

different lengths; these differed by 3 cm. from one another, the shortest being 6 cm. and the longest 33 cm. Each line had to be reproduced 40 times, and the average of these was taken. The table of correlations which is given is very interesting, for the coefficients decrease with the difference in the lengths of the lines whilst the reliability coefficients are as high as 0.98. In the light of these results the authors discuss two fundamental issues of differential psychology, *viz.*, (1) the meaning of factors, or causes, of correlation, and (2) the nature of the grouping of simple abilities into larger classes.

A. WOHLGEMUTH.

*The Law of Affective Equilibrium.* (*Amer. Journ. of Psych.*, January, 1929.) Beebe-Center, J. G.

In the realm of cognitive and conative experiences "Gestalt" psychological laws have been formulated of late. The author has attempted to investigate whether such laws obtain in the affective field. He experimented with three trained observers and a set of twenty-one olfactory stimuli, which were arranged in order from most pleasant to most unpleasant. It was found that after unpleasant determination the percentages of pleasantness were greater than after pleasant determination. The following law is then formulated: "The affective value of the experimental correlate of a stimulus varies conversely with the sum of the affective values of those experiences preceding this correlate which constitute with it a unitary temporal group." The investigation was not well planned, the facts of fatigue, relief, contrast, etc., are not sufficiently considered, and this "Gestaltgesetz" will hardly appear acceptable even to those who may be otherwise favourably inclined towards "Gestalt" psychology.

A. WOHLGEMUTH.

*Improvement in Memory Span.* (*Amer. Journ. of Psych.*, January, 1929.) Martin, P. R., and Fernberger, S. W.

Memory span improves up to the end of the second decade and then remains stationary; it has therefore been looked upon as a congenital ability. The authors investigated the auditory vocal memory span upon two intelligent students as subjects by giving them series of digits from five upwards until they broke down. Two series were given each day for each number of digits, and the score for each day was the highest single series reproduced correctly. Both subjects showed distinct improvements as time went on, but from the introspective record it is evident that practice in grouping the digits was of paramount importance. So the authors rightly say, "It is obvious that no unqualified statement can be made with regard to improvement in memory span."

A. WOHLGEMUTH.

*A New Classification of the Red-Green Colour-Blind.* (*Amer. Journ. of Psych.*, April, 1929.) Terman, S. W.

The colour sphere rather than the spectrum should be used as a basis for tests of colour-blindness, since differences in saturation

and lightness are for the colour-blind differences in hue. An individual's colour vision may be described in terms of the four-stage classification of colour-vision. Each hue is given a rating of 1, 2, 3 or 4. A rating of 1 indicates perfect vision and one of 4 that the hue is seen as grey; 2 and 3 are for intermediate stages. The many different types of confusions made by different colour-blind individuals are explained by this classification, for only colours which are seen alike are confused.

A. WOHLGEMUTH.

*Grey and the Colour Pyramid.* (*Amer. Journ. of Psych.*, April, 1929.) *Dimmick, F. L., and Holt, C. H.*

The authors found that the necessary and sufficient colour categories, or unique colours, are red, yellow, green, blue, black, white, and grey; and consider that grey ought to be treated as a unique colour.

A. WOHLGEMUTH.

*Energy, Engines and the Engineer: A Critique of C. Spearman.* (*Amer. Journ. of Psych.*, April, 1929.) *Washburn, M. F.*

After paying merited tribute to Prof. Spearman's *The Abilities of Men*, the author gives an outline of Spearman's theory of general and specific factors, and then advances his objections to the vitalistic assumption of an engineer and to the assumption of a mental energy with laws that do not harmonize with those of nervous energy. The latter, he thinks, arises from the mystical tendency that assumes the control of an engineer. Prof. Washburn prefers to think that each of us inherits a central engine, the brain cortex, with peculiarities of structure that determine intellectual ability by determining what portion of the energy derived from metabolism can be used for thought. Neither innate quantity of mental energy, nor the power of a superphysical engineer, but innate differences in the structure of the engine, seem to him the most probable basis for differences in the abilities of men.

A. WOHLGEMUTH.

*Unconditioned Salivary Response in Man.* (*Amer. Journ. of Psych.*, April, 1929.) *Winsor, A. L., and Bayne, T. L., jr.*

Secretion from the parotid gland appears to be the result of highly integrated nervous action. The nature of this reaction at any time might be the result of direct or indirect excitation or inhibition, whether conditioned or unconditioned. The data in this report point to the possibility of direct proprioceptive stimulation of these glands from the muscles of mastication and swallowing. In addition to the functional evidence presented, attention is called to the fact that recent neurological research has presented conclusive evidence that there are nerve-fibres ascending from these muscles to the salivary centres.

A. WOHLGEMUTH.

*Preliminary Note on After-images from Stimuli of Low Saturation and Short Duration.* (*Amer. Journ. of Psych.*, April, 1929.) *Frehafer, M. K.*

With graded stimuli less than 70 ml. in brightness, of short duration and low saturation, the following results were obtained: