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djustment of Behavior Problems of School Children

Description and Evaluation of the Clinical Program in Berkeley, Calif

By

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DEPARTMENT OF THE INTERIOR,
OFFICE OF EDUCATION,
Washington, D. C., January, 1932.

SIR: There is at the present time a strong movement to include in the school curriculum more preparation for character education. The schools have long recognized their obligations in this respect but more progress has not been made because they did not know how to bring it about. With the coming of trained psychologists, psychiatrists, and other specialists, we are beginning to study the problem cases. When enough pupils of the type of Joe, Ruby, Willard, Marion, Neil, and Raymond have been studied as carefully as these children were in Berkeley, and their records compared with a group ordinarily considered normal, we shall begin to have information on which a curriculum for the socially maladjusted child may be built. Doctor Martens is giving special attention to this work in the country.

This report represents the first of a series of research studies in the education of exceptional children to be planned cooperatively by the United States Office of Education and selected school systems. Deep appreciation for their interest and cooperation is expressed to Dr. Lewis W. Smith, superintendent, Berkeley public schools; Dr. Virgil E. Dickson, assistant superintendent of schools, under whose immediate direction the experiment was carried on; Miss Margarita McGovney, assistant director of the bureau of research and guidance; Dr. V. H. Podstata and Dr. Louise Hector, physicians; and all administrative and teaching assistants who had a part in the development of the project. The general guidance and counsel given by members of the Department of Education at Stanford University are also gratefully acknowledged. The Office of Education is putting out the report in order that its findings may become generally known.

I think that this manuscript represents a worthy achievement and respectfully recommend that it be printed as a bulletin of this office.

Respectfully submitted.

WM. JOHN COOPER,
Commissioner.

ADJUSTMENT OF BEHAVIOR PROBLEMS OF SCHOOL CHILDREN

A DESCRIPTION AND EVALUATION OF THE CLINICAL PROGRAM IN BERKELEY, CALIF.

INTRODUCTION

Recent developments in the extent of the service rendered by child guidance clinics have been phenomenal. In 10 years (from 1920 to 1930) the number of hours per week of psychiatric time available for children's problems of behavior increased tenfold. In 1920 only a very few mental hygiene clinics for children were available. In 1928 there were approximately 490 clinics in the country giving psychiatric service to children, and by 1930 the number had increased to more than 600. These range from traveling clinics which spend only a few days each year in any given community to local clinics which are manned with one or more full-time psychiatrists, psychologists, and social workers.

Multiple causality of behavior problems.—The foundation upon which such clinical facilities have been built has been the fundamental conviction that much of juvenile delinquency, as well as of adult crime and mental illness, can be eliminated through adequate attention to the early symptoms of maladjustment and personality problems in childhood. According to present-day conclusions, the causes of social maladjustment and delinquency are legion. No one factor has been isolated as being exclusively responsible. Clinical researches all point to a multiplicity of causative factors, including both possible hereditary tendencies and environmental influences, but with an increasing importance attached to the latter. Emphasis is placed upon a program of study that will involve every aspect of the child's life—physical, intellectual, emotional, social, spiritual—any element or combined elements of which may prove to be the underlying reason for the undesirable behavior. The child as a total individual in a total situation becomes the object of scrutiny in the endeavor to harmonize conflicts that arise in any phase of his life.

Responsibility of the school.—The tragedy of the unadjusted school child has so frequently resulted in the even greater tragedy of the psychotic adult and the social delinquent that school authorities are finding it one of their major responsibilities to give serious consideration to the undesirable behavior symptoms of childhood. The early detection of maladjustment, an analysis of its causes, and an applica-

tion of remedial treatment demand the best facilities which the community can afford. Even then success can not be guaranteed, for the environmental influences of home and neighborhood often work in direct opposition to measures of adjustment which might otherwise be effectual. However, the prevention of crime and psychosis in even a moderate percentage of cases is a challenge which the school can not afford to pass by. If we can find the means whereby the maladjusted child may be made a happier, more contented individual and a better adjusted, contributing member of society, then all the time, the study, and the money spent upon the program will not have been in vain.

Such a program, however, costs money, and the school administrator must always be looking for the most economical means of attaining the desired end. This, too, is his responsibility. The growing importance claimed for personnel work and pupil guidance from the kindergarten through the university has brought us face to face with the task of justifying the expense involved in such programs through an evaluation of the results accruing from them. Every new project brings from the efficient administrator the question, What is it worth? He demands—and he has a right to demand—evidence of the effectiveness of the proposed program. Unwilling to spend money for that which will not bring commensurate returns, he may hesitate to undertake any extensive organization of guidance unless he is fairly well assured of getting value received.

Difficulty of scientific evaluation.—Unfortunately, in the field of children's behavior, as in all sociological research, tangible proof of the effectiveness of a given program is difficult to secure. The field of sociological research is always fraught with difficulties unknown to the natural sciences. The variable factors of hereditary and environmental influences, the intangible elements of personality which have as yet yielded but little to objective measurement, the need of resorting to rating schemes where objective measurement fails, the difficulty of establishing the reliability of one's observations—all these items challenge the ingenuity of the research student when he is dealing with human behavior. Furthermore, in studying the reactions of childhood, one is dealing with living, growing, developing children and young people who, as a result of the sheer growth process, are changing physically, emotionally, and socially from year to year. To segregate such simple growth processes from any added influences which are instrumental in causing changes and to place an evaluation upon each one of them is a statistical feat which has not yet been achieved.

In the clinical researches which have been carried on with problems of child behavior the technique used has been largely an adaptation

or abridgment of the case-study method, supplemented by statistical procedure and interpretation. The success of a clinical program has usually been measured by the percentage of children treated who later emerge as well-adjusted young people and adults. While the findings of such research have been most suggestive and constructive, the limitations of the method are recognized by those who have used it. We might like to think that the clinical treatment was the factor that brought about the child's later adjustment, yet there is no conclusive proof that it really was so. Perhaps our efforts have done something to help him change. But perhaps, too, he has changed even in spite of our efforts. At any rate, who can say conclusively to what additional factors such changes may be due? There are too many other influences which may have entered in as vital contributing causes.

If we could control the circumstances surrounding the children who are under treatment and if we could compare their progress with that of an equated group of children who present the same types and degrees of behavior problems, living under similar circumstances but not given any clinical treatment, then we should approach the conditions of a controlled experiment the results of which would throw some light upon the value of the clinical treatment given. Unfortunately, the conditions of such a controlled experiment can not be realized in dealing with human life. We can only approximate them as closely as the existing situation permits and draw conclusions within those limits.

If such an experimental procedure can be realized anywhere as a method of attack upon this problem, it should be applicable in a public-school system, where there are large numbers of unselected children—and of selected children—who can be used as subjects. There are difficulties of technique which still persist, involving, on the one hand, the existence of numerous variable factors which militate against a fine equation of groups and, on the other hand, the turnover in the school population, which depletes the number of children available for study from year to year. Yet, within certain limits, the equation of groups can be carried out; and if the sample is large enough at the beginning of the study, losses should not destroy the significance of the results. Obstacles of statistical nature can be overcome so far as the present science of statistics permits.

But the public-school system in which such a study is undertaken must be one in which there are certain conditions satisfying the requirements of an adequate child-guidance program. There must first of all be an understanding on the part of school administrators of the problem of individual differences as well as a willingness to provide for them; there must be an active cooperation among all social agencies

affecting the welfare of children; and there must be available the expert services of those specialists who know best how to deal with the behavior problems of childhood.

Purpose of present study.—It was with full recognition of all the limitations within the field of research of human behavior that the present study was undertaken. Because, however, the school system which constitutes its background was one of those which seem to offer a happy combination of understanding, cooperation, efficient organization, and expert service it was hoped that some light might be thrown upon the problem of behavior adjustment through an intensive investigation of the program in operation there and through a continuous study over a period of years of the progress of the children concerned.

This report thus presents an account of a pioneer experimental project carried on in a city school system. Its purpose is twofold:

1. To show, through description of the organization and methods used in a typical city, how the facilities of the city and the city school system may be utilized for coordinated service and for an economical program looking toward the adjustment of behavior problems of school children. Part I of the bulletin presents such a description. It will interest all those who are concerned with the development of clinical facilities in their own communities and with the growth of the program in the country at large.

2. To describe a method of research which has been used in evaluating such services and which seems to throw some light upon the value of the clinical treatment given. Part II is designed to fulfill this purpose. It will be of value primarily to those who are interested in carrying on experimental research in this field, as well as to those who are eager to know the outcomes of such studies without actually engaging in them.

The realization of each of the purposes under consideration is important to educational progress. We need not only to be going somewhere; we need to know *where* we are going and *why* we are going. The development of research bureaus within city school systems and the refinement of research techniques make possible the evaluation of local practices to a degree which would not have been possible a generation ago. As the conception of the importance of mental hygiene grows and as adequate provision for it is increasingly made in our school systems there is every reason to expect opportunity for further experimentation in this field which will supplement the pioneer effort described in this bulletin.

PART I

PART I. A DESCRIPTION OF ORGANIZATION AND METHOD

CHAPTER I. THE ORGANIZATION OF THE PROGRAM

The technique of an experiment dealing with human behavior is dependent upon the background of the social life and social facilities against which it is projected. There is little freedom in controlling the conditions under which one works. On the contrary, we must accept the social situation as we find it and then attempt to build the structure of experimental procedure on the basis of what we have. Local school conditions, environmental influences, home situations, and community organizations all have an important bearing upon the problem of adjusting children's difficulties. For this reason the setting into which the present experiment was introduced must first be described.

The scene of the experiment.—The scene of the experiment is the city of Berkeley, Calif., which, according to the 1930 census, had a population of 82,109. There are in the city 1 senior high school, 4 junior high schools, and 17 elementary schools. In these full-time day schools of the city the average daily attendance for the year 1929–30 was 12,049, distributed as follows:

Kindergarten	641
Elementary (grades 1–6)	5, 943
Junior high (grades 7–9)	2, 993
Senior high (grades 10–12)	2, 472
Total	12, 049

The city has adopted progressive ideals of governmental organization and of educational objectives. The location of the State university among the low-lying hills of its eastern border has helped to make it a center of cultural opportunity and professional service. Opposite, stretching along its western line, lies the water-front district, with its numerous factories and South European population. Between these two extremes there is the cosmopolitan array of citizenry that can be found in any American city.

