PSYCHOLOGY-PHYSIOLOGY

Moderate Drinking Makes Driving Hazard

MODERATE amounts of alcohol consumed as whiskey or beer cause autoists to drive faster and make more driving errors, Dr. H. M. Vernon, of the Industrial Health Research Board, reported to the British Association.

"Some drivers maintain that moderate quantities of alcohol have no effect or improve their driving," Dr. Vernon explained.

Then he told of tests on fifteen experienced autoists and five non-drivers who bravely subjected themselves to "experimental doses" of whiskey or beer taken on an empty stomach. An ounce of whiskey was administered, rather more than an Englishman gets when he orders a "large whiskey." The beer dose contained only a sixth of an ounce of alcohol.

The human guinea pigs were not allowed to drive on real roads in the interest of safety and scientific accuracy. Instead they were put at the wheel of a dummy car and directed to drive it along a track projected as a moving picture on a screen. The path taken by the car was automatically recorded.

The mild beer had no effect on experienced drivers, but it affected the five non-drivers more than the whiskey. For the experienced drivers the whiskey caused an increase of six per cent in driving time and an increase of twelve per cent in driving errors. The effect of alcohol differed greatly among the persons tested, but half of them speeded up ten to twenty-four per cent.

"As a rule the drivers were quite unconscious of any speeding up after drinking alcohol," Dr. Vernon concluded, "and this suggests that even moderate quantities of alcohol should be avoided before driving."

Science News Letter, September 19, 1936

ARCHAEOLOGY

Finds Traces of Ancient Civilization in India

A DISCOVERY that is expected to push back the age of known human habitation in India and throw much light on its culture was reported by Mlle. Simone Corbiau, Belgian archaeologist who conducted an exploration for the Brussels Museum.

Digging at a site that was supposed to contain only remains of the Greco-Buddhist times, Mlle. Corbiau found evidence of a far more ancient civilization. The age of the archaic pieces she discovered is believed to be about 4000-3500 B.C., some 6,000 years ago.

The region in which Mlle. Corbiau made trial diggings is the Peshawar district in the uppermost corner of the Northwest Frontier Province of India.

Mlle. Corbiau believes that a very early stage of Indus Valley civilization has been discovered, which is paralleled by finds in Sumerian Mesopotamia of the Jemdet Nasr period, protohistoric Aegean, and at the prehistoric site of Anan in Russian Turkestan.

Science News Letter, September 19, 1936

SOCIAL SCIENCE

Urges More Vigor In Studying Science of Man

MAKING a plea for the application of research to the "science of man" with a vigor equal to that used in the recent exploration of the physical world, from atom to universe, Sir Josiah Stamp, the British economist, delivering the presidential address at the meeting of the British Association for the Advancement of Science, declared that the shortcomings of the active world are to him "but the fallings short of science."

"Wherever we look we discover that if we are to avoid trouble we must take trouble—scientific trouble," Sir Josiah said. "The duality which puts science and man's other activity in contrasted categories with disharmony to be resolved, gaps to be bridged, is unreal. We are simply beholding ever-expanding science too rough round the edges as it grows."

An attack along the social sciences front from politics and education to genetics and human heredity is long overdue in Sir Josiah's opinion. Expenditure on the natural sciences is some eight to ten times greater than that on the social sciences. As an example, hardly any money at all is available for research into the immense and vital problems of population in all its qualitative and quantitative bearings.

"In some ways we are so obsessed with the delight and advantage of discovery of new things that we have no proportionate regard for the problems of arrangement and absorption of the things discovered," he remarked. "We are like a contractor who has too many men bringing materials on to the site, and not enough men to erect the buildings with them. In other words, if a wise central direction were properly allocating research workers to the greatest marginal advantage, it would make some important transfers. There is not too much being devoted to research in physics and chemistry, as modifying industry, but there is too much relatively to the research upon the things they affect, in physiology, psychology, economics, sociology. We have not begun to secure an optimum balance. Additional financial resources should be applied more to the biological and human sciences than to the applied physical sciences, or possibly, if resources are limited, a transfer ought to be made from one to the other."

Sir Josiah deplored the common notion that economics should be judged by its ability to forecast, especially to a particular date. This idea is fallacious because the prophecy if "true" and believed must destroy itself. People will act to anticipate the date and thus destroy the prediction.

The changes brought about by the impact of science upon everyday economic life were classified by Sir Josiah as "work creators" and "work savers." One tends to offset the other. Dislocations caused by labor-saving machinery can most easily be made good by a due balance of new labor-creating commodities.

Because increase of population has slowed down in recent years, slackening the increase in demand for commodities, he suggested that "perhaps birth control for people demands ultimately birth control for their impedimenta."

Science News Letter, September 19, 1936

LANGUAGE

System of Signs Ideal International Language

A SYSTEM of making signs was recommended by Sir Richard Paget as the ideal international language, that would be natural to all races as well as easy to learn and remember.

