

## PSYCHOLOGY

# Addict Helps Build Habit

Drug addicts have a relapse to the drug because they have taken active part in its use, Marjorie Van de Water reports from the American Psychological Association meeting.

► A NEW psychological explanation for drug addiction shows why patients given opiates for pain do not often become addicts.

When these patients get well and are released from the hospital, they do not show any alteration in their behavior, Dr. John R. Nichols, psychologist of Southeastern Louisiana College, reported to the American Psychological Association in Chicago. They do not rob drugstores, forge prescriptions or show any sign of uncontrollable "craving" for opiates. The overwhelming majority of patients never become addicts, he said.

With illegal drug addicts, the big medical problem is not getting them "off the drug," Dr. Nichols said. It is the problem of relapse after cure.

In experiments on rats, Dr. Nichols used a kind of conditioning called "operant conditioning" to make the animals drug addicts. Some of the rat addicts went back to the drug after being "cured" for weeks. This is probably the first demonstration of relapse by animals, Dr. Nichols indicated.

The reason why Dr. Nichols' rats became addicts and why they later relapsed after "cure" was credited by him to the operant conditioning. In operant conditioning, the subject must do something; he must take an active part in the process.

In these experiments, after the rats had become dependent upon opiates and then had been without the drugs for 48 hours, they were trained to turn their heads in a certain way that started an infusion pump that gave them a shot of the drug.

Thus they learned by their own action to end the distressing withdrawal symptoms.

In man, too, the development of addiction appears to be related to whether he takes an active role in using the drug. Illegal users of opiates are active, Dr. Nichols said. They initiate the drug-taking action and that behavior rapidly becomes a chronic obsessive-compulsion for them.

Passive recipients of opiates, such as hospital patients, however, may become physiologically dependent on the drugs and show withdrawal symptoms but when they are taken away from them, they do not rush out to hunt up a "pusher."

• Science News Letter, 78:179 September 17, 1960

## Machine Teaches Russian

► USING a do-it-yourself machine, a soldier can learn enough of even the difficult Russian language to be able to take a Russian prisoner.

The machine is a tape recorder with a specially programmed tape. The tape contains Russian phrases that cannot be erased. It also has sections where the soldier-student can record his own pronunciation and play them back, with the original pronunciations, for comparison.

Scientists from George Washington University's Human Resources Research Office (HUMRRO), Washington, D. C., described an experiment to the American Psychological Association in Chicago that indicated the language machine is successful.

In experiments, soldiers learned a 450-

word miniature of the Russian language entirely by machine. At the end of the course, which required 20 days, the soldiers were able to take "prisoners." (Native-born Russian teachers without knowledge of the course took the role of prisoners.) The soldiers gave the necessary commands: "hands up," etc., and asked important questions such as "What kind mine fields?" and "Where artillery?" And the soldiers understood the prisoners' answers.

Even soldiers whose lack of aptitude would make it impossible for them to learn Russian by conventional methods were able to complete the machine-taught course, it was reported.

The scientists who conducted the experiments are Dr. Eugene Rocklyn and Richard I. Moren of HUMRRO.

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## Drug Against Fear

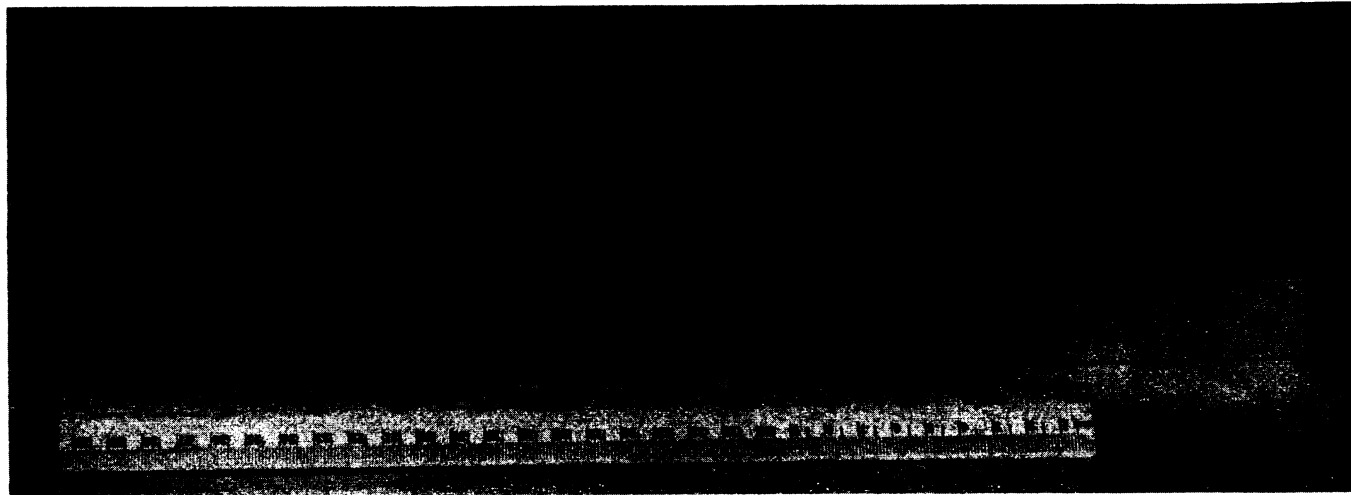
► A FAMILIAR DRUG may some day be used to protect men against the intense fear ordinarily experienced in combat.