The school program.—The Berkeley school system has long had its program of classification and counseling. The assistant superintendent of schools is also the director of research and guidance, in administrative charge of classification, of special classes, of school counseling, and of all individual adjustment work. In each school there is a teacher or a group of teachers who act as counselors and who, with the

cooperation of the classroom teacher, study individual needs, make contacts with the pupil and his home, and offer recommendation for adjustment. A carefully organized plan of testing and of cumulative records is in operation which makes available at any time and in any school objective evidence regarding the abilities and achievements of any child. Emphasis is placed upon the child as a complex human personality and upon the importance of finding out all that can be known about him before any steps should be taken in guidance. Educational, mental, physical, social, and emotional factors are all taken into consideration.

Such a program is not unknown in the schools of our country. Many other cities have accepted similar ideals of making the child—the *whole* child—the center of school activities. Berkeley has undertaken the additional task of making this school program only one part of a larger coordinated plan involving the cooperation of school and social agencies in their common responsibility of child guidance. To this end, in the year 1924 the Berkeley Coordinating Council was organized.

The coordinating council.—As in many other towns of its size, one finds in this western city numerous civic and social agencies at work for community betterment. The health department, in addition to its ordinary duties of general supervision of health and sanitation, supervises a health center which offers clinical service to those who need it. The welfare society carries on charitable activities of a social nature. The police department lays great stress upon a preventive program among children, seeking through its policewoman and its probation officer to recognize and to solve the problems of predelinquency before actual legal offense may be committed. The school department has its bureau of research and guidance, already mentioned.

All these agencies, as well as those of a less public nature, have as one of their major purposes the furtherance of child welfare. Each one is attacking the problem from a different angle and each one has much to contribute to the total cause. Yet in Berkeley there existed until recently the same situation which is still found in many other cities—one which was marked by an almost total lack of active cooperation among the officials involved. Except for the unusual case which demanded a careful sifting of its history and interrelationships, it might be said that no one agency had an intelligent comprehension of what the others were about. Such a situation not only leads to frequent duplication, waste, and inefficiency of service, but it is often actually harmful in its results upon the individual under treatment.

Leaders of the movement felt that if any community is to concentrate effectively upon the adjustment of problem children, then it should have the unselfish cooperation of all the agencies that have to

do with child life. Each agency must be willing to surrender prerogatives or to accept additional responsibility if the case seems to demand it. All must unite in their willingness to serve in the way that seems best for the interests of boys and girls and for the betterment of the community.

It was to foster this spirit of cooperation that representative executives of the schools, the police department, and the health department met in the year 1924 to discuss ways and means for a better coordination of work, especially with reference to salvaging maladjusted children. The group met informally several times, then effected an organization, and called itself "The Berkeley Coordinating Council for Child Welfare." Its aims and purposes were stated as follows:[1]

1. To promote the physical, moral, and mental welfare of the children in the community.
2. To coordinate the activities of existing agencies, preventing duplication.
3. To promote personal acquaintance and esprit de corps among executives of the various agencies.

Since these early beginnings eight years ago the work of the council has developed until its membership now includes the following: The assistant superintendent of schools, who is also the director of the bureau of research and guidance; the chief of police; the director of the city health department; the superintendent of social service in the city health center; the visiting teacher; the executive secretary of the welfare society; the policewoman; and the director of playgrounds. Five publicly supported departments are thus represented—the police department, the health department, the welfare society, the department of playgrounds and recreation, and the school department.

Members of the council meet in weekly sessions and consider problem cases that have come to the attention of one or another of the agencies represented. All the information concerning a given child which is in the possession of any one agency is placed at the disposal of every other. Typical cases which come up for discussion are those involving educational maladjustment, behavior difficulties, social indigency, and physical inadequacy. So also the child with special ability or talent may become an object of attention, particularly through the enlistment of the aid of some public-spirited citizen or organization to help in the development of his capacity. Assignments for follow-up are made by the chairman of the council. With skillful executive leadership and with the unity of purpose which marks its program, a consistent policy of cooperative effort is followed by all its members.

[1] Virgil E. Dickson. The Berkeley Coordinating Council. Mental Hygiene, 13: 514–519, July, 1929.

From the files of the council have been gleaned the following abbreviated records of specific cases, illustrating the principle of coordination which is at work:

1. The *welfare society* presents a family which has been receiving support for several years. The problem is getting rapidly worse. There are 13 children—some married, with other children coming on. Other relatives bring a total of more than 20 persons in the house most of the time. Sometimes 3 or 4 out of the 20 are working at low wages. Sometimes no one is working. All of the 13 children who have grown to adolescence have been in delinquency and crime. The older ones are either in prison or being sought for crime. The *health department* reports that most of the family have an infectious disease. The filth and living conditions are so horrible that the younger children have no choice for developing into anything but delinquency and crime. The *schools* have truancy and disciplinary trouble with all the children. The *police* have many records. The *recreation department* reports trouble on the playground. Thus all five departments have something to contribute to the picture. All reports are combined. After careful consideration the council makes a plea to the juvenile court judge that he break up the home to the extent of declaring five of the younger children wards of the court to be assigned to the *welfare society* for probation and placement in homes. This was done, and at least some check placed upon the destructive influences operating upon those young lives.

