"What we need to know," says Professor Whipple in his preface to Mr. Finkelstein's monograph, "is: What are the traits, qualities, or capacities that we are actually trying to measure in our marking systems? How are these capacities actually distributed in the body of pupils or students? What methods ought we to follow in measuring these capacities? What faults appear in the marking systems that we are now using, and how can these be avoided or minimized?"

In a very brief introductory chapter, the author sketches the problems which have arisen within the last decade with regard to the marking of students in schools and colleges. "From the studies of J. M. Cattell (1905), W. S. Hall (1906), Max Meyer (1908), W. F. Dearborn (1910), A. G. Smith (1911), A. G. Steele (1911), W. T. Foster (1911), and others who have discussed various phases of these problems, has come the demonstration that few teachers stop to consider what the marking system under which they work really implies; that the variability in the marks given for the same subject and to the same pupils by different instructors is so great as frequently to work real injustice to students; and that the marking system in most common use—the percentage system with 100 for a maximum and 60 or 70 as a 'pass mark'—is in all probability not the best system."

Chapter II discusses three theoretical problems: "Should marks indicate performance, or ability, or accomplishment? . . . What is the theoretical distribution of the quality or traits that the marks are to indicate? . . . What is the best method of translating the distribution into a scale of marks?" Mr. Finkelstein thinks "The best possible division of the marking scale for any small number of groups is the five member division," and he adds, "The theory of the application of the five-division system to the actual grading of students assumes that the actual distribution of marks should conform fairly closely to a theoretically predetermined distribution." Assigning "the symbols A, B, C, D, and E to excellent, superior, average, inferior, and failure, respectively," he shows that "the divisions recommended by Professors Meyer, Dearborn, and Cattell for each hundred students are as follows:

|       | A | B | C | D | E |
|-------|---|---|---|---|---|
| Meyer | 3 | 22| 50| 22| 3 |
| Dearborn | 2 | 23| 50| 23| 2 |
| Cattell | 10| 20| 40| 20| 10 |

Criticizing the percentage system he makes an observation which will have weight with all who have studied its application to class grading. "Theoretically," he says, "this scale implies that distinctions of a fineness of one-hundredth may be made, and in practice such distinctions are constantly attempted. But what is the difference, if any, between a mark of 75 and one of 76? What, for
that matter, does 75 mean? Has the student accomplished 75 per cent of some ideal accomplishment? . . . The very fact that its divisions [the hundred-point scale's] are so minute is doubly insidious; it promises precision, but it cannot afford it." In a footnote he quotes with apparent confidence the debatable conclusion of Professor Starch: "The steps on a scale should be at least twice the size of the mean variation or probable error of the measurements in order to be distinguishable steps. Hence the steps in a marking scale should be at least two times 4.2, or approximately 8 points. And hence on a scale of passing grades of 70 to 100 only four steps can be used with any degree of objective reliability."

Chapter III analyzes the combined results for numerous college courses, using some 20,348 marks given at Cornell University during the first term of 1902-03. The author finds that he is "justified in taking 75 as the net average mark of the students here represented for the purposes of fitting the curve of actual distribution to the curve of theoretical distribution." Continuing, he says, "Now if we assume, like Cattell, Meyer, and others, that the symmetrical probability curve were the correct theoretical distribution, then if 75 were the median or mode, there ought to be equal divisions above and below this mode. But the deviations above 75 cannot exceed 25 points; hence the lowest possible mark, or complete failure, would have to be indicated by the mark of 50. It is perfectly evident that this conclusion leads to an absurdity. Complete ignorance of a subject should be represented by a mark of 0."

If, however, he assumes that the correct theoretical distribution is a curve skewed to the right, then the translation of this curve to the actual distribution is feasible. He lays down as "the pattern or ideal distribution of marks the following scheme:

| Group            | Poorest | Inferior | Average | Superior | Excellent |
|------------------|---------|----------|---------|----------|-----------|
| Per cent.        | 12      | 19       | 45      | 21       | 3         |
| Range in percentile scale | 0-59   | 60-69    | 70-84   | 85-94    | 95-100    |

His conclusion is that "It would be in every respect desirable for Cornell University, and any other institution of like character, and probably also for the secondary schools as well, to adopt a five-division system of marking with the express provision that, in the long run, the marks given by any instructor must not deviate widely from the distribution just indicated."

Chapter IV gives the distribution of marks by individual courses, a total of 8141 marks being analysed. Charts are used to show, among other things, the first term marks in one course as compared with second term marks in the same course, typical "high markers" as compared with "low markers," and the low standing of a class of engineering students taking a course in mathematics as required work, contrasted with the far better standing of a class of arts students taking the same course as an elective.

Mr. Finkelstein believes that while "marks may be based upon performance, upon ability, or accomplishment, the last named is, save under unusual circumstances, the quality on which the marks should be based." Among his other conclusions there is at least one which might be adopted by college officers of administration, no matter what individual standards may be adhered to
by members of the faculty, "In order to insure the working of the system,"—
and this applies equally, of course, to any system of marking,—"the distribu-
tion actually given should be tabulated at stated intervals, say biennially, and
the distribution should be made public, so that every examiner shall know to
what extent he conforms to the principles on which the system is based."

A. T.

Character and Temperament. By Joseph Jastrow. New York and London:
D. Appleton & Co., 1915. Pp. xviii+596.

It has been said in jest, that the man or woman who is fond of talking
about temperament may be safely assumed to have none; and that the
man or woman who is deeply concerned about his or her own character, has
none worth fostering. But character and temperament are very real factors
in human behavior. Professor Jastrow calls them, "the psychological sources
of human quality." He says, "The composite term character and tempera-
ment has the currency of tradition; the possibility of interpreting it for present-
day psychology is an inviting task."

The task which Professor Jastrow has accomplished is truly inviting. That
the "currency of tradition" has more weight for him than has "present-day
psychology," is evident. The psychology of this book is the psychology of the
educated layman, of the reader of novels and literary magazines. Likewise,
the sociological and biological generalizations upon which Professor Jastrow
draws lavishly, are the generalizations of twenty years ago. Of present-day
advances in the three great sciences of humanity, his book contains no hint.
The work done, for example, in the field of heredity by the Pearson laboratory
in London, and in the field of clinical psychology by the many clinics and labora-
tories in this country, is left unexplored.

The book occupies the pleasant and uncharted land between science and
interpretive literature. The scientist will call it an essay; the essayist may
prefer to look upon it as a scientific work. Psychologists who are making a
scientific analysis of the fundamental variations of character and temperament
and their causes, will get little, if any, assistance from this book. Workers for
human progress, who "look forward and not back" will find it disappointing.
But many cultivated minds will appreciate the grace of Professor Jastrow's
style, and will consider that his views have a distinction which more than com-
pensates for their lack of originality.

A. T.