

possessed by the typical journeyman and the relation of general education to proficiency in a trade. The use of self-administrative performance tests in trades is recommended as a means of providing incentive to learn. The investigator cites their use in two engineering schools. The obvious advantages of the plan are that the person tested can see how his performance compares with the norm or with any point on a scale without the loss of interest due to delayed scoring. The one-word-answer form of test is also self-scorable and this feature has been found to have a big appeal to the interest of students. These methods should appeal to the teacher because of their manifest economy in scoring time, and the fact that the pupil is convinced that his score is free from the effect of personal bias.

In the appendix there appears a chart for finding probable errors of Pearson  $r$ 's, and a selected list of fifty references.

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4. Professor Scott has written a plea for the recognition by employers of the individuality of their employees. The book contributes little to our knowledge of educational psychology, but the authors would probably be last to insist on making this a research contribution.

Mental tests in industry serve their greatest usefulness, not as a method of selection and elimination, but as a means of classification and adjustment of intelligence to difficulty of job.

Among office employees, distinctly higher average mental alertness scores for men than women indicate an occupational selection of the more capable men and less capable women in office work rather than a basic sex difference.

In simple, routine jobs the questionnaire method reveals that those men who are most badly retarded in school have the least "amount of dissatisfaction;" while, in jobs requiring high intelligence, those most retarded in school have the most dissatisfaction. These results—valuable if they can be substantiated—may be complicated by the questionnaire fallacy. The amount of dissatisfaction which one has for his work cannot be measured reliably by one or two questions. At best, the results will vary with the way in which the question is framed.

Some may be offended by the plain speech quoted to illustrate

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<sup>1</sup> Scott, Walter Dill, and Hayes, M. H. S.: *Science and Common Sense in Working with Men*. New York: The Ronald Press, 1921, p. 154.

psychological principles. The pure psychologist may complain that the term "instinct" has neither been defined nor used according to his liking. The applied psychologist may wonder at the omission of charts, diagrams and statistics in a book dealing with tests and their applications; yet, were the book written otherwise, its message to employers, individuality of human beings and the great variability of human traits, might not be as widely distributed to those untrained in statistical methods. A realization by employers of the importance of individual differences, the authors feel, will do much to secure those industrial adjustments which exact measurement and many statistics may fail to bring about. Why should not someone now write a test primer to carry to the employee the message of individuality,—that message which has had such far-reaching beneficial effects in education?

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5. *The Growth of Intelligence*.—This problem is much disputed at the present time and the appearance of a monograph<sup>1</sup> on the subject is, therefore, very timely. The usual assumption has been that the rate of gain decreases gradually up to some age between fourteen and sixteen, at which point growth seems to stop. The author of this monograph, however, finds that the rate of growth is constant from nine to fifteen, and that there is no indication of cessation at this age. Other data, which he describes, suggest to him that growth continues up to eighteen at least. These conclusions are based upon three annual re-tests of 171 children, using a battery of eighteen tests. In addition the results of other workers are made use of to support his conclusions. The actual curves from his own data show a slightly decreasing rate of gain for memory functions, complex functions, and informational functions, but a constant rate of gain for simple functions. The decrease in the first three groups is assumed to be due to the selection of the cases tested, and, therefore, a constant rate is supposed to be truer to the facts. The author does not say why this assumption should not also apply to the simpler functions, in which case we should have an increasing rate of gain from age nine to age fifteen. The correlation between mental traits measured at a two-year interval is found to be high, thus strengthening our belief in the constancy of

<sup>1</sup> Brooks, F. D.: *Changes in Mental Traits with Age*. Teachers College, Columbia University *Contributions to Education*, No. 116, 1921.