

of bodily development as measured by weekly weighings. The thymus-destroying X-ray treatments were given within 48 hours after birth of the rats.

The Philadelphia doctors conclude that their findings "indicate a close relationship between the function of the thymus and the proper development of the testes."

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## MINERALOGY

## Photographic Film Aids Radium Tests

**R**ADIOACTIVE minerals in a rare ore sample from Jimtown, Colo., were recently determined without destroying the mineral by Dr. E. N. Goddard, U. S. Geological Survey mineral expert, by a new use of the test by which radioactivity was first discovered.

Placing a polished face of the ore sample on a sheet of photographic film, and leaving it untouched for some time, Dr. Goddard was able to determine, after the film was developed, the presence of pitchblende, a strongly radioactive ore of uranium, by its intense black markings on the film, and cerite, a weakly radioactive ore of cerium, from its gray markings. Substances that were not radioactive left no marks on the film.

Later analyses of this ore sample showed that it was about 940,000,000 years old, placing it among the oldest rocks known, formed during the long eras before life appeared on earth.

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### RADIOACTIVE FINGERPRINTS

*At left, photograph of polished face of the Jimtown ore sample, showing extremely complex mineral structure; at right, print made from photofilm on which sample had rested. Brilliant white spots were caused by uranium and its decomposition-product, radium; gray areas are due to the feebler radioactivity of cerite and yttrocerite; black areas indicate non-radioactive minerals*

## PSYCHIATRY

# Playing With Shy Children, Doctors Learn Their Troubles

## Young Patients Identify Themselves With Their Dolls, Indirectly Disclosing Secrets That Gnaw Their Minds

**P**LAY as a method of treating children with mental difficulties, behavior problems and even excessive shyness claimed the attention of members of the American Orthopsychiatric Association at their meeting in Chicago.

How can maladjusted children be made to disclose the cause of their difficulties? "Active play" was the answer given by Dr. Joseph C. Solomon, the psychiatrist at the Baltimore Clinic of the Mental Hygiene Society of Baltimore.

The method consists in playing with dolls with the child. "Active play," according to Dr. Solomon, is a new method in which the children play a game about themselves without disclosing their own identities.

"By active play therapy," he said, "the psychiatrist is able to secure first hand information from the mouth of the child as to how he or she is reacting to his or her environment."

The young patient identifies himself with the doll, and in his play is prone to make the doll express his own feelings.

"The mere putting his thoughts into words plays an important role in the child's mental catharsis," Dr. Solomon said. "It is generally accepted that the aeration of the child's mental conflicts has beneficial treatment value."

Children are also encouraged, he said, to express their animosities, and to give physical expression to their hostilities, as well as to talk about them. After re-

peated demonstrations the patient no longer feels the need to express his hostility.

"It should be kept clearly in mind," Dr. Solomon warns, "that the method is partly a trick by which a child says things about himself that he ordinarily would not tell."

Resentment may result if the child feels he has been trapped. During the treatment the physician participates actively, and from time to time, as a suitable occasion arises, makes suggestions to direct the child's future thinking. Thus therapeutic suggestions are incorporated in the play.

Shy, withdrawn children may become normal under proper care in which play has a part, Pearl Lowenstein of the Jewish Children's Bureau and Margaret Svendsen of the Institute for Juvenile Research of Chicago have found. These workers studied the behavior of 13 girls and boys ranging in age from 6 to 8 years at a small farm camp.

Under the guidance of a psychiatric social worker who directed a program of play the children gradually lost their shyness and became active and aggressive. Other difficulties, shown in disturbed sleep, eating difficulties and nervous mannerisms, improved or disappeared at the same time.

The most encouraging thing about this study, they said, was the fact that the improvement was often maintained after the children returned to the old environment.

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