



#### BRAIN DEMONSTRATION

*Attracting considerable attention at the AAAS exhibits was this model of the brain with electric buttons in the different centers, each of which would light up the corresponding activity illustrated in a panel of photographs. Joseph A. Bracco of the New York Museum of Science and Industry is shown demonstrating the exhibit.*

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the mechanism of immunity developed against helminths by their hosts."

This means that it will be possible to raise parasitic worms and experiment with them much as cultures of bacteria are handled in research laboratories.

### Men Against Toothaches

**A** DEVOTED band of men against toothaches sat in an all-day session at the Richmond meeting, discussing that painful problem of dental caries or tooth decay. The problem is painful in more than the literal sense of aching teeth, because in spite of a vast amount of research scientists have unfortunately not yet found a way to prevent caries.

Two new ideas have recently been added to the older ones about causes of caries. The condition runs in families, U. S. Public Health Service scientists have reported. Brothers and sisters of children with caries, in a group of over 4,000 given careful dental examinations, have more than twice as much caries as brothers and sisters of the children examined and found free from caries. This suggests that there is an inherited tendency, but the federal health service

scientists are not yet ready to give any specific explanation for the familial differences.

Fluorine in the water, cause of the ugly tooth condition of mottled enamel, may provide protection against caries, another group of U. S. Public Health Service scientists suggest. They found a higher percentage of children had no caries in communities where the domestic water supplies contain higher concentrations of fluorides than in communities using waters of lower fluoride concentrations.

The fluorine may not be the substance responsible for the difference. Reporting the U. S. Public Health Service findings, Dr. H. Trendley Dean suggests that some other constituent of water may play a role.

Just how fluorine, if it is fluorine, protects teeth from decay is not known, but if this proves to be a fact the means of preventing tooth decay would be relatively simple. Communities have already stopped the ravages of mottled enamel by changing their water supplies. Adding fluorine would be simple enough.

Mottled enamel would not be the necessary price to pay for such a method of caries prevention, either. Dr. Dean's

studies showed that even where the amount of fluorides in the water was too small to cause mottled enamel, the children's teeth were free from caries.

Diet as a cause of tooth decay was discussed at length. Latest angle on this is the idea that diet does not cause decay because of its composition, acting through the body chemistry, but because of its physical character, acting mechanically. Coarse particles of food are blamed for causing caries, according to this theory.

Reporting studies on this line, Dr. C. A. Lilly and associates of the University of Michigan asserted:

"In our studies of between 1,500 and 1,600 rats over a period of six years, unquestionable dental caries has never occurred, regardless of what diet was fed, if the diet was kept absolutely free of coarse hard particles."

### Scientists Must Help World

**I**T IS the duty of scientists "to assist in the establishment of a rational and harmonious social order out of the welter of human conflict into which the world has been thrown through the release of uncontrolled sources of industrial production and lethal weapons."

This is the message brought to the American Association for the Advancement of Science by Sir Richard Gregory, Bart., for many years editor of the British science journal, *Nature*.

Exalted spiritual ideals combined with research results in fields of natural knowledge, Sir Richard believes, will give scientific guidance towards individual fitness and also towards a higher human perfection and social life "which will make the world truly a celestial dwelling place."

Man's future is here on earth, Sir Richard indicated.

"Science is concerned with the progress of knowledge and the evolution of man not only in the past but also in the present and future," he said. "The idea that such development is possible is relatively modern. The chief philosophers of ancient Greece held that the Golden Age was in the past and that mankind was receding from it; and the same view of human decadence is given Biblical authority in Genesis. It is quite possible that some savages have fallen from a higher to a lower level of savagery, but this is an unusual course to follow. We need not believe that man has degenerated from a state of perfect knowledge to that of being 'born in sin and shapen in iniquity,' or that the recovery of his