2. Another case of truancy from *school*. Broken home—mother unable to control the boy. Temporarily placed in an institution with good results. Returned to the home. Soon started in trouble again. Booked in *police department* for stealing and other offenses. Treated by *health department* for disease. With lack of home supervision, boy had no ability to meet the ordinary social requirement of the community for more than a few days without some breach of conduct. The total history showed that nothing short of specific placement and probation or an institution could protect the boy and society.

3. The *schools* called attention to a family of five children, all definitely feeble-minded. The father of low mentality—the mother, low grade feeble-minded. Children were limited only by the calendar and biology. The *council* collected a complete history, presented it to the *judge* with recommendation that the mother be committed to the institution for feeble-minded long enough to be sterilized. This was done, and society has been saved the burden of additional dependents from that source.

4. The history of a serious problem child reveals that the parents need instruction. The *school counseling service* gives it. The child needs medical attention; the *health department* gives it. There is need of food and clothing; the *welfare society* responds. Any one of the workers going into the home may need the moral support of the law. A *policeman* in uniform merely goes along. The uniform does the work without the necessity of words. The combined efforts of the group bring about constructive changes both in the home and in the behavior of the child.

In addition to specific case work, the council also conducts investigations of civic conditions and sets up policies. A spot map of juvenile crime in the city has been made and contributing causes studied. A list has been prepared giving the names and addresses of all the feeble-minded, all the insane, and all the epileptics in the city. It has on record the location of all recreational and amusement centers, all pool halls, moving-picture theaters, clubs, churches, etc. Such

material is helpful in the study of those forces that tend to promote or to destroy the welfare of youth in the city.

In May, 1932, the chairman of the council wrote as follows:[1]

The council is voluntary. It has no official authority. It does not vote, except once a year to elect a chairman, nor does it have the power to authorize or to require any department to do anything. The chief of each department goes forth from any meeting fully responsible for his own department and free to do as he thinks best. But if he has presented a problem in the council he has had the judgment and the free discussion of the chiefs of all the other departments. He knows what they think, and he knows in what way they will be able to cooperate. They in turn are familiar with his problems and often are told what he intends to do. I can not overemphasize the fact that our coordinating council is a deliberating and counseling group. Our purpose is to become mutually con-

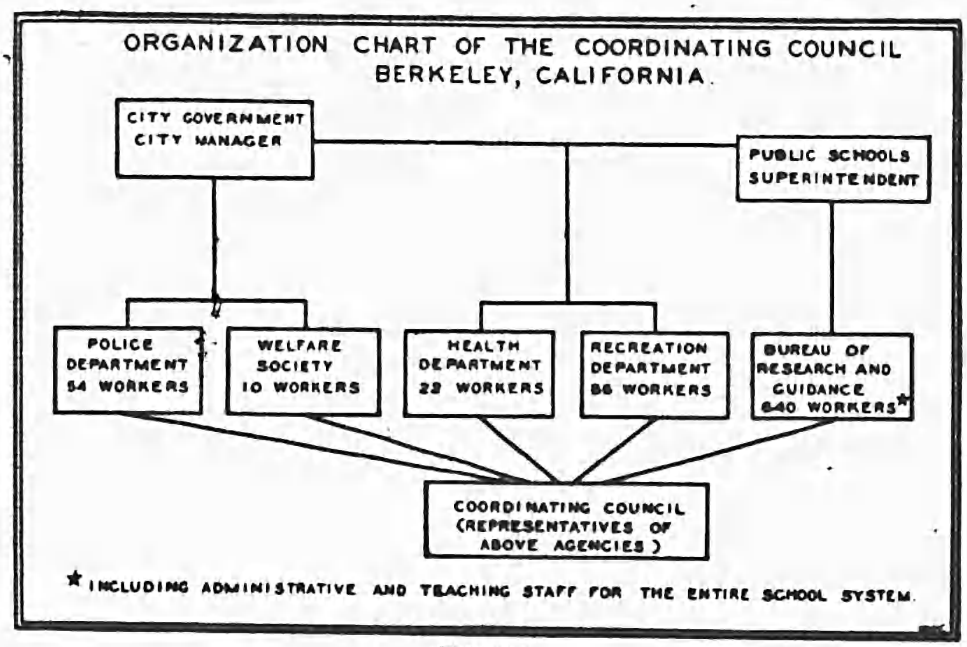

FIGURE 1

scious of the problems and policies peculiar to each department and of those that may be common to two or more of the departments. We deliberate, we cooperate, we educate one another, we become acquainted. We are wise enough not to try to dictate. If our coordinating council were made a requirement by the city charter and we were forced to vote on interdepartmental policies, we would break up in a row, and would need the rest of the police department, in addition to the chief, to settle our differences. As we are now organized, there has not been a serious conflict among the five departments represented during the eight years.

So great has been the impression made by the organization of the Berkeley Coordinating Council upon those interested in social welfare that it became the basis of a recommendation made by the Cali-

[1] Excerpt from an address given by Virgil E. Dickson before the California Council of Social Work.

fornia Commission for the Study of Problem Children in a report submitted in January, 1929, as follows:[3]

> The commission was very much interested in the description of an organization now in operation in the city of Berkeley, called the Berkeley Coordinating Council. This enterprise has obtained wide publicity, not merely in the State but elsewhere in the Nation, as a unique and extremely interesting social experiment. . . . The commission thinks it might be desirable to consider the appointment of a State coordinator, thoroughly familiar with the Berkeley Coordinating Council, who might go from community to community upon request and attempt to introduce the system or some modification of it throughout the State.

The nation-wide recognition which has been accorded the Berkeley plan is illustrated in a report[4] prepared under the joint auspices of the New York State Bureau of Municipal Information and the School of Citizenship and Public Affairs. The statement is made in this report that "the Berkeley plan is a forward step in crime prevention work and should be considered seriously by other cities, both large and small. A coordinating council is needed in every city in the country." Upon this basis the recommendation is offered that a coordinating council be established in every city of New York State "either as a part of the crime prevention bureau or as a separate organization."

The behavior clinic.—As a general executive agency for promoting cooperation and efficiency in the service of childhood, the coordinating council has been most effective. A further development toward even more intensive study and treatment of individual children who exhibit distinct behavior problems has found its way through the organization (in 1928) of the behavior clinic, which is sponsored by the board of education and by the coordinating council and which is working in immediate relationship to them.

The clinic is under the administrative guidance of the assistant superintendent of schools, who is also a member of the coordinating council and the director of the bureau of research and guidance, having under his direction all those school activities which are designed to make provision for the individual differences of children and for the adjustment of problem cases. The clinical staff consists of the following:

(*a*) One psychiatrist of national repute, who during the first two years of the operation of the clinic donated his services for part time, but who more recently has been placed upon a paid basis for three half days per week. His is the ultimate responsibility of diagnosing the problems of personal maladjustment that arise and of analyzing

[3] Report of the California Commission for the Study of Problem Children. Sacramento, Calif., State Printing Office, 1929. (P. 42.) The members of the commission were as follows: Paul Rieger, chairman; Kenyon J. Scudder, secretary; Norman Fenton, research consultant; Mariana Bertola, Elizabeth McManus, Lewis M. Terman, Miriam Van Waters, and John P. Plover.

[4] Hubert R. Gallagher. Crime Prevention as a Municipal Function. Syracuse, N. Y., Syracuse University, 1930. 66 pp.

emotional conflicts, domestic difficulties, physical inferiorities, and various other causal factors as they affect the behavior of childhood. Upon him also devolves the responsibility of recommending desirable means of helping the child and of adjusting his environment to meet his needs.

(*b*) One pediatrician who works directly with the psychiatrist and who at present donates his services. He conducts the initial physical and medical examinations of the children when they are referred to the clinic.

(*c*) One psychologist, who is the assistant director of the bureau of research and guidance. This person has the assistance of selected counselors and teachers in the schools who have been trained to give intelligence tests. Every child upon admission to the clinic is given an intelligence test, and other psychological investigations are carried on which may throw light upon the causes of his behavior and the most effective possibilities of treatment.

(*d*) Four visiting counselors, each of whom devotes half time to the clinical social work, the other half being given to teaching, counseling, or other responsibilities in the school system. Through repeated contacts with both the child and his parents these workers keep open the pathway between the clinic and the home. They study the parental relationship and the reaction of the child to the environment in which he lives. They make appointments with welfare agencies concerned with the treatment of the child, and they use every means at their disposal to see that these appointments are kept and that the recommendations made by the psychiatrist are carried out.

Procedure of the behavior clinic.—The plan of work which the clinic has adopted is as follows:

1. Principals and teachers are asked periodically to report all serious behavior problems in their schools. A serious behavior problem is defined as "one which varies sufficiently from normal behavior to cause the teacher to feel that the child can not be managed satisfactorily with the group." It is specified that such problems need not be flagrant ones of rebellion or delinquency; they may equally well involve the child who shows a neurotic disorder or an extreme tendency to shrink within himself. Withdrawal as well as attack, undue reticence as well as extreme aggressiveness, smoldering resentment as well as open revolt, hidden emotional complexes as well as manifest temperamental difficulties—all are included in the category of "serious behavior problems."

2. For each child thus reported, principals and teachers make out a detailed record of objective evidence, indicating instances of his unsocial behavior. This report includes also items concerning the child's school record, as well as a rating of personality traits.

3. The staff of psychological and social workers furnish information regarding mental ability and interest, home environment, social influences, and any other data that can be gathered from psychological and social investigation.

