during silence. There appears to be some relationship between the severity of the block and the amount of reduction of the reflex time.

A third study shows that alcohol decreases the patellar reflex time in dogs. In general each of 5 dogs ranging in weights from 31 to 37 pounds was given intravenously rapidly 20 cc. of 97% alcohol in 80 cc. of normal salt solution. The reflex times of each dog were consistently but irregularly shortened after the alcohol injection. In addition the ranges of reflex time were greater. The reductions in reflex time varied from 6 to 30% of that of the normal period.

All of these findings indicate that the nerve impulse in these reflexes may travel beyond the cord to certain higher nerve centers or at least that the higher centers are a functional part of the lower and that an alteration of the functions of the former alters prejudicially the functions of the latter.

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The Effect of Submersion in Water at Various Temperatures On Respiration.

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The data herein presented include only a part of an investigation of the disturbances in respiration due to submersion in water of various temperatures.

Wasserman,[1] Bazett,[2] and Hill and Flack[3] made observations on the effect of bath temperature changes on respiration, but we have failed to find a complete picture, beginning with cold and ending with hot water. However, the results reported by these investigators parallel our findings.

In securing the data, use was made of the constant temperature baths provided by the Psychopathic Hospital. Each subject was placed in the tub in a prone position during which time a record of normal respiration was taken. Following this the tub was filled, temperature changes made and data recorded as indicated by Fig. 1. Time is recorded in 5 sec. intervals.

[1] Wasserman, Max., *Casopis ceskych lekaru,* 1924, Nos. 16, 19. (Quoted from *Archiv. des Maladies, du coeur des Vaisseax et du Sang.,* 1926, 50.)

[2] Bazett, H. C., *Am. J. Physiol.,* 1924, lxx, 412.

[3] Hill, L., and Flack, M., *Fr. Physiol.,* 1908, 38, *Proc. Physiol. Soc.,* lvii.

The data presented in Fig. 1 show that there are 3 distinct changes in the respiratory movements when a subject is placed in a water bath varying from 65°F to 116°F. During the filling of the tub the movements are irregular, becoming slightly faster and much

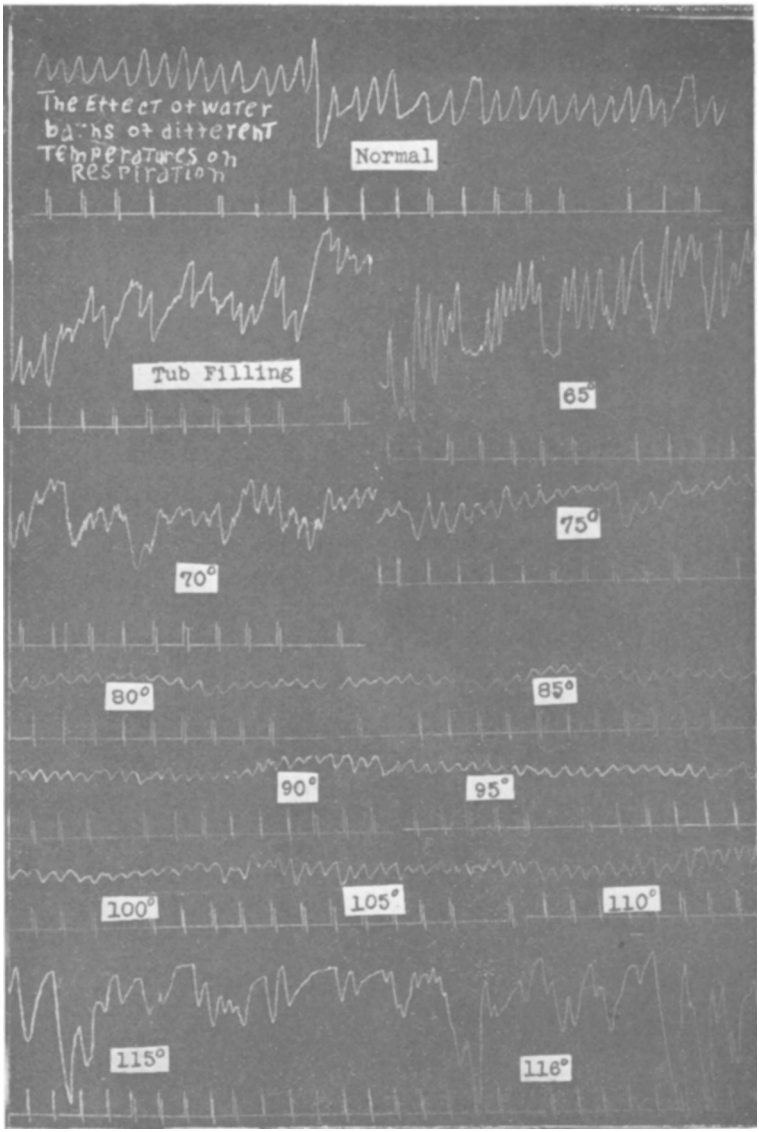

FIG. 1.
The effect of submersion in water at various temperatures on respiration.

deeper while the bath remains at 65 F. As the temperature is increased, the respiratory movements tend to become more quiet and much shallower. At 80 F the movements are practically normal as to rate but are very shallow. The shallow characteristic begins to disappear at 110 F. When 115 F is reached, the respiratory movements again become deep and irregular, assuming a form somewhat similar to those recorded in the cold bath.

In most cases, very little discomfort was experienced in the cold bath. However, when the temperature reached 105 F, the subjects perspired profusely. As the temperature was increased still more, symptoms such as nausea, dizziness and extreme irritability were observed.

The outstanding feature of the experiment is that the respiration rate is changed but little, compensation being accomplished by a change of depth.

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A Study of the Metabolism of Reticulocytes.

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The metabolism of blood cells can be estimated from their glycolytic activity *in vitro*. This rate of glycolysis has been studied in the blood of patients with pernicious anemia during a remission induced by liver extract. In all of 5 cases the amount of sugar glycolyzed increased abruptly at the beginning of the remission. In 2 of the 5 cases the increased glycolysis during the reticulocyte crisis could be explained by an increase in erythrocytes and leucocytes. In the other 3 cases some of the increased glycolysis seemed to be attributable to the increase in the reticulocytes *per se*. This might indicate that young blood cells have a more active metabolism than adult cells.