The last section of the monograph consists of a theoretical application of the data of these experiments, together with current neurological theories, in a discussion of the nature and definition of attention, and its possible psycho-physical basis. The present writer will not descant upon the success or lack of success of this paper, aiming, as it does, to be hardly more than an outline study. I believe, however, that it suggests the possibility of adapting a broader range of psychological problems to laboratory methods than has hitherto been done, and also that in doing this much more exhaustive methods of technique must be used.

THE AUTHOR.

Methodologische Beiträge zu psychophysischen Messungen. DR. ARTHUR WRESCHNER. Schriften der Gesellschaft f. psycholog. Forschung. III. Samml., Heft 11. Leipzig, 1898. 238 pages, 7 marks.

This investigation of the accuracy of judgments in lifting weights begins with experiments in which weights attached to the wrist were lifted by a movement at the elbow joint.

The question is proposed: Can we properly consider the judgments 'smaller,' 'equal' and 'larger,' as three separate, independent forms of judgment with definite limits between them? The results show that if the different weights be represented on the axis of X to each side of the standard and if three sets of ordinates be erected proportional to the frequency of each kind of judgment for each weight, we obtain three overlapping curves whose maxima are at different points. The maximum for the judgment 'equal' is over the value for the standard, that for 'greater' is beyond the standard, and that for 'smaller' below it. The important fact established by these experiments is that the curve of frequency so closely resembles the usual exponential law assumed for statistics and measurements that we can hereafter with small error use such a law for discussion. Closer inspection, however, shows that these curves are slightly asymmetrical in the same sense as most statistical curves, namely, with an excess of large values; this tells in favor of the use of the median. These experiments afford an excellent occasion for calculating the results according to the scheme developed by Bruns (Phil. Stud., 1893, IX., 1); it is to be deeply regretted that the author has missed the opportunity. The author carefully discusses his results in respect to the error of sequence in its various factors, to practice, etc. In regard to Weber's law he finds that the mental processes involved in judging are different for small

weights, for moderate weights and for heavy weights; under these circumstances the law has only approximate validity. The investigation shows the marks of the careful methods employed in Professor Ebbinghaus's laboratory, in which the experiments were performed.

E. W. SCRIPTURE.

Ueber die Raumwahrnehmungen des Tastsinnes. Ein Beitrag zur experimentellen Psychologie von DR. VICTOR HENRI. Reuther & Reichard, Berlin. 1898.

In this monograph Dr. Henri gives us a critical examination of the present condition of research, experimental and theoretical, on the problems of the spacial perception of touch. All of the important work of others is recounted and many investigations of the author are described. But the aim of the treatise is by no means that of an objective account of the *status quo* of investigation on this subject. The treatment, while it endeavors to cover the whole ground, is dominantly critical.

The monograph is divided into two main parts—that treating of the facts and that treating of the theories. The former is opened by an important discussion on the nature of the threshold for two or more points to be distinguished through the sense of touch. Here the author concludes that the nature of this threshold has heretofore been generally misapprehended, that the sensations of one point pass gradually over to those of two through more or less distinct stages, and that the best method of experimenting on this subject is to have the reagent describe all of his sensations as completely as possible. These conclusions are then substantiated by means of a long series of researches on the threshold for two points conducted by the writer and Dr. G. Tawney.

From this the author passes on to discuss other thresholds, the 'Vexirfehler' and the experiment of Aristotle. Dr. Henri's researches on the last, which have already appeared in *L'Année psychologique*, form one of the most valuable and interesting portions of the work. The result is stated as follows:

"When two fingers are crossed and each is touched with a point, two points are perceived, the distance between which seems greater the smaller it actually is. Moreover, a reversal occurs so that the point to the left appears to the right and vice versa."

This much is contained in the first chapter. The second and third chapters deal respectively with the localization of impressions of touch and with a physiological and pathological treatment of the general