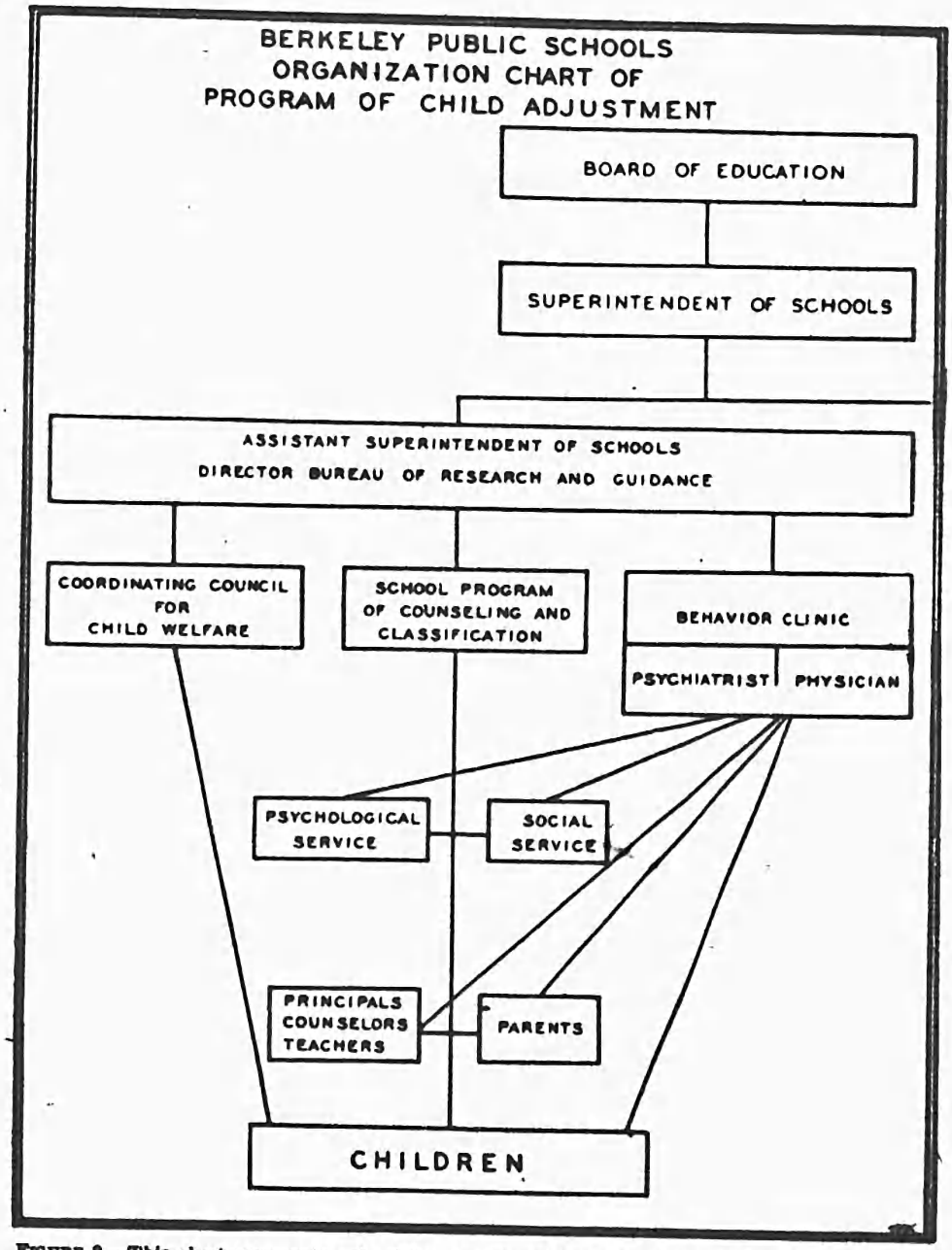

FIGURE 2.—This chart represents only that segment of the organization of the Berkeley public schools which relates to the program of child adjustment described in this bulletin.

4. The pediatrician and the psychiatrist make physical, medical, and neuropsychiatric examinations of the child.

5. With all the evidence before them, the clinical staff sits in consultation, interviews teachers, principal, and parents, and makes recommendations for treatment. Such recommendations may involve medical care, readjustment in home or school, assistance

rom social agencies, or attention to environmental conditions of any kind.

6. In needy cases medical treatment is furnished at nominal cost by the city health center. Contact with the home is made by the visiting counselor to whom the case is assigned. School adjustments may involve a change of school, a change of class, or counsel to the teacher and principal for a modified approach to the child.

7. All developments in the case are followed by the visiting counselor, and periodic reports of progress are made by the school. The child is brought before the clinic at stated intervals for reexamination and counsel.

A chart showing the place of the behavior clinic in the school system and the interrelationships among all the agencies involved in the program of child adjustment is given on page 12. Each unit may give effective service in its own field, but in order to supplement its work it needs also the effective service of every other unit. There is but one purpose for which they all exist, and that is the abiding welfare of the children whom they serve.

CHAPTER II. SOME CLINICAL PICTURES [1]

The general methods used by the clinic in the adjustment of problems brought to its attention have been described in the previous chapter. The specific treatment applied to individual cases varies with the type of problem to such a degree that no single prescription can be offered as meeting the needs of all cases save the very general one of the physician: Find the source of the difficulty and eliminate it. Physical, social, environmental, emotional factors all play a part in the picture of the whole. Whatever is wrong in each part of the picture distorts the whole until correction is made and harmony is restored.

The functioning of the clinic, therefore, can best be described through illustrative pictures of the lives of some of the children who have needed help. Each one represents the story of a human struggle, often hidden away in the deepest recesses of child life, yet none the less overwhelming and devastating. If we are willing to take the time and to make the effort to probe deeply, gently, patiently, understandingly, we may hope to find a way to bring back into the picture the harmony and the beauty that belong there.

1. JOE

The problem.—He sat picking the frayed cuff of his little faded coat, a perfect picture of depression and despair. He had entered school about a month late, having moved to the city from a large wheat ranch in Montana. In the past year his father had lost all of his property in wheat speculation. His mother had died of cancer, and the family, consisting of the father and seven children, had been left adrift without a rudder. Apparently the mother had been the guiding spirit in the family, and when she went no one knew what to do. The oldest girl, Joe's half sister, was keeping house on the $100 a month which the father earned as an elevator operator. Between this half sister and the boy there was a decided conflict, which added to the general unhappiness and depression in the home. Joe was 13 years old and was entering the eighth grade. He said he thought he could keep up with the class, although he bragged that since he was 8 years old he had been difficult to handle in school, seldom studied, and was usually in trouble with the teacher or principal. The boy was tense and uneasy, but tried to put on a "bold front."

