

untarnished honor, of peculiar foresight, of strong will and of intense energy in bringing to pass things of which others only dreamed. In preserving the record of his father's active business life Mr. Baker has rendered a most useful public service.

EDWARD LINCOLN SMITH

Tests and Measurements in the Social Sciences. By TRUMAN L. KELLEY and A. C. KREY. (Charles Scribner's Sons, New York, 1934. \$3.00.)

This volume summarizes the results of a four-year study of objective tests and measurements in the field of the social studies. The project was initiated by the Commission on the Social Studies in the Schools and carried out as a cooperative effort of social scientists and statisticians. Its tone is set throughout by clash of the divergent viewpoints of these unlike groups. The result is a book with a dual personality.

The plan of the committee was to prepare new-type tests that would be valid and reliable measures of the educational values achieved by the social sciences. The project was started with high hopes. The social scientists had confidence that the statisticians would have no great difficulty in securing in the field of the social sciences measures of the same exactness they were reputed to have prepared in other areas of knowledge. The statisticians, on their part, appear to have assumed that no difficulties not already overcome in other fields would be encountered in the attempt to secure exact measurements of the changes brought about in school children by study of the social sciences.

The disappointment that followed the dashing of these high hopes permeates the entire volume. In retrospect, as Prof. Krey points out, there was little justification for the great expectations with which the project was begun. The technical experts could not begin work until the social scientists had furnished them with a statement of the ends, aims, and purposes of instruction in terms of objective knowledge. Such a statement did not exist and could not be formulated. As Professor Krey points out, ". . . it became clear that the most 'objective' fact about social science was that it was so largely 'subjective.'"

Under the handicap of this difficulty the collaborators did the best they could. The social scientists present a reasoned and careful analysis of the aims of social science instruction, albeit not in the

objective form desired by the statisticians. The technical experts employ techniques in an attack on some minor problems of social science teaching. But under the circumstances no concerted attack on common problems was possible and the divergent viewpoints of the two groups are on most points unreconciled. The two chapters in which these clashes of viewpoint are presented are among the most valuable in the book. In the final chapter Prof. Krey evaluates the project from the viewpoint of a social scientist. In Appendix 1, under the heading "A Divergent Opinion as to the Function of Tests and Testing," Prof. Kelley, the statistical adviser for the committee, presents the sharply contrasting viewpoint of the technical expert in measurement. These two statements will doubtless serve as the starting point for a further attack on the problems they raise. By clarifying the issues they do much to clear the ground for a new alliance of testers and teachers.

The diverse conclusions of the authors should not draw attention from the factual contents of the study. Roughly two-thirds of the 635 pages are devoted to descriptions of actual experimental studies of measurement in the social science. The general method of securing measurements of abilities is stated clearly and at length by Prof. Kelley. Prof. L. C. Pressey contributes a chapter on the measurement of knowledge of the concepts used in the social sciences. Prof. Kelley describes tests designed to measure the degree of understanding that students have of words. Other chapters describe tests of mastery of the concepts used in the social sciences and of the ability to read maps. An ingenious test of ability to evaluate historical evidence is described by Miss Marion Clark. Professors Kelley and Trabue give an account of an elaborate study aimed at the measurement of such character traits as courtesy, fair play, honesty in school work, loyalty to fellows, poise, and regard for property rights. Prof. Jordan, following the techniques devised by Hartshorne and May, studied the cheating of students in the classroom and the reasons for such dishonesty.

In view of these solid achievements and of the immense amount of necessary trial and error that now lies behind the committee, the pessimism of the authors seems hardly justified. It is no small achievement that the social scientists have set out to make use of the newer techniques of measurement in an attempt to evaluate the results of their teaching. Nothing short of this elaborate enterprise would have been sufficient to demonstrate that no type of test, new

or old, can measure the deep seated changes that it is hoped takes place in the pupil as a result of instruction in the social sciences. The fundamental problem of discovering the extent to which social science instruction in the schools brings about differences in the student when he becomes a citizen, a tax payer, and a voter, lies far beyond the skill of any tester. Yet it is on the assumption of such differences that social science instruction is justified. It is inevitable that the social scientist and the technical specialist in measurement continue to collaborate until the anomaly of a science that cannot use the methods of science no longer exists. As a first step in that collaboration the present book is necessary and valuable.

WILLIAM R. WILSON

Triggernometry: A gallery of gunfighters with technical notes on leather slapping as a fine art, gathered from many a loose holstered expert over the years. By EUGENE CUNNINGHAM. (New York: The Press of the Pioneers. 1934. Pp. 441. \$3.75.)

This colorful collection of biographies of famous Texas gunmen supplies the reader with plenty of thrills. Mr. Cunningham in his treatment of the lives of these men avoids sensationalism through his commendable restraint. While Eugene Manlove Rhodes in his foreword points out that the grim-faced gunman "killed armed men—not men unarmed and bound" there is no attempt on the author's part to glorify the exploits of either these fugitives from justice or of the sheriffs who pursued them. No attempt is made to picture men like Billy the Kid, John Wesley Hardin or Wild Bill Hickok as other than what they really were. Despite the author's impartial treatment the reader's sympathy is aroused many times for these frontier fighters whose fearlessness alone often puts to shame the tactics of our modern gangster. As the title suggests, Mr. Cunningham emphasizes throughout his book the technique of shooting and devotes his final chapter to "triggernometry." A rather unusual feature for a book of this type is the bibliography or "Source Shelf," listing thirty books mostly biographical in nature.

RONALD TODD