

necessarily leave a number of things still to be improved upon. Among these the following suggest themselves to the reviewer:

1. A more thorough standardization for age III, IV, and possibly V. Non-selected children of these ages and younger are difficult to find in groups available for examination.

2. The selection of cases above XIV is unsatisfactory, and the number of normal cases rather small.

3. The number of tests beyond age X is too small to give a high degree of reliability in the examination of the individual case. Tests should have been found for the intermediate ages of XI, XIII, XV, and XVII. The absence of tests at the ages of XI and XIII is at the most critical point of the scale, inasmuch as they are needed here especially for the examination of borderline cases of these ages and older. As they stand, however, the tests undoubtedly give more reliable results at this point than did the original scale.

4. Many of the new tests introduced as well as old ones retained involve in a high degree the judgment of the examiner as to how the response of the child is to be scored. This difficulty is overcome in a measure by giving copious illustrative responses and their scorings, which on the other hand increase the burden of details of procedure to be memorized.

5. It would have added greatly to this volume to have given results on each individual test showing the increase in percentage of children, from younger to older, passing it. By far the most important thing about any system of tests is the reliability of the result of the individual examination, not the agreement of average age with average mental age. This reliability depends on the number of individual tests used and applicable in the individual examination, and on the rate of increase in the percentage of children, from younger to older, passing each test. Perhaps this will be given in the monograph on the details of the results that is promised.

Faribault, Minnesota.

F. KUHLMANN.

Schools and Classes for Exceptional Children. By David Mitchell.
Dept. of Psychology, University of Pennsylvania. Pp. 122.
The Survey Committee of the Cleveland Foundation, Cleveland, Ohio.

This report is one of the twenty-five sections of the report of the Educational Survey of Cleveland, conducted by the Survey Committee of the Cleveland Foundation in 1915. The monograph on schools and classes for exceptional children is a brief history and constructive criticism of the provision made for such children in the public schools of Cleveland. This city has met the demands of compulsory education by well directed but not always well organized efforts to adjust the schools to the various atypical children who could not be forced into the scheme arranged for the so-called average child.

As early as 1876, Cleveland took the first steps toward providing special training for the children unsuited to the regular grades, when forty "truant and incorrigible boys" were enrolled in the Special Unclassified School for Boys. A school for the deaf, special classes for defectives, so-called "steamer" classes for foreign children, classes for epileptics, a school for crippled children, industrial centers, classes for the blind and an open air school followed.

In 1915 there were twelve different kinds of special schools and classes, enrolling more than 2,500 children under the care of 140 teachers. The exceptional children have been grouped with reference to the probable future relation of the individual to society. Children different from the majority, but who will probably become self-supporting units of the community, are classified as socially competent and educated as far as possible in the same schools with normal children. Thus children of normal mentality, who are suffering from physical defects, will be trained to take their places in society on the same terms as individuals not so handicapped. On the other hand, children who, by reason of mental defect, will always require social assistance, are segregated in special schools and fitted to become as nearly self-supporting as possible, in the community life of an institution.

As an instance of the plan for the education of the socially competent exceptional children, take the "Cleveland plan" for the education of the blind. Insofar as possible, the blind children are taught in classes with seeing children, the special teachers for the blind being "tutors for the group" rather than regular grade teachers. There are two kinds of classes, those for the blind and for the semi-blind, in which forty-eight children were cared for under the direction of six teachers, in 1915. In caring for the deaf, the segregation plan has been followed. The survey committee strongly recommends that the same plan be followed for their education that has been so successfully carried out with the blind. The so-called "restoration classes" aim to tutor children who, for remediable causes have fallen behind their regular grade and to "restore" them to that grade as soon as possible. Where failure to advance is due to illness or to home conditions which make regular attendance impossible, children are given special individual attention for a sufficient period of time to bring them up to standard. That another group of children, who require intensive training and study to determine the cause of retardation, be included in this group is very strongly recommended. Such careful training and study would be exceedingly valuable in the diagnosis of doubtful cases of feeble-mindedness.

The Cleveland public schools have assumed the responsibility for two classes of the socially incompetent, the epileptics and the feeble-minded. It is admitted that at least one of these classes, the epileptic, presents so unsatisfactory a pedagogical problem as to warrant elimination. The medical and educational treatment, which these cases require, makes them proper subjects for an institution only.

The author defines feeble-mindedness as social incompetency. "No one who can manage his own affairs so that he will not need supervision can ever be called feeble-minded" and conversely "when one has shown his lack of ability to maintain himself independently of others, an uncontested diagnosis is made." However, the sociologist's definition of feeble-mindedness will not altogether satisfy the psychologists requirements, nor will it cover the case for him. Exceptions to the rule constitute one of the psychologist's most perplexing problems; individuals with apparently average intelligence, whose lack of those qualities of emotion, will, and judgment that are necessary to their social competency will incapacitate them to maintain existence without supervision and, on the other hand, individuals of a low type of mentality who will be just able to eke out a meagre existence under the simplest conditions.

