

PSYCHOLOGY

Learn While Asleep

Group of students who hear Chinese words and English equivalents played by phonograph during sleep learn such words faster than if music played.

► **YOU CAN** learn Chinese while you are asleep, Dr. Bernard H. Fox and Joseph S. Robbin report in Washington.

They conclude this on the basis of an experiment conducted at George Washington University, which demonstrated that a recording of Chinese words and English equivalents, played to dreaming students between 2:30 a.m. and 3:00 a.m., helped them in their Chinese studies in the morning. Results are reported in the *JOURNAL OF EXPERIMENTAL PSYCHOLOGY*. (Jan.).

Thirty young men and women took part in the experiment. They were divided into three groups with equal ability in learning Chinese words. One group heard the Chinese words with English equivalents during sleep. The second group heard the same Chinese words but with mis-matched English words. The third group heard a recording of Strauss waltzes.

After waking up, the group that had heard the correct list of Chinese words learned the same list after an average of only 5.6 repetitions. The group who had

listened to Strauss required 7.7 repetitions. But the group that were mixed up by wrong English "equivalents" required 11.1 repeats.

Any who said they heard the machine or who woke up during the playing were eliminated from the experiment. The Chinese words, however, did make the listeners dream. One individual dreamed that she was on a street in China.

Records intended to teach you languages while you sleep have been widely advertised, but psychological experiments designed to test their value have had conflicting results. Some seemed to indicate some improvement after use of the records, but others indicated that groups taught during sleep did no better than those who slept the night through without any teaching.

In the George Washington experiment no comparison is reported between those who had the recording played to them during sleep and any others who may have stayed awake for the same period to study the Chinese words.

Science News Letter, March 22, 1952

MEDICINE

Smaller Artificial Kidney

► **A NEW** artificial kidney, smaller and simpler to operate than those now in use, has been developed by John R. Guarino and Louis J. Guarino of the Brusck Medical Center, Cambridge, Mass., and the Pan-Engineering Company, New York.

The device is intended for routine use in small hospitals and clinics. Like big artificial kidneys, it operates to remove poisonous substances from the blood and keep life going while temporarily damaged and non-functioning kidneys can be repaired or recover by themselves from the damage.

Patients brought to small, local hospitals with bichloride of mercury or barbiturate sleeping pill poisoning might be helped by this device, it is suggested.

In the older, large artificial kidneys, the patient's blood is run through many feet of cellophane tubing. The tubing is immersed in a bath of salt solution. The poisonous substances in the blood diffuse out into this fluid and the blood is returned to the body.

The new, small artificial kidney works on the same principle, but the salty fluid is carried in the cellophane tubing while the blood enters and leaves a silicone-coated glass chamber. The cellophane tubing containing the salty fluid is in this chamber.

Among advantages claimed for the new apparatus are: small size with simplicity of construction and operation; requirement of a small amount of blood for a large dialyzing surface area; elimination of blood pumps, machinery and air traps; no opportunity for reabsorption by the blood of toxic material diffused from it into the fluid in the tubing; and elimination of such problems as blood circulation, clotting, hemorrhage, sterility and reactions.

Details of the apparatus and its use in dogs are reported in the journal *SCIENCE* (March 14).

Science News Letter, March 22, 1952

MEDICINE

Viruses Cause Suicide Of Red Blood Cells

► **RED BLOOD** cells are made to commit suicide by the action of certain viruses, Dr. Sylvan E. Moolten and Ellen Clark of St. Peter's General Hospital, New Brunswick, N. J., report to the New York Academy of Sciences.

The result in the patient is the kind of anemia known as hemolytic. The viruses, according to the theory of the New Bruns-

wick scientists, change the structure of the red blood cells in such a way that the red cells act as a foreign protein substance in the body. They provoke development of antibodies to themselves, just as the body develops antibodies to fight disease germs. In the case of the changed red cells, the response of antibody formation results in clumping and destruction of the red blood cells.

As a result of correlating hemolytic anemia with clumping of red blood cells, Dr. Moolten has been able to develop a rapid diagnostic test for identification of virus infection of the blood stream.

Science News Letter, March 22, 1952

GENETICS

Problem Dogs Help Understand Neurotics

► **THE PART** that heredity plays in producing neurotics and misfits in society is being sought in reasearch at the dog colony at the Roscoe B. Jackson Memorial Laboratory in Bar Harbor, Me., by Dr. John L. Fuller.

"Problem" dogs, all raised under identical conditions, are being studied to find out just what inborn differences have contributed to their behavior.

The dogs were picked as "maladjusted" if it was necessary to remove them from their group to prevent serious injury or death, or if the animal was unable to learn the beginnings of two tests easily learned by 90% of the other dogs.

The behavior of these dogs in a variety of situations showed that dogs, like men, may be maladjusted in one situation and normal in another.

Different breeds of dogs were found to differ greatly in their general adjustment.

Science News Letter, March 22, 1952

MEDICINE

Life Most Risky On Day of Birth

► **THE FIRST** day of life is the most dangerous, it appears from figures worked out by statisticians of the Metropolitan Life Insurance Company, New York.

"If the number of deaths on the day of birth were to continue for the first 100 days, no infant would survive beyond that time," the statisticians report.

One-third of all deaths in the first year of life happen on the day of birth. Three-fifths of the infant deaths occur during the first week. About 78,000 babies die each year in the United States before living to the second month of life. This is well over twice the number that die during the remaining eleven months of infancy.

Premature birth is the largest single factor accounting for deaths of babies under one month of age.

Science News Letter, March 22, 1952