

PUBLIC HEALTH

Addicts Recall First Drink

➤ HOW WELL you remember your first drink may help indicate your chances of becoming an alcoholic, Dr. Albert D. Ullman of Tufts University, Medford, Mass., has found.

It is certainly not a one-item "test" of proneness, but studies of alcohol addicts show that their first drink was more emotionally arousing and thus easier to remember than the first drink was for normal drinkers, Dr. Ullman reports.

An earlier test compared college students with a group of alcoholics in their memories of the first drinking experience. Although a majority of the students remembered the first drink, a significantly greater number of alcoholics remembered theirs, and in more detail. It was a more anxiety-loaded experience for the alcoholics and more were intoxicated from their first experience.

In all, there were six characteristics of the first drinking experience of the alcoholics and of the college students that were significantly different.

These included their memory of the first drink and age at the time, whether or not they became intoxicated, where they had their first drink, who was present, and how soon after did they have the second drink.

Since there are 11 male alcoholics for

every two female ones, Dr. Ullman theorized that more men would show the characteristics associated with alcoholism than would women. To test this, he assembled another group of both male and female college students and gave them a questionnaire about their first drink.

Contrary to his expectations, more women than men remembered their first drink, although three-fourths of all the students reported they remembered it.

If recalling the first drink is taken as the index of emotional arousal associated with drinking, then the women would appear to be more "aroused" than the men, Dr. Ullman reports. But there is a higher degree of protection and restraint imposed on the women that has to be considered, he adds.

Girls tended to have their first drink at home with their parents who wanted to teach them what drinking was like and how to handle it. Boys, on the other hand, more often had their first drink outside the home together with their contemporaries or older persons.

Dr. Ullman reports his findings in the *Quarterly Journal of Studies on Alcohol* (June).

Science News Letter, July 20, 1957

ENGINEERING

Missile Failures Important

➤ MISFIRES and other unsuccessful launchings of rockets and guided missiles are often more important to the U. S. defense effort than are successful firings.

This is the opinion of Robert Greene, the rocket engineer who developed a motor for the Air Force rocket test sleds and who is now pioneering commercial and peacetime uses for rocketry. Mr. Greene, project engineer of the Grand Central Rocket Company, Redlands, Calif., told SCIENCE SERVICE that all rocket projects encounter failures and misfires.

"They are frequent, and they are normal in the course of developing a rocket or missile. In nearly every case valuable information is gained, often even when the projectile fires but crashes."

Mr. Greene pointed out that development of the test sled rocket motor, now considered one of the most efficient solid propellant rockets produced, involved ten consecutive unsuccessful firings before his team was able to achieve a successful run of the motor. In each case needed information was gained.

A careful study of the failures paid off, he said, and the sled's "rocket motor now has an extremely high efficiency, approaching that of the Project Vanguard third stage motor, which is considered the ultimate in solid propellant rockets."

Referring to some public criticism of misfires and failures in the nation's rocket and

missile program, Mr. Greene cautioned that the criticisms do not help the program.

"We must expect, in fact we need," he explained, "a certain amount of failures. Each firing that the public might call a 'failure' actually represents time, money and effort well spent."

Asked about the failure of the first liquid powered motor delivered for stage one of the artificial satellite missile, Mr. Greene said he was sure valuable information was obtained, and that both it and the failure of the first Atlas intercontinental ballistic missile were necessary steps toward success.

Two rockets developed by Grand Central for fighting forest fires have already been successfully used, and Mr. Greene, together with another engineer, has been assigned the task of investigating how to make rocketry less dependent on war.

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TECHNOLOGY

Robot "Brains" Figure Electric Power Schedules

➤ ANALOG COMPUTERS are now being used to see that electric power is dispatched to users such as factories or local power companies on the most economical schedules possible, reported R. B. Shipley, consulting electrical engineer, to the American Institute of Electrical Engineers meeting in Montreal, Canada.

More of the computers are taking over as automatic "watchmen" of today's vast electrical generation-transmission networks, and are being put to work to figure the best and most economic routes for the electric power sent out to consumers. The electronic "brains" do this by setting up internal electrical-mathematical "models" of the power system, and rapidly solving problems fed into them by referring to these models.

Electrical analog circuits "are the first to solve this economic dispatch problem exactly and directly," Mr. Shipley said, since the computers make possible changes in routing the electricity at minimum expense, and provide a great deal of additional information about the vital workings of the power network.

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