



SLOW MOTION X-RAY—Members of the University of Rochester medical school are showing X-ray movies, using the new projector they developed that permits projection at film speeds as low as six frames per second without flicker. From the left, they are Sydney A. Weinberg, one of the designers of the apparatus, Dr. Frank Campeti and Dr. George H. Ramsey.

PSYCHOLOGY

Attitudes Toward Children

Russians are no more dictatorial toward their children than are Americans, tests given to 51 displaced persons from behind the Iron Curtain show.

► **FORMER SOVIET** citizens are no more dictatorial in their attitudes toward children than are Americans, Drs. Eugenia Hanfmann and Jack Getzels of the Russian Research Center, Harvard University, told the Eastern Psychological Association meeting in New York.

This was disclosed by a test administered to 51 Russian displaced persons interviewed in Munich, Germany, and 51 Americans matched to the Russians in age, sex, educational and occupational status.

The test consisted of describing to the individual a situation of conflict between two family members and asking him to tell how it came out.

Both Russians and Americans considered equally the importance of the child. In discussing conflict involving grown-up sons and daughters, both groups asserted equally strongly the right of the young people to plan their own lives.

However, the Russians placed a greater value on continued family belongingness and family unity, and they assumed that both parents and children would be motivated more by these wishes than by desire for self-expression and freedom. The Rus-

sians also assumed the existence of a harmonious relationship between husband and wife more frequently than did the Americans.

Other personality differences found between Russians and Americans in the Munich interviews were described to the same meeting by Dr. Helen Beier, also of the Russian Research Center.

Russians are preoccupied in a marked way with the problem of truthfulness, Dr. Beier reported. They are strikingly concrete in their discussions and show less interest in analyzing their own motives and actions. They give in easily to their impulses and although they condemn this indulgence, they display relatively little punishing attitude toward people who do. This easy acceptance of themselves is linked with a feeling of closeness to other people and a need for social interaction. They tend to have less doubt about being accepted by others than do Americans.

This information about the Russian character was obtained by giving a battery of clinical personality tests to the former Soviet citizens interviewed in Germany.

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HERPETOLOGY

Rattlesnake Rattles Faster When Warm

► **THE RATE** at which rattlesnakes rattle depends on the animal's temperature. When warmed to normal body temperature of a warm-blooded animal, the cold-blooded rattler rattles about six times as fast as at an icebox temperature of just above freezing.

Findings on the rate of rattling of these snakes over a large temperature range, apparently not recorded before, are reported by Drs. L. E. Chadwick of the Army Chemical Center's Medical Laboratories near Edgewood, Md., and Hermann Rahn of the University of Rochester School of Medicine and Dentistry, Rochester, N. Y., in *Science* (April 2).

The to and fro movement of the rattle is made by three large muscle groups on each side, the scientists report, with the groups on each side contracting simultaneously during rattling.

The rattlesnake's rattling is done at a speed comparable to the wing beat of the humming bird or of various insects, but the studies suggest that there is no alternation of contractions in sequences in the three muscle groups to account for the high speeds of rattling.

The tail muscles that move the rattle are dark red to brown, in distinct contrast to other skeletal muscles of the snake's body, which are white to light pink. This suggests a high content of muscle hemoglobin or other pigment which might be essential for both the high speed and long duration of uninterrupted rattling.

Continuous rattling for as long as 20 minutes has been reported.

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BIOPHYSICS

Body Radioactivity Near Tolerance Limits

► **THE AMOUNTS** of radioactive substances normally deposited in human bodies, even when they are not exposed to fall-out ash or other radioactivity from A- and H-bombs, are close to the accepted tolerance.

This finding comes from studies by Dr. A. T. Krebs of the Army Medical Research Laboratory at Fort Knox, Ky.

The amounts of radium element Dr. Krebs found in normal bodies, however, seem to be well below the accepted permissible radium content.

In reporting his study in *Science* (April 2), Dr. Krebs points out that measurements of radioactivity in the human body should be interpreted with regard to whether the element radium is being measured, or the radioactivity from other elements in the body, such as potassium and carbon.

The amounts of radioactive substances in normal bodies, although they bring the "irradiation burden" close to accepted limits, are much lower than the toxic amounts found so far in radium poisoning cases.

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