with the War Demonstration Hospital, New York City. The assistance was not limited to the active period of the war, but continued after the signing of the armistice.

THE eighteenth annual meeting of the North Carolina Academy of Science will be held on April 30 and May 1, at the N. C. State College, West Raleigh. Professors A. H. Patterson, physicist, and R. W. Leiby, entomologist, are president and secretary-treasurer, respectively.

UNIVERSITY AND EDUCATIONAL NEWS

THE family of Henry Phipps have given $500,000 to the Henry Phipps Institute of the University of Pennsylvania for the study of tuberculosis.

MR. JAMES F. BRADY and Mr. Vincent Astor have subscribed $250,000 to the two million dollar endowment fund of the New York Post Graduate Medical School as soon as the first million dollars has been raised.

DR. ALBERT W. SMITH, dean of the college of mechanical engineering of Cornell University, has been appointed acting president of the university during President Schurman's leave of absence. President Schurman will resume office on June 1, retiring on June 23.

MR. ALBERT E. WHITE, formerly head of the metallurgical branch, technical staff of the Ordnance Department, has returned to his former position as professor of chemical engineering at the University of Michigan, Ann Arbor, Mich.

DR. WILLIAM LEONIDAS BURLISON, professor of crop production of the University of Illinois, has been appointed head of the department of agronomy, to fill the vacancy caused by the death of Dr. Cyril G. Hopkins.

DISCUSSION AND CORRESPONDENCE

CEREBELLAR LOCALIZATION BY THE APPLICATION OF STRYCHNINE

THERE exists, at the present time, a considerable diversity of opinion with respect to the localization of functions in the cerebellum. The conception of cerebellar localization is based on the studies of Elliot Smith, Bolk, van Rynberk, André-Thomas and Bárány. Nevertheless, in a recent study of war wounds involving the cerebellum, Gordon Holmes was unable to find definite evidence in support of the localization doctrine.

The present writer is conducting a series of experiments in which an effort is being made to solve the problem by the application of strychnine to the cerebellar cortex. The experiments are being performed on cats anesthetized with chloroform and ether. Tracheotomy is carried out and both carotid arteries are ligated. The left cerebellar hemispere is then exposed. A 1 per cent. solution of strychnine nitrate containing methylene blue is applied to the surface with a small pledget of absorbent cotton. Any excess is carefully wiped off and spreading to the medulla oblongata is precluded by the use of thick vaseline. The area covered by the strychnine solution apparently embraces the "crus secundum" and to some extent the "crus primum" of Bolk. The crus secundum, according to van Rynberk, is concerned with the ipsilateral hind limb, whilst the crus primum is concerned with the ipsilateral forelimb.

After applying the strychnine the animal is laid on its back and the narcosis is allowed to subside slightly. Within about 5 minutes it is found that flexion applied to the ipsilateral (left) hind leg at ankle, knee and hip evokes a succession of regular tremors which may persist for an indefinite period. Mechanical stimulation or faradization of the pads of the foot yields a like result, which is also evokable by induction of the knee-jerk. Frequently the leg is carried by the rhythmical tremors into a condition of sustained extension, which recalls vividly the condition met with in "decerebrate rigidity."

Application of the above-mentioned modes of stimulation to the contralateral (right) hind leg is usually without result but at times phenomena of similar kind are induced. These, however, are weaker and of shorter duration than in the ipsilateral limb. It ap-

pears possible that when a minimal quantity of strychnine is employed the reactions described will be found to be confined to the ipsilateral hind leg. Together with the hind limb phenomena just described there is usually to be noted a rigidity affecting both forelimbs, which again strongly recalls the appearances of decerebrate rigidity.

The reactions above depicted do not appear to be due to an action of the strychnine on the spinal cord and bulb, since the symptoms are confined to the hind and forelimbs. Vigorous stimulation of other parts of the body, *i. e.*, the trunk and head elicits not the slightest indication of strychnine convulsions. There is no opisthotonus; the lower jaw is constantly relaxed and the mouth open.

Magnini and Beck and Bikeles had previously applied a solution of strychnine to the cerebellar cortex for the purpose of localization. The effects described by these authors were, however, of an indefinite character and involved widely-separated regions of the body. According to Luciani the reactions were in part due to diffusion of the drug to the medulla oblongata and the observations of the writers cited lend no support to the doctrine of cerebellar localization. In my experiments, on the contrary, precautions were taken to prevent spread of the drug to the medulla oblongata and the symptoms themselves were of a definite and restricted nature. My experiments are being continued on the cat and the method will be extended to the study of the cerebellum of the dog, monkey and other animals.

Frederick R Miller

Western University Medical School,
London, Canada,
March 22, 1920

A LOGIC TEST

To the Editor of Science: I have lately came upon what I regard as the very best Logic-Puzzle that I have ever met with; that it is good is proved by the fact that the people I have put it to have been somewhat equally divided as to whether they answer yes or no to the question involved. Moreover, it is an actual case—a real advertisement of a clothing store that I had the good luck to find in a recent newspaper. This is it:

> We have all known from our youth up that to err is human. If this is so, it must be that all of our competitors are thoroughly human.

The implication is, of course, that "our competitors" are people who make (in their cutting and fitting) plenty of errors, and the inference drawn is that this proves them to be human. Now this is either good reasoning or bad; which is it?

I should be extremely glad to receive answers to this question, and especially if they are accompanied with the grounds for the answer—yes or no.

Christine Ladd-Franklin

Columbia University,
March 2, 1920

THE SITUATION OF SCIENTIFIC MEN IN RUSSIA

A recent letter to Science (March 26, 1920, p. 322) having brought up the question of "the situation of scientific men in Russia," with particular reference to Professor Pavlov, it seems fitting to publish the following letter from Professor Boris Babkin, who was for many years assistant to Professor Pavlov. We are all interested in the welfare of our scientific colleagues in Russia as well as in other countries, and this direct statement may throw some light on the situation.

H. Gideon Wells

The Otho A. Sprague Memorial Institute,
Chicago, Ill.,
April 5, 1920

Dec. 17, 1919.

Physiological Laboratory,
University of Odessa.

Dear Professor Wells,

I take advantage of my old acquaintance with you in E. Fischer's laboratory and beg you to assist me in the following matter.

The bolshevik revolution has brought Russia into such a state that not only has scientific work come to a standstill, but even our lives are in danger. Many professors have been put to death, many are in prison. I consider it necessary to continue my scientific activity. I therefore beg you to help me