

ANTHROPOLOGY

# Starvation Causes Abnormal Development in Young Rats

## Lesson of Effects of War Can be Learned From Experiments Reported at Anthropologists' Meeting

**W**AR BRINGS famine, and the starvation has always been supposed to put a permanent blight on the children of the wartime generation.

Experimental check-up on this widely held sociological doctrine is obviously desirable—and just as obviously impossible to obtain with human subjects. But application can be made of experiments on deliberately short-rationed rats; and that is what was reported at the Pittsburgh meeting of the American Association of Physical Anthropologists by Prof. C. M. Jackson of the University of Minnesota.

Prof. Jackson took newborn rats and fed them just enough to keep them alive but not enough to gain any weight. He did the same thing with partly grown young rats. After these periods of controlled malnutrition he put them on full rations.

### Dystrophic Changes

"When rats are held at birth weight for about two weeks," he stated, "the body undergoes marked dystrophic changes in external form, with enlarged head and eyeballs, elongated trunk and tail. The hair coat develops. The skeleton increases in size, with progressive ossification. Brain development similarly continues. In general, the enlarged organs (integument, eyeballs, testis, kidney) show also distinct tendency to normal differentiations of tissues. Normal development may proceed also in organs with decreasing weight (suprarenals), although regressive changes occur in the spleen.

"In older growing rats held at constant body weight for longer periods, the changes in organ weights are different," Prof. Jackson continued. "In the more fully developed tissues, degenerative changes occur. The surviving undernourished rats show remarkable capacity for recovery on normal refeeding, although permanent stunting is possible.

"In male rats fully refed after stationary body weight from 3 to 18 weeks of age, there is an initial spurt of ab-

normally rapid growth. This rate soon decreases, however, and the test rats ultimately lag about 16 per cent. behind the controls in average body weight.

"The original disproportions in the dystrophic rat become corrected, so that the various organs in general tend to recover the size normal for corresponding body weight. In some cases, however, organs may remain permanently undersized or oversized."

### No Physical Types

Students in American universities are nonconformists when it comes to matching themselves up to preconceived "standard" physical types. Drs. William H. Sheldon and William B. Tucker of Chicago, who have measured sizes and shapes of 2,500 co-eds and 4,000 men at four leading Midwestern institutions, reported their findings on this revolt of youth against bodily regimentation.

Three widely accepted physical types are classified as round or pyknic, square or athletic, and slim or leptosomic. Each type is supposed to have certain mental traits corresponding to the physical shape.

As a matter of fact, the two Chicago physicians found not three types but an almost infinite number of them—"a continuous trivariate distribution . . . There were not types but a continuous distribution of three components in human morphology." And the mental traits, so far as they could be measured at all, were just as much of a defiance to rigid assortment into classes.

### Ancient Melting Pots

Racial melting-pots are no new thing under the sun. Racial successions quite as complex as those now going on in modern America occurred in Asia Minor in the gray dawn of history. Their main outlines, as traced by skulls and bones collected in Syria, Anatolia, and Iran (Persia), were reported by Prof. W. M. Krogman of Western Reserve University.

Prof. Krogman found in the collec-

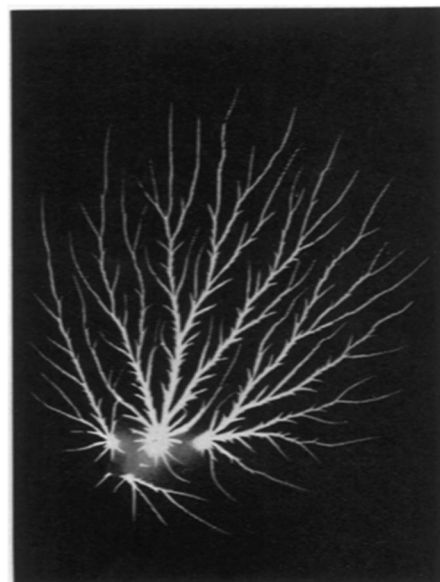
tions he studied skulls typical of Nordic, Mediterranean, Alpine, and Arme- noid races, with Negro and Asiatic also represented. Basic, earliest at all sites, was the long-skulled Mediterranean type. Throughout the area it dominated levels dated earlier than 3000 B. C. In some of the skulls there were negroid traces.

Nordics appeared on the scene as early as 3000 B. C. in the country around the Aral and Caspian seas, but did not become a real factor in Asia Minor itself until five hundred or a thousand years later. The round-headed Alpines arrived in force about 2500 B. C. Arme- noid roundheads show up about 1500 B. C. at the earliest, and cannot be called really distinct until about 1000 to 500 B. C.

The Negro and Asiatic skulls, said Prof. Krogman, were found at one site dated between 2500 and 2000 B. C. They were apparently strays, however, and as types play no real part in the photohistory of Asia Minor.

*Science News Letter, April 23, 1938*

Despite poetic allusions to the stag drinking his fill, a British naturalist says he has never seen a deer drinking or found any one else who has.



### PERSONAL RECORD

*We often hear of "electric personalities", but it is not often that an automatic photographic record of one can be obtained. Miss Francis M. Davis, X-ray artist of Santa Monica, Calif., explains this one: "One day when I was full of static and in a hurry, I touched this film in the dark and this pattern developed where sparks had jumped from my fingers."*