

A glimpse of theatrical lighting effects, as they were designed in Roman days, is offered at ruins of a Jerash theater. The plays must have been given in daylight, with little chance for artificial lights, Dr. Stinespring ex-

plains. But the stage was built with pink limestone columns, and when sunset spreads rosy colors over this stage, even a person sitting in the wreck of the tiers of seats can imagine the beauty at the close of a performance.

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PSYCHOLOGY-PHYSIOLOGY

## Brain Waves New Tool for Watching Workings of Mind

Learning Can Be Observed by Psychologist Through Tapping Electric Impulses Direct From Brain

**T**APPING of electric potentials, or "brain waves," directly from the brain now gives the psychologist a new tool for the study of what goes on in the mind of man, including the higher thought processes, it is suggested by Dr. Herbert H. Jasper, psychologist of the Emma Pendleton Bradley Home, East Providence, R. I., and Brown University.

If you look at a red light shining in a darkened room and then that light is put out, you will continue to see the light for a time as an "after-image." In the past, psychologists have been able to study such after-images only through the description by the subject of what he saw. Now the brain waves give a new and independent verification.

When nerve impulses go to the brain from the eye or the ear, they do not find a nice quiet group of brain cells awaiting their coming to be set into activity, Dr. Jasper has found.

"These cortical cells seem to have a vigorous activity of their own, but evidently not enough to discourage always the sensory impulses, for they may jump right in and either abolish completely the cortical rhythm or distort it beyond recognition by causing it to behave in a very different manner," he said.

By watching the record of the brain waves, the psychologist can tell when the subject is seeing the light and how long the after-image persists. When a flickering light is used, he can tell exactly how fast the light may flash and not appear to the observer as a continuous beam.

The process of learning may be "watched" in the brain. For example, a faint sound does not ordinarily produce the upsetting effect on the brain

waves that is produced by a bright light. But when the faint sound and the bright light are associated together, the faint sound may come to have a similar blocking effect on the brain waves. The psychologist watching the brain wave patterns can tell exactly when this learning, or "conditioning" takes place.

A change in "mental set" of the observer may make the bright light cease to block the brain waves, or it may cause the faint sound to become as effective as the light ordinarily is, Dr. Jasper found.

"Even though we are able to tap only certain aspects of the bioelectric activity of a few cortical regions," he concluded, "we are certainly obtaining an important objective record of the effects of sensory stimulation which bear significant relations to what psychologists have discussed formerly under the rubric of the conscious mental processes."

Thus the brain waves open up an entirely new technique for the scientist who wants to study objectively and scientifically the processes known formerly only by subjective report.

Dr. Jasper recently described the new applications of the brain-wave technique to the New York Academy of Sciences.

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In museums of the world there are now 150 of the painted coffins of Egyptians inscribed with religious thoughts 4,000 years old.

The house of the future may have glass walls and marble windows, now that research has developed glass building blocks and marble that is translucent like stained glass.

MEDICINE

## Remedy for Cystitis May Come From Insecticide

**A** LABORATORY-MADE insecticide powder which may turn out to be a valuable remedy for bladder disease was reported to the American Society for Pharmacology and Experimental Therapeutics. The report was made jointly by Drs. Floyd DeEds, John O. Thomas, C. W. Eddy and A. B. Stockton of the U. S. Department of Agriculture and Stanford University Medical School.

The powder, which has the name phenthiazine, was made in the Department of Agriculture laboratories for use as an insecticide. Before it was put into practical use for this purpose, it was tested on animals to determine whether it was poisonous. Its effect on these animals indicated a possible use as a urinary antiseptic.

Rabbits suffering from cystitis or bladder inflammation due to infection with colon bacilli were cured by the addition of small amounts of the powder to their diet.

### Encouraging Results

Encouraging results in about thirty human cases of chronic cystitis were obtained with phenthiazine. In these thirty cases every kind of treatment had failed to relieve the condition. With proper scientific caution, however, the investigators point out that the new antiseptic is still in a very experimental stage and far from being ready for general application in the treatment of human disease.

A plentiful supply of the antiseptic will be available as a result of laboratory synthesis made recently.

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PSYCHIATRY

## New Organization To Study Suicide

**T**HE CAUSES and ways of preventing suicide will be the subject of study by an organization just chartered in New York State, according to an announcement in the professional journal, *The Psychological Exchange*. The organization is aided financially by Marshall Field and others. It has a staff of seven psychiatrists and two social workers who will make researches and spread information on this subject.

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