to the Florida mainland, the U.S. Department of Agriculture has revealed.

In spite of constant and apparently successful attempts to eradicate the pink bollworm moth from infested wild cotton in southern Florida, the pest has continued to frustrate control workers by its sudden reappearances.

A clue to the persistence of the bollworm in Florida came when a survey of two Bahama islands, less than an hour's flight from Miami, disclosed thousands of cotton plants growing in dooryards, on roadsides and in dense bush. Blooms, bolls and squares of this Bahama cotton were found infested with pink bollworm.

Bahama cotton fruits heavily from January through April, when the bollworms there would be expected to be in greatest numbers.

This is also the season when pink bollworms are found in Florida cotton. South Florida's winds are usually from the south and southeast, for about one-third of the fruiting season. This is where the Bahama lie.

Pink bollworms have been found 1,000 feet in the air on other occasions. Precisely how far they can be carried by high wind currents is not known. There is evidence bollworm infestations of west Texas in the early 1920's were windborne from Mexico's Laguna area, over 200 miles south of the border.

Science News Letter, December 31, 1955

MEDICINE

Carbon Dioxide Aids Heart X-Ray Examination

CARBON DIOXIDE GAS is expected to give doctors a safer way to make X-ray examinations of the inside of the human heart.

The method was reported by Drs. Herbert M. Stauffer, Thomas M. Durant and M. P. Oppenheimer of Temple University Medical School, Philadelphia, at the Radiological Society of North America meeting in Chicago.

The carbon dioxide gas would be used instead of air or oxygen to make the chambers of the heart opaque to X-rays so that an outline of them shows up on the X-ray film. The gas is injected into the veins and travels along them to the inside of the heart. Large doses have been well tolerated by dogs, Dr. Stauffer reported.

Carbon dioxide is preferred by the Philadelphia group because it is about 20 times as soluble in blood serum as air or oxygen, which should lessen the danger of bubbles accidentally forming and plugging an artery or vein. Such bubbles when formed from air are called air emboli.

Science News Letter, December 31, 1955