

THE TENTH PAVLOV CONFERENCE*

THE tenth Pavlov Conference on physiological problems was held in Moscow from 29th March to 2nd April under the Chairmanship of Academician Leon Orbeli, Vice-President, Academy of Sciences, U.S.S.R. The Conference was organised by the Biology Section of the Academy.

Unfortunately all Pavlov's pupils were not able to attend as they did the previous conferences in order to discuss their work and achievements on the analysis of the Master's heritage. Nevertheless, the Conference became a kind of a congress of physiologists.

Some fifty papers were presented at the Conference. This was the first conference since the war began. In general the Conference was called to exchange experiences of physiologists who have turned their study to pathophysiological problems since war began because of the material presented by war injuries to the nervous system. In this way physiologists have been able to work for the benefit of their country by seeking means to promote rapid treatment and cure of the wounds and at the same time have accumulated much new data and enriched the science of neural physiology.

Deserving of special attention are the papers read by Professors P. K. A. Nokhin, A. R. Lurye, N. I. Grashchenkov, T. P. Mayorov, V. V. Stroganov, and scientific workers V. V. Pavlov and E. E. M. Sosuntsova. During their observations and experiments on patients physiologists have discovered a number of new facts and have been able to give already known facts a physiological interpretation. In this respect special interest was aroused by the paper read by Professor P. K. A. Nokhin on distribution of higher nervous activity in dogs following the removal of the frontal part of the brain cortex, and the paper which followed immediately after it was read by Professor A. R. Lurye on nervous disorders following injuries to the frontal part cortex in man. The former showed by means of combined motor and secretor methods that removal of frontal sections of cortex, while it left secretor and simple motor reactions untouched, made itself felt, in fact, that it was impossible to stop motion, forming part of complex action once it had been started. The latter showed in a number of patients the impossibility of stopping movement and disruption.

In addition to purely physiological interpretations some speakers at the Conference were able to give details of the excellent results of the therapeutic measures they had adopted, for example, in curing deaf-mutism resulting from concussion (90 per cent. cures, Professor A. G.

Ivanov Smolensky), and work on new methods of diagnosis of diseases of cerebellum (M. B. Tetyeva and Peed Yankovskaya).

Great interest especially on the interpretation data obtained was shown in the paper read by Prof. V. K. Petrova, an old colleague of Pavlov who is now seventy years of age. She has worked on the dogs for fifteen years subjecting some to various nerve traumas and carefully guarding others against any sort of nerve injury. Professor Petrova noted that dogs suffering from nervous injuries have all grown decrepit while healthy dogs still look comparatively young, that they did not show grey hairs, bald spots and affected teeth. The former in addition also suffer from skin diseases and cancer-like tumors.

Dr. M. I. Livanov who is continuing Pavlov's work on conditioned reflexes has obtained these reflexes from changes in electrical activity of brain cortex; Professor Y. P. Frolov, also continuing Pavlov's work has obtained conditioned reflexes from muscular contraction in lungs of tortoises.

Work on unconditioned reflexes and instincts was detailed in papers by Professors S. A. Vassiliev, A. A. Mashkovtsev and V. Krushinsky. Vassiliev gave experimental explanation for the mechanism which causes birds to take dust-baths and showed that birds which have been deprived of their voices continue to perform all actions necessary when singing as though voice were still functioning. Professor Mashkovtsev gave the Conference excellent results of his work on the decrease in percentage of barrenness amongst domestic animals; Krushinsky showed that difference between wildness and tameness in grey and white rats depends to a considerable extent on development.

Amongst other papers read were those by Professor G. B. Gershun who showed that when patient is unconscious resulting from concussion, and excitors continue to affect the central nervous system and are reflected in electrical impulses in brain cortex but do not affect consciousness of patient; by L. S. Gdushelva who showed that absence of cerebral hemispheres in doves leads to birds being considerably less affected by carbon dioxide poisoning than is the case in normal birds; by M. I. Saprokhin who showed convincingly that not only cerebellum affects vegetative nervous system but that vegetative nervous system also affects cerebellum.

Great interest was also displayed in work of those who were at the Conference and who are not amongst actual pupils of Pavlov: Academician L. S. Stern, Professors H. S. Koshtoyants and N. I. Grashchenkov, both corresponding members of the Academy, and Professors M. M. Zevadovsko, E. B. Balsky, A. A. Magnitsky; S. D. Klencharev, leading Therapeutist and R. Lurye, Physiologist.

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