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## CHILD DEVELOPMENT AND THE INTERPRETATION OF BEHAVIOR<sup>1</sup>

By Professor JOHN E. ANDERSON

DIRECTOR OF THE INSTITUTE OF CHILD WELFARE, UNIVERSITY OF MINNESOTA

A YEAR ago upon this occasion, Professor Walter R. Miles delivered an address in which he presented the results of a series of studies upon longevity and senescence. To-day, I propose to start with the opposite end of the life process and consider some of the theoretical implications of modern studies of infant and child development. Since titles for vice-presidential addresses are sent in much in advance of their delivery, this paper has greater scope in its title than in its content. For it started to discuss the implications of several principles and ended with one; thus illustrating its final topic, the movement from generalized to specific behavior.

<sup>1</sup> Address of the vice-president and chairman of the Section on Psychology I, American Association for the Advancement of Science, St. Louis, Missouri, December 31, 1935.

Despite some differences in detail and in the interpretation of results, it may quite fairly be said that in the early stages of all responses studied genetically, behavior is more generalized, partakes more of the nature of mass activity, involves more of the whole organism, than is true of that behavior observed later in time. Coghill<sup>2</sup> has elaborated upon his phenomenon and discussed some of its implications. It appears alike in studies of prenatal and infant behavior and in the studies of older children. Sometimes this early behavior is described as mass activity or diffuse movements of the whole organism; in other instances as a likelihood that almost any response may be obtained on the first application of a stimulus, known

<sup>2</sup> G. E. Coghill, "Anatomy and Human Behavior." Macmillan, 1929.

# SCHOOL AND SOCIETY

EDITED BY J. McKEEN CATTELL

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## VITAMIN A

On January 30th, 1932, Mead Johnson & Company announced an award of \$15,000 "to be given to the investigator or group of investigators producing the most conclusive research on the vitamin A requirements of human beings." (J.A.M.A., January 30, 1932, pages 14-15.)

This award was extended on February 11th, 1933 (J.A.M.A., pages 12-13) to include an additional award of \$5,000 for a laboratory investigation "which may later serve for, or point the way toward an evaluation of the vitamin A requirements of human beings."

In accordance with the terms announced, the Judges decided (April 10, 1935) that the Clinical Award should be postponed until December 31st, 1936, and that the Laboratory Award should be divided between Dr. S. B. Wolbach, Harvard University, for his basic work on the pathology of avitaminosis A, the regeneration of epithelial tissue impaired by vitamin A deficiency, and the relationship of vitamin A to the integrity of the teeth; and Dr. Karl E. Mason, Vanderbilt University, for distinguishing exactly between the pathology of avitaminosis A and avitaminosis E, and for his contribution to the quantitative relationship of vitamin A deficiency to the keratinization of germinal epithelia.

The Judges for this award were announced February 11, 1933: Isaac A. Abt, Northwestern University; K. D. Blackfan, Harvard University; Alan Brown, University of Toronto; Horton R. Casparis, Vanderbilt University; H. F. Helmholtz, Mayo Clinic; Alfred F. Hess, Columbia University; E. V. McCollum, Johns Hopkins University; L. B. Mendel, Yale University; L. T. Royster, University of Virginia; and Robert A. Strong, Tulane University.

## PRESENT STATUS

Many papers on vitamin A have appeared since December 31st, 1934. Most of these have been in the field of laboratory experimentation, but, in addition, numerous publications involving clinical studies have appeared. From time to time, available abstracts of such work are sent, by the Secretary, to the Judges.

It is to be noted that the main award will be made on the basis of papers published, or accepted for publication, by December 31st, 1936.

It is the earnest hope of the sponsors of this award that the large amount of experimental work which has been done since January, 1932, will permit a true evaluation of the vitamin A requirements of human beings.

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