

in connection with a Duprez signal driven by a tuning fork of one hundred vibrations a second.

At first ten clicks were used for the experiments, the clicks being separated by an interval of .011 of a second, the groups by an interval of .25 of a second. All numbers from four to ten were used as standards, and compared with numbers greater or less by one. As a result of experiments on three subjects, it was found possible to recognize a difference of one click in any number below ten, with the interval above mentioned, the percentage of errors being greater, the greater the number of clicks, and less difficulty being experienced when the standard was compared with a less number of clicks.

In answer to the principal question to be settled by these experiments, it may be said that number has no influence in the mere perception of discreteness; that a difference of one in ten is less difficult to recognize than a difference of one in five, a conclusion agreeing with the psycho-physic law.

Two other points have some light thrown on them by these experiments. One click more or less in successive groups can be recognized when the number of clicks is not too large or the rate too rapid. It is extremely improbable that any clicks are lost in the perception of a rapid group up to 153 a second.

Experiments on Physiological Memory by Means of the Interference of Associations.

By J. A. Bergstrom (Am. Jour. of Psych., Vol. V., No. 3).

It is a well known fact that old habits are difficult to be overcome, and that fatigue or carelessness will lead us unconsciously to forsake a new for an established method of action. But it is only by experiment that we can determine whether the old habit interferes with the forming of the new one. To decide this problem was the object of the series of experiments undertaken by Mr. B.

Unprinted cards were made into packs of eighty, each pack containing ten kinds of cards, and each kind having the same abstract word printed at the top, such as "Vitalism," "Homophone," etc.

The experiment consisted in sorting two packs in quick succession, placing cards containing the same word in the same pile, the arrangement of the words to be different for the second pack. The length of time required for sorting the second pack was longer in nearly all cases,

differing with different individuals from three to seventeen seconds. In thirty experiments, directed by Mr. B., the reviewer of this article sorted the second pack, when different from the first, in less time by 3.1 seconds than he could the first.

Later, to simplify the experiment, pictures of common objects took the place of words, and the ten objects were selected to be as unlike as possible. The cards were thrown on a rough white table cover, to prevent slipping.

The first object of the experiment was to determine the rate of decrease of interference with increasing intervals of time between the two sortings, seven or eight different intervals ranging from 3 to 960 seconds being used, and two minutes rest allowed between experiments on different intervals. Altogether, the experiments required an hour a day, and records of five persons were taken for periods varying from twelve to twenty-one days.

The results gained by Mr. B. are quite in harmony with those of previous investigators. He found that memory was closely related to habit, and that habits are chiefly physiological in their basis. He also gained new material, setting forth the marked influences of vigor and fatigue which bear out the general belief in a daily rhythm. His results also show that men are influenced in their activities by the state of the weather, by food, by the frequency and amount of rest, and by whatever would tend toward changing the regularity of mental life, such as grief, anger, anxiety, and melancholia. Taken together with the classical work of Ebbinghaus, and the more recent experiments of Müller and Schumann, as well as the painstaking researches of Münsterberg, these interesting investigations which Mr. Bergstrom gives us are the most fruitful and wide-reaching of any up to date.

On Psychoses after Influenza.

By Julius Althaus, M.D. (Jour. of Mental Science, Vol. XXXIX., No. 165).

This subject has been scarcely treated in the standard works of Clouston, Savage, and others, and, indeed, there is little in the periodicals previous to 1890. This article, given in the form of a lecture, is really an epitome of all the literature, good and bad, that has appeared within the last two years.

He traces this psychoses in its relation to other post-