It is, never the less, the problem of the pedagogical psychologist to discover whether a child will be able to maintain himself without social assistance and to plan that child's training according to his ability. To

that end are established for the mentally exceptional children: (1) Industrial Schools and Training Centers; (2) Backward Classes; and (3) Classes for Defectives. The Industrial Schools differ from the Training Centers in that they give industrial training to the brighter children who, though backward in the work of the regular grades, will probably be capable of self-support if given proper manual training. The Training Centers are designed for defective children and the number of these children who can profit by instruction in reading and writing is very limited. Of the Special Classes for Defectives the very pertinent criticism is made that there is no organization which co-ordinates the work of all the classes and valuable time and material are wasted as a result of lack of supervision, every teacher being a law unto herself. The author brings up a question which the special classes everywhere must solve in order to justify their existence, the question of how far it is worth while to spend time on the "three R's" with children who will make no practical use of such knowledge. He cites the case of a boy, who after ten years in the special classes and regular grades, can read and write mechanically simple monosyllabic words and do very crude hand-work. The education of this boy has cost the city approximately \$1,000. Of course this boy is a proper subject for an institution, but the worthwhileness of such training is very doubtful for many of the cases with whom the special classes are now dealing; the expenditure being out of all proportion to the results obtained.

In the manner of the selection of the feeble-minded children, the author finds much room for improvement. The initiative, as usual, is taken by the grade teacher in cases of pedagogically retarded children. Feeble-minded children are often overlooked owing to the neglect of the teacher to take the age factor into account when estimating the intelligence of the over-age child. As Terman points out, the teacher is apt to estimate the intelligence on the basis of the child's performance in the grade where he happens to be located. The use of the Binet scale "as the final means of determining the mental status," the author finds very unsatisfactory. The establishment, which he recommends, of a psychological clinic, under the direction of a trained psychologist, with an assistant field worker to investigate environmental conditions and clinical clerk to record and file data would undoubtedly be invaluable in the selection of the mentally exceptional child. Yet for school systems where such an elaborate psychological equipment is not feasible the Binet scale has proved, even in the hands of untrained examiners (experienced only in the use of the scale) a more valuable means of judgment than any other. With all their mistakes, the errors of judgment are neither so great or so frequent as in the subjective diagnosis even of experienced persons. If their "Binet expert" classifies two children who do not pass higher than the tests for three years, as low grade imbeciles, when one of them has a chronological age of 16 years and the other 6, the fact should not redound to the discredit of the Binet scale but the interpretation of the results should be put in the hands of some one qualified to read them in terms of the relation between age and mental age. Writing in 1905, Binet states the case thus: "Here is a child of twelve years, who does not know how to apply to the objects which he sees the words which he hears and which he pronounces; the majority of children of two and three years can already do this; he presents therefore a retardation of ten years. Then here is another child of the same degree of intelligence who is four years old; he is only two years behind children of his own age. Are we not justified in taking into account

this enormous difference of age? Would it be right to say that these two children, because they have the same intellectual level, both belong in the same category? . . . " In Dr. Goddard's revision of the Binet scale, he takes account of the relation between age and mental age, the consequent retardation being the basis for classification for children who have not yet reached mental maturity. The age-grade classifications which correspond to the three classes, moron, imbecile and idiot apply to adults.

But the author has stated that it is the aim of the report to show that "Even if the method of giving the tests were perfected to the utmost possible degree, the results would still be unsatisfactory." Though it is admitted by the best qualified authorities on the Binet tests, that they are as yet an imperfect measure of intelligence, still they constitute our best means of judging intelligence. The critics of the scale have not demonstrated a better way. The author states that the Binet scale as used in the Cleveland schools has not proved satisfactory. As to how unsatisfactory, he has given us no data upon which he bases his conclusions. He has suggested the use of other tests; we have no assurance that other tests will correct the faults of the Binet scale. It has been the aim of the psychologists, who have been revising and extending the scale that Binet began, to continue the work from the point where its originator left it, utilizing all of the work that has been done on the scale, revising and extending as the gradual accumulation of data corroborates or refutes the individual tests. He suggests that the "age-grade" method of scoring is inferior to the "point scale" method; in the "intelligence quotient" of the Binet revisions we have the same thing based on more data than the "point scale" grading, and with the added advantage of more norms to standardize conclusions. Had Binet lived he would undoubtedly have perfected the scale along the lines being followed by the psychologists. He was aware of its limitations but maintained its value as a method and to that end, as an instrument for scientific diagnosis, would require an examiner who "should have served an apprenticeship in a laboratory of pedagogy or possess a thorough knowledge of practical psychological experimentation." It was the reviewer's understanding of Binet's statement that such apprenticeship was necessary to make possible an intelligent interpretation of the psychological processes involved in the tests and to appreciate the importance of absolute accuracy in the observance of the conditions of the experiment and in the recording of results—not, as the author implies, an admission of the inadequacy of the tests as a measure of intelligence "even if the method of giving the tests were perfected to the utmost possible degree."

Necessarily, the Binet scale falls short in the measurement of those psychological functions without which native intelligence alone can never enable the child to cope successfully with educational problems. Quoting from Stern, "the degree and duration of attention, industry and conscientiousness, sense of duty and capacity to fit into the social group," qualities of character and will added to intelligence, measure school performance.

The recognition of the necessity of adapting the educational procedure to the needs of exceptional children and the directing of pedagogical effort toward the accomplishment of practical results, make this survey very valuable in the adjustment of special class problems.

Faribault, Minnesota.

M. A. MERRILL.