

*Origin of Motor Reactions Produced by Electrical Stimulation of the Cerebral Cortex.* (*Arch. of Neur. and Psychiat.*, vol. xxxi, p. 1129, June, 1934.) de Barenne, J. G. D.

The author found that after thermo-coagulation of the three superficial layers of Area 4 of Brodmann in monkeys, apparently normal motor reactions are obtained. After a short period of depression of excitability, lasting less than two minutes, the threshold for unipolar stimulation was found unchanged as compared with that obtained before the lamina thermo-coagulation. Only the large and giant pyramidal cells of the fourth layer remained, so that the effects obtained must have been due to stimulation of the bodies of these nerve-cells.

G. W. T. H. FLEMING.

*A Biochemical Study of the Metabolism of Mental Work.* (*Arch. of Psychol.*, No. 164, Mar., 1934.) Goldstein, H.

The author found that in tasks involving mental work with overt physical component—

(a) Increase of the physical component results in greater metabolic change ;

(b) Increase of the mental component without increase of physical component does not result in greater metabolic change.

In tasks involving mental work with a minimum physical component, metabolic change does not differ significantly from that which occurs during "no work".

He points out that it is exceedingly difficult to separate mental work from muscular work ; they occur in varying proportions in all types of performances. If there are effects produced by mental work *per se* upon metabolic activity, our present methods are not sufficiently sensitive to detect them. The total mass of the brain-cells involved in mental work constitutes only about one ten-thousandth of the entire body.

G. W. T. H. FLEMING.

*An Experimental Study of Sleep* [*Estudio experimental sobre el sueño*]. (*Arch. de Neurobiol.*, vol. xiii, p. 793, 1933.) Ibáñez, J. S.

The ion of calcium produces sleep, and the ion of potassium produces excitation. The substances were injected into the fourth ventricle of cats by the thecal route at the base of the skull. With calcium chloride sleep was at once induced ; the animal was asleep in a minute or two. The sleep was initially profound, and gradually became less intense ; the duration of the sleep averaged three to four hours. There was a direct relation between the amount of the calcium salt injected and the intensity and duration of the sleep. The audio-palpebral reflex was not affected. With the injection of potassium chloride there was definite excitation, the intensity and duration of which were in direct relation to the amount of the salt. No residual effect was apparent.

M. HAMBLIN SMITH.

## 2. Psychology and Psychopathology.

*Organization of Memory in Young Children.* (*Arch. of Psychol.*, No. 162, March, 1934.) Bryan, A. I.

A group of 200 children between ages 5 and 6 were given eleven tests of memory, a vocabulary test and the Stanford-Binet test of intelligence. Evidence for the presence of a central factor was found in—

- (1) The significantly high positive correlation between the memory tests.
- (2) The size of the average inter-correlation of the memory tests.
- (3) The insignificant size of the mean tetrads.
- (4) The high correlations of each of the memory tests with the central factor.

The central factor extended through both the vocabulary test and the Stanford test; both these tests showed slightly higher correlations with the central factor than did any single test in the memory series. The early levels of the Stanford-Binet tests are predominantly memory tests. Verbal ability was shown to be closely interrelated with memory ability. The central factor is probably a memory factor, and probably indicates a fundamental commutability of function between simple retentivity and the more general ability which we term intelligence.

G. W. T. H. FLEMING.

*An Inquiry as to Æsthetic Judgments of Children.* (*Brit. Journ. Educ. Psychol.*, vol. iv, p. 162, June, 1934.) Bulley, M. H.

The child lives the imaginative life, then becomes materialistic and practical in his demands; at a later date his outlook is once again largely coloured by imagination. From a practical standpoint it was shown that really good art teaching could save the child from the influence of ugliness. Taste begins to decline from age 10, touches bottom round about 11-13, and then steadily improves until it merges into the general level of adult taste (or lack of taste). Critical judgment becomes most marked at 16, and it is at this age that wise guidance in the training of sensibility can be given without harm. In both elementary and secondary schools girls have an advantage over boys in æsthetic judgment.

G. W. T. H. FLEMING.

*Informational Content of Children in the First Four Grades.* (*Psychol. Clinic.*, vol. xxii, p. 198, Sept.-Nov., 1933.) Wiltshire, H.

Ability to answer information questions increases by school grade in both urban and rural groups, and the urban children have a slight advantage. A sex difference is evident in favour of the boys in all the grades, but this lead does not seem to be consistently progressive with age.

M. HAMBLIN SMITH.

*The Determination of Laterality.* (*Psychol. Clinic*, vol. xxii, p. 141, Sept.-Nov., 1933.) Twitmyer, E. B., and Nathanson, Y.

It is a serious error to regard writing or figure-tracing as the sole diagnostic criterion. Writing presents but one phase of the neuro-muscular pattern, and imitation and enforced training have also to be taken into account. General bodily laterality and visual dominance must be considered. A child who demonstrates left-handedness should not have this changed. Cerebral dominance may be complete, or may obtain only for certain levels of behaviour.

M. HAMBLIN SMITH.

*The Characterological Method of Jurowska* [*El método caraterológico de Jurowska*]. (*Arch. de Neurobiol.*, vol. xiii, p. 1151, 1933.) Bustamente, M.

The method consists in causing the subject to read, or in reading to him, a series of 27 questions. To each of these questions there are three types of "pure" response, scored, respectively, as 1, 3 and 5. "Intermediate" responses are scored as 2 or 4. On the basis of the figures thus obtained a "profile" is constructed for the individual tested. The method is inspired by the work of Kretschmer. Some typical profiles are given. The author regards the method as a valuable auxiliary to the diagnosis of characterological type.

M. HAMBLIN SMITH.

*Personality Traits and Fluctuations of the Outline Cube.* (*Amer. Journ. Psychol.*, vol. xlvi, p. 470, July, 1934.) Frederiksen, N. O., and Guildford, J. P.

The authors investigated the relation of introversion-extraversion to the fluctuations of the outline cube.

They drew up a scale of tests for I-E which correlated well among themselves.