

**Psychometric Methods.** By J. P. GUILFORD. London: The McGraw-Hill Publishing Company, 1936. Pp. xvi + 566. Price 25s.

The author commences: "The primary aim of this volume is to teach the student of psychology how to deal effectively and intelligently with quantitative data." The book is divided into three parts. Part I consists of an introduction to the general theory of errors, including means, standard deviation, the normal distribution, etc., with their applications to psycho-physical methods in general and to various well-known types of experiment in detail. Part II deals with psychological scaling methods and the appropriate calculations. Part III deals with correlation and mental testing; here are explained curve fitting, testing goodness of fit, and simple, multiple, partial and non-linear correlation. The last two chapters deal with the theory and practice of mental testing, and with Spearman's two-factor and Thurstone's vector theories. It concludes with thirteen tables of functions which are commonly required for the work.

The book is closely written and contains a large amount of information. The subjects mentioned above are dealt with in much more detail than the brief list above would suggest. The student who reads and masters the contents should be well abreast of present-day work in psychometrics.

The statistical methods used in the book are deliberately simplified and the student needs little more than school algebra to follow the equations and calculations. In places, however, the simplification appears to have been overdone. Thus, there is no mention of the basic ideas underlying the  $\chi^2$  test of goodness of fit. This means that the reader is in great danger of using the  $\chi^2$  test in cases where it is totally inapplicable. Simplified statistics always suffer from this danger. We would suggest that the book would be improved by statements, dogmatic if necessary, warning the reader that certain methods are valid only under certain specified conditions.

A second blemish lies in the author's descriptions of tests of significance. He repeatedly describes in full detail the older and rather crude approximations which were once widely used; he then mentions that the accurate method is quite different and proceeds to give details of this. Surely the probable error of a coefficient of correlation should be abandoned for ever now that Fisher's accurate distribution is available.

These are minor blemishes in a book which is comprehensive, detailed and easy to read, and which we can confidently recommend to students of the subject.

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