

PHYSIOLOGY

No Machine Like Brain

The idea that a machine can be created to work like the human brain is attacked by a British scientist who believes the idea will be eventually discarded.

➤ MAN'S mind has not been able to make a machine that works like his own brain, Dr. Geoffrey Jefferson, professor of neurosurgery at Manchester University told the British Association for the Advancement of Science at Newcastle-Upon-Tyne, England, taking issue with the theory of cybernetics put forth by Prof. Norbert Wiener of Massachusetts Institute of Technology.

"There is no authority for assuming that the brain works like a mechanical or electronic machine," Dr. Jefferson said. "There is definite similarity, especially on the small scale of two nerve cells. But it may be a great mistake to assume that nerve action is the same throughout the infinitely complex human nervous system.

"We do not know how nerve impulse is translated into thought. We haven't the slightest clue to the mode of formation of worded concepts."

Man is the only animal who chops up sound to make speech, Dr. Jefferson said. But he believes that there may be an unrecognized similarity to speech in the lower animals.

Dr. Jefferson defined the brain as a collection of data stored as experience and synthesized into thought and responses to meet our needs.

He asked scientists not to forget that cybernetics merely points to an analogy.

"The mechanistic viewpoint will eventually, if reluctantly, be discarded," Dr. Jefferson predicted. "Man is indeed master of himself and it is his brain which makes him so."

Mechanistic explanations of the brain and mind are as fallacious as the physical laws of two centuries ago that helped biological progress although they were proved false, Dr. A. D. Ritchie, professor of philosophy of Edinburgh University told the scientists. The riddle of mind and brain will be solved by metaphysical thought and not on a physical basis, although the mechanical concepts may be temporarily helpful.

The human brain is not sufficiently developed evolutionally to achieve a comprehension of the intricacy of its own mechanism, Dr. Alexander Kennedy, professor of psychology and medicine at Durham University said, although he did not agree with Dr. Ritchie.

Sinfulness may have a physical basis, Dr. Kennedy said, since moral awareness is dependent upon nervous mechanism. This is shown in the case of amoral behavior patterns following encephalitis or leucotomy, an operation in which the white matter of the frontal lobes of the brain is cut.

Moral awareness is thus shown to be not purely subjective in the mind but based on physical factors.

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PSYCHOLOGY

Disability No Joke To Man Who Has It

➤ DISABLED persons laugh at the same jokes as do normal persons—provided the joke is not about a physical handicap, Drs. Milton W. Horowitz and Leola S. Horowitz, of the University of Kansas, told the American Psychological Association in Denver, Colo.

Eight crippled individuals and 13 non-handicapped persons were asked to rate jokes for humor and for humiliation. Some of these jokes were about various handicaps and others were "innocuous." Neither

the crippled persons nor the normals found one type of joke more humiliating than the other, but both found a difference in their humor.

Both groups agreed pretty well in their ratings of the "innocuous" jokes, but significant differences were found in the handicap humor.

Science News Letter, September 17, 1949

MEDICINE

Daily Alcohol Drinking Is Damaging to Brain

➤ ALCOHOL, drunk every day in large quantities, causes permanent damage to the brain. This is revealed in mental tests and also in the brain waves, or electric impulses from the brain itself.

The tests, which were conducted on 51 alcoholics without mental disease, were reported to the American Psychological Association in Denver, Colo., by Dr. Lucille B. Kessler, of Traverse City, Mich., State Hospital.

Alcohol is a potent poison, Dr. Kessler told the meeting. When in contact with the nervous system it can produce sludging of the red blood cells. This is a condition in which the blood does not flow smoothly, but forms clumps of cell masses which



HELICOPTER GETS FLOATING FEET—Nylon floats have been attached to the wheels of this tandem rotored Piasecki HRP-1 "Rescuer" helicopter of the U. S. Coast Guard. It enables it to set down easily on the water for emergency rescues. It was designed by Cmdr. Frank A. Erickson, head of the Rotary Wing Development Unit at Elizabeth City, N. C. The pilot needs only pull a cord to release the floats. Insert photo shows how compactly the floats fold around the landing wheels.