His study of sign language and his conclusion that speech is simply mouth gestures expressing meaning gave rise to Sir Richard's suggestion.

The proposed world sign language would be controlled from the start, he suggested, by a world commission that would promulgate its decisions by means of movies and television.

"Man is not primarily a tool-using animal," Sir Richard said. "He is rather a symbol-using animal.

"Speech was born when separate signs were evolved for separate ideas. The corresponding mouth gestures were combined with the emotional language of grunts, chuckles and cries, and ultimately produced speech.

"Sign language could be logically developed so as to express the highest and subtlest thoughts of man.

"Auditory speech superseded sign language because it required less effort. It left man's hands free, and did not need light or direct vision for its understanding.

"The development of speech is retarded by pedantry, from which sign language is at present free."

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ARCHAEOLOGY

Cyclops Was Not Greek; The Babylonians Knew Him

Discovery of a Bas Relief Showing a Babylonian God Stabbing a Cyclopean Demon Dates Him As Of 2,000 B. C.

REMEMBER old villain Cyclops in Greek mythology, with one terrible eye in the middle of his forehead?

That picturesque monster, American archaeologists have now discovered, was not invented by Greek imagination at all. Babylonians knew about Cyclops—which means round-eyed—back in the days of Abraham. And that was around 2000 B.C., and over a thousand years before the Greek poet Homer made the Cyclopes famous as giant cave dwellers who ate men and defied gods.

Discovery of a bas relief plainly showing a Babylonian god stabbing one of the Cyclopean demons has been reported from Iraq, where an expedition of the Oriental Institute of the University of Chicago has been unearthing Babylonian cities. The remarkable sculpture was unearthed at Tell-Asmar, site of ancient Eshnunna.

The Cyclops is shown completely in the god's power. His hands are tied behind his back, a broad knife is stuck in his ribs, and just to be sure he doesn't get away the god has planted one foot on old Cyclop's toes. In all this discomfort, the sculptor has forced Cyclops to "turn his face to the audience" to reveal the horror of his one big round eye and the sightless traces of ordinary eyes below it. Rays of light or fire around his head like flower petals show that this was indeed no ordinary creature.

Fashion a Clue

Dr. Henri Frankfort, field director of the Iraq expedition, calls attention to the flounced skirt in which the monster was dressed, as a significant historic point. Clothes like this were fashionable in Mesopotamia before 2500 B.C. But by 2000 B.C., when the sculpture was made, flounced skirts were antiques, and the sculptor, trying to dress Cyclops in traditional manner, managed only what Dr. Frankfort calls a "bungled version." From this bit of evidence, Dr. Frankfort is convinced that Cyclops was no new idea to Babylonians even as early as 2000 B.C.

Finding that Greeks borrowed mythological figures from the East, Dr. Frankfort emphasizes, "does not diminish in any way our appreciation for the originality of the Greek mind."

The Greeks were late arrivals in an ancient and highly developed civilized world, the archaeologist points out, and discoveries such as this illustrate how our modern civilization is, through Greece, inseparably linked with the ancient Near East.

Snake Worshipers

First evidence Babylonians were snake worshipers is another result of the expedition. The discovery consists of two cauldron-shaped pots one placed upside down over the other, unearthed in a temple at Tell-Asmar. Decorations on the jars glorify the power of the snake, and an unbroken saucer found in the lower jar with small animal and bird bones suggests to the archaeologists that a live snake was kept in the covered container.

At Ischali, another site explored by the expedition, a temple of sun-dried brick has come to light, revealing that ancient Babylonian architects built temples on a large scale and worked with great care. A statue of the goddess Ishtar-Kititum was found still enthroned in the temple.

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A little 3-inch head on a bas-relief in the Boston Museum of Fine Arts is believed to be a portrait of the poet Horace, whose features have heretofore been missing among the hundreds of statues of Romans known today.

RUDE TO CYCLOPS

The Babylonian god who thus stabs the one-eyed demon, pulls his beard, and treads on his corns, incidentally proves to scientists that Cyclops was known at least a thousand years before Homer wrote of him.

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filament and a grid like some giant radio tube. Radio waves bounce from end to end of the cylinder.

The high energy waves produced may be used directly inside the tank or, enlarged many times, for radiothermy. Or they can be carried off on a wire to the antenna of a television broadcaster.

The waves also may be used to speed up electrons passing through the chamber, Dr. D. L. Webster, chairman of the physics department, pointed out. Such electrons would have energies equal to or above 5,000,000 volts. Directing the electrons on a target would create penetrating X-rays; or by shooting them at atoms nuclear disintegrations could be studied.

Distinguished From Cyclotron

The present name rumbatron was chosen to distinguish the device from the cyclotron apparatus of Prof. E. O. Lawrence at the University of California.

An important difference between the new rumbatron and the cyclotron is that the former uses electrons as the bombarding particles while the cyclotron employs atomic nuclei themselves, which are much heavier.

Small models of the rumbatron have been successfully operated showing that the design is satisfactory for the large apparatus now being built.

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