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 audito-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.

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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.