[1] The clinical pictures described in this chapter have been contributed by Mrs. Helen Russ, one of the visiting counselors connected with the behavior clinic.

It was not long before Joe was in trouble in the new school. He eemed to be driven by his unhappiness. He could not adjust in he university city because, as he said, "the way the people think nd talk is so different from back home on the ranch." He missed is mother; he hated his sister; he despised his father, thinking him weakling. He smoked incessantly and ate very little, refusing ractically everything but meat, potatoes, and candy. He grew to be all, thin, and stooped, and developed a slight cough. Finally his ase was taken before the counseling committee of the behavior clinic.

Initial examinations—Diagnosis and recommendations.—The ental test showed that he was an intelligent boy (IQ 116), emotion-lly somewhat unstable, very sensitive, and most unhappy. The sychiatrist explained that the rebellious attitude at home and the rouble with the half sister were undoubtedly due to a lack of under-tanding by the family of the natural demands of an unhappy adoles-ent. The boy had no common interests with any of the family and o real companionship with his father. Without his mother, who ad been a close friend, he felt entirely insecure and inferior. This eeling of inferiority was involved also in the school situation. He aydreamed of being a successful athlete and a popular fellow among he other boys in school. Yet because of his ill health he was unable o play in the games, and because of his former rather wild life on he big ranch it was difficult for him to find much in common with he city boys and girls. The physical examination showed that the oy was really ill. The doctor said he should be in bed and requested ests for tuberculosis. The child was taken to his home by the school urse, who reported that the house was cold and gloomy and that he only place where he could stay was a close room heated by an il stove. The doctor recommended a tuberculosis sanitarium. The isiting counselor was urged to develop a better feeling of community nterests within the family group.

Treatment and follow-up.—Joe was sent to the county tubercu-osis hospital. He spent five months in this sanitarium, and after-ards said that it had been the first time in his life when he had had ny real training. He had learned to enjoy a well-balanced diet and o appreciate the laws of hygiene. He thinks that the last month e spent in bed was the happiest in his whole life.

While Joe was at the hospital the visiting counselor developed a riendly relationship with the family. Frequent picnics were planned t the sanitarium, and the boy and his father grew to appreciate ach other. The half sister was appointed as a teacher in a neighbor-ng village, and although she lived at home she was much happier vith her new work. When Joe returned he was brown and robust ooking. He had gained 20 pounds at the sanitarium and he was eady for school.

However, his adjustment at school was not yet achieved. There was still the problem of his social life. He was much more mature than the other ninth-grade pupils with whom he was working and he soon became discouraged and unhappy. He had frequent attacks of asthma, and, although the doctors no longer feared active tuberculosis, they felt that unless he took excellent care of himself he would soon be in bed again. At one of his frequent visits with the psychiatrist Joe told him that the crowd of boys with whom he was running were drinking a lot and that he guessed his uncle up North had the right idea when he used to "drown his troubles with a bottle of gin."

In the fall of 1930 it was arranged that the boy should go to the part-time school and work several hours a day. He was much happier with this program than he had been when he was in school all day. His jobs covered a great variety of activities. He worked as a day laborer washing walls in vacant storerooms; as a cook in a restaurant helping with the quick orders; as an assistant in a practice golf course. During all this time he was living a rather dangerous life. He was getting little sleep, he was drinking, and he was smoking too much for his bad lungs. It seemed as if he would not submit to the régime his health demanded. He rebelled because he was not as strong and capable as other boys. One morning at about 7 o'clock he called the visiting counselor by phone. "I am down town, but I don't know what's going on. I've got an awful hang-over." The counselor asked him to stay where he was until she called for him. He was able to give her the street location. Within 15 minutes she picked up a very confused, sick youngster. She took him home and put him to bed. It was later arranged that he go into the country for a while with a friend.

Present status.—This was about two years ago. Since that time the boy has developed greater self-control. It has been a difficult and gradual uphill climb. Often life has been too hard and Joe has given up in despair, but always when his courage returned he was one step nearer a satisfactory adjustment. He spent about a year in the country, and when his family eventually moved to another city he had worked out a plan of life and was no longer rebelling against his hard lot. He is attending a good school, and wrote in a recent letter, "I am going to school every day and can truthfully say I enjoy it. The grades for last month were fair some even good. I have kept up in everything, and my teachers all seem satisfied."

He plans later to attend college and study law, with the idea of going into political life. Now that several of the children have become self-supporting it is easier for the father to carry the lightened burden, and Joe and his father have become good friends. One day this spring Joe sat visiting in the counselor's office. "I certainly

was an unhappy kid when you first got hold of me. I didn't know then what made me act so ornery. That was it, wasn't it? You had me sized up right from the start. Well, we have had lots of good times together, anyway. Remember when —." And the boy and his friend spent another happy hour "talking things over."

2. RUBY

The problem.—One morning just before the Christmas holidays of 1929 the visiting counselor was called to witness a wildly angry girl who was indulging in what the principal called a temper tantrum. She had been fighting with several children on the playground, had knocked down one, and was standing with her back to the wall and her fists clenched daring anybody to call her names again. This same child had been described in a previous report as failing in school work and as unusually reticent and shy, except at times of terrific outbursts when her classmates teased her about her large size. Ruby was 12 years old, and although her intelligence was normal (IQ 102) she was about a year and a half retarded in school. She weighed 142 pounds and was 5 feet 6 inches tall. During the recess periods the other children took delight in teasing her, frequently calling her "big cow" or "ox," and trailing around after her on the school grounds until in desperation she would turn to fight. Very often these quarrels ended in Ruby's hurting one of the smaller children. This caused complications with homes, and Ruby became known as the bad girl of the neighborhood.

Initial examinations—First diagnosis and recommendations.—There was no question in the minds of the doctors that Ruby's abnormal physical development was the basic cause of her misconduct. She was extremely sensitive about her size and was under a constant nervous tension because of the teasing of the other children. She could not concentrate. She was worried and unhappy. Failure in school work must be a natural result. The doctors advised glandular therapy. Great care was necessary in administering this treatment, in order to expedite the processes of puberty without further stimulating physical growth processes. The visiting counselor was advised to help the child take care of her skin and to rid her face of embarrassing pimples and blackheads. Because of her emotional disturbances her comprehension had been blocked and she had developed reading difficulties. This called for special attention in school. "It would be advisable," said the psychiatrist, "to put this child in a class where the pupils are more nearly of her own size, if such an arrangement is possible."

Treatment and follow up.—The first step in adjustment was a transfer to a junior high school, even though Ruby had not yet completed the work of the fifth grade. With the unique organization of

this junior high school it was possible to arrange Ruby's program almost as if she were in a coaching school. Excellent teachers, interested in the emotional as well as the intellectual development of the child, disregarded the "grade placement" on Ruby's transfer card, but took her as they found her. Upon a weak and irregular foundation they began to build a solid structure in mathematics, composition and related subjects, social studies, and the arts. Ruby was soon proud of her success in school. It was easy, too, to interest her in the care of her skin and her general personal appearance. It was not long before she had developed into a rather attractive young lady of about the same size and general appearance as the other girls in the class.

Soon Ruby was transferred to a regular low seventh grade. She was now in her proper age group, and, although still large for her age, here in the junior high school her size was an asset. She went out for basket ball and made an excellent center. The physical education teacher was training her with a small group of other girls for exhibition work in swimming when the development of sinus trouble made further swimming inadvisable. Ruby had, however, been elected secretary in one of the girls' organizations, and the teacher in charge explained that "we shall let her give reports in the school assembly to compensate for the exhibition swims that she can not enter now." Although she was still shy and awkward and made few friends, she was on the whole a different child in the new environment.

Present status.—Ruby had been in this school three terms when the request came from her parents to transfer her to a junior high school much nearer her home. The clinical workers faced a dilemma. On the one hand there was the fine adjustment which Ruby had made in the present school. On the other hand was the expense of car fare which the family was hardly able to meet; also the fact that the neighborhood girls attended the near-by school, but most of all the insistence of the mother that her daughter be enrolled in what she thought was one of the schools for the better families of the city.

The girl was transferred and has now been in the new school a year. Several teachers have tried to boost her, but she has been unable to reach quite the same social and political position she held in the old school. However, she is doing satisfactory work with her own age group and has never in any way been made to feel conspicuous or unhappy because of her size. The girl still has too few social outlets, and this fact, together with financial reverses in the home, causes problems requiring careful treatment. The school, with the advice of the psychiatrist, has planned a limited academic course for her ninth-grade program. Art, music, and homemaking will be emphasized, with the hope that Ruby and her mother will be able to find happiness in working together for the home, thus relieving the worry that comes from curtailed income.

3. WILLARD

The problem.—In the fall of 1928 an 11-year-old boy in the fifth grade was reported for disobedience, incorrigibility, abnormal selfishness, cruelty, stealing, profanity, and general insubordination in the classroom. He had been reported to the police many times, but the records had in each case been marked "no charge." He had been attending school irregularly in one or the other of two elementary schools in the neighborhood of his home. In both schools there had been trouble. From each one came the report that, although the boy had normal intelligence (IQ 109), he seemed to show no interest in his school work. The principals also found the mother a very difficult person to deal with. She had a good education, was active in parent-teacher association work, and had been the president of several clubs. Yet she was highly emotional and did not show the understanding of the boy that he needed.

The boy and his father had always been good friends. They had many interests in common. They enjoyed hiking and gardening, and the father frequently helped his son with his home work, particularly with arithmetic, which was one of his most difficult studies. The father's health had never been very good since he was discharged from the Army with shell shock. Yet in 1928–29 he was not only carrying his own work as an engineer for one of the large public utility companies but was also writing for certain scientific magazines. Willard needed his father's friendship at this time, and it is possible that if the man had had more time for his son much of the storm and stress of the next few years could have been averted.

Initial examinations—Diagnosis and recommendations.—Willard's general physical condition when he was examined at the clinic was fairly good, with the exception of a chronic sinus infection. The doctors recommended tonsillectomy and the removal of adenoids. At no time, however, was ill health an