

Part III.—Epitome of Current Literature.

1. Anatomy and Physiology.

The Physiological Integration of Sensory Processes within the Grey Matter of the Nervous System. (*Brain*, April, 1931.) Creed, R. S.

This article is a critical review of the physiological interaction in the nervous system between trains of centripetal impulses. Psychical interplay between already elaborated percepts is carefully distinguished, and many examples of interaction on the physiological plane are brought forward, the further study of which promises to advance our knowledge of the functions of the central nervous system in relation to sensory phenomena.

WM. McWILLIAM.

The Relationship between the Intensity of the Tone-stimuli and the Size of the Resulting Conditioned Reflexes. (*Brain*, April, 1931.) Kupalov, P. S., Lyman, R. S., and Lukov, B. N.

Previous reports from the physiological laboratories of Prof. Pavlov in Leningrad have stated that the magnitude of a conditioned reflex is proportional to the strength of the stimulus which calls it out. This report presents the results obtained when this proposition is tested with the more suitable apparatus now available for producing and controlling the relative intensity of tones.

WM. McWILLIAM.

Physiology and Pathology of Nervous Activity at Higher Levels. (*L'Encéphale*, November, 1931.) Pavlov, I.

This communication, made by Prof. Pavlov to the Medical Society of Leningrad, is quoted in part only.

The article deals with dog experiments. It is first postulated that nervous activity consists of a continual balancing between excitation and inhibition. Animal experiments are then described. In excitable animals the close succession of inhibiting and exciting stimuli produces a condition which the author feels justified in describing as neurasthenia, and he has noted that, while the condition may be produced in a good many dogs, some will recover on the exhibition of bromide. Dogs of this type, while in the neurasthenic condition, lose all their positive reactions and fall into a state of chronic inhibition. In other cases where nervous activity is more promptly inhibited, even under the influence of strong

stimuli, the condition may be called hysteria. The objection that in hysteria as well as inhibition there is frequently strong excitation is not valid, because in these so-called hysterical dogs there are periodical attacks of positive activity. As an explanation of this, the author states that the cerebral hemispheres form a system continually co-ordinated; but in which points may be isolated. It is possible to make such a point function improperly without affecting the rest of the organization. Such a position may be brought about by attempting to make the dog discriminate between a metronome of 100 per minute and a metronome of 95, the one positive and the other negative. The extremely difficult discrimination involved produces such a disturbance of the auditory analyser, that in severe cases the analyser radiates an inhibition which may depress all conditioned activity for several days.

Passing to hypnosis, the author describes the phenomenon as a dissociation of cortical activity. A hypnotized dog will salivate to a conditioned stimulus, but will not eat offered food until awakened. The explanation of this is that the motor area is inhibited. This inhibition is not "all or nothing." In light hypnosis the dog loses only tongue and masticatory movements, and a progressive loss of food-taking movements is noted as the hypnosis deepens—turning of the head, bending of the neck, movements of the trunk, all progressively disappear. This progressive inhibition is not in accordance with the more obvious formal localization theories.

The author has formed the theory that certain features of schizophrenia are phases similar to the hypnotic phenomena observed in the dog. The cortex, consisting as it does of a synthetic and analytic influence over sub-cortical centres, is, in these cases, to some extent subordinated. This would explain the motility disturbances of the schizophrenic.

In the same way, echolalia, echopraxia and stereotypy may be explained as different degrees of cortical isolation, affecting now one part of the hemisphere and now another.

The author concludes by stating that psychology at the present is divided into association psychologists and the Gestalt school, that the physiology of the cerebral hemispheres permits a *rap-prochement* of these two schools of thought on a basis of fact experimentally established.

W. McC. HARROWES.

The Physiological and Clinical Analysis of Inhibitory Processes.
(*L'Encéphale*, November, 1931.) Agadjanian, K.

This article of considerable length is particularly interesting in view of Pavlov's article in the same issue. It is an approach to the problem of inhibition along lines which are not so definitely Pavlovian, and it is an interesting review of work which has been done in this field.

The author concludes with the statement—which is essentially one of Pavlov's conclusions—that there is no evidence to support