Experiments with cats and rats giving rise to this hope were reported by Dr. Neal E. Miller of Yale University in his address as recipient of one of the 1959 American Psychological Association distinguished scientific contribution awards.

Previous studies have shown that the horrible fear in combat can cause not only combat neuroses, shell shock, but also psychoses and such psychosomatic symptoms as stomach acidity, ulcers, heart symptoms and increased susceptibility to infection.

In some of their experiments with rats, Dr. Miller and his associates first taught the animals to be scared of a flashing light at one end of an experiment box. This was done by giving them electric shock through a grid on the floor. The closer the rats approached the flashing light, the stronger was the shock.

With the aid of doses of sodium amytal, the rats would later go farther toward the light in the face of threat of possible shock

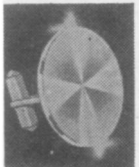


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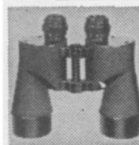
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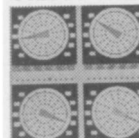
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than they would without the drug's aid.

Psychologists consider the possibility that sodium amytal can be used to help soldiers advance in battle in spite of great natural fear.

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## Mental Hygiene Course

► IF A COLLEGE STUDENT registers for a course in mental hygiene in the hope that it will give him some inexpensive psychotherapy, he is doomed to disappointment.

Study of a mental hygiene class of 37 students showed that no significant improvement in adjustment was observed after the completion of the course, Dr. Conrad Chayette of De Paul University, Chicago, told the meeting of the American Psychological Association in Chicago.

The only significant change observed in the students was that they became somewhat more maladjusted in their home situations. It may be, Dr. Chyatte speculated, that the inept application of the superficial knowledge gained in the course acted to irritate relatives and others at home, making relationships more difficult.

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## Reduces Stopping Time

► A WARNING SIGNAL before a traffic light turns from green to the warning yellow can help the driver reduce his decision and stopping time, the American Psychological Association was told in Chicago.

Drs. A. C. Busch and F. W. Trabold of Avco Corporation reported experiments with drivers of an automobile simulator that showed the advantages of the auxiliary cues displayed while the green light is on.

They also reported that a horizontal rectangular shape for traffic lights would be superior to the standard circles.

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## Emotions Induced

► EMOTIONS induced in a person under hypnosis are real in the sense that they are accompanied by measurable physiological changes—the heart rate may speed up, for example. But the same emotions can be induced by suggestion in a waking person not under hypnosis and he will show the same physiological changes. The same changes take place in subjects who are not hypnotized, but told to pretend to be.

Experiments throwing this new light on hypnosis were reported to the American Psychological Association in Chicago by Drs. Esther Helfman, Ronald E. Shor and Martin T. Orne, all of the Massachusetts Mental Health Center in Boston.

The emotions induced in both hypnotized and waking subjects were fear, calmness, happiness and depression. Fear was found to be the most active emotion in terms of physiological changes; depression was found to be the least active.

The same differences in physiological changes accompanying the different emotions appeared in those who faked the hypnotic state as well as in those who were really hypnotized.

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## Can Choose Careers Early

► BOYS AND GIRLS can make a realistic choice of career as early as the fourth grade, Dr. Robert P. O'Hara of Boston College told the American Psychological Association meeting in Chicago.

Previously, it has been thought that fantasy-based choices—"I'm going to be a fireman because he drives a red truck"—are all that can be obtained from children through the sixth grade.

Dr. O'Hara's study of 1,200 boys and girls showed that in the fourth, fifth and sixth grades children can make a choice of a future career based on their own true aptitudes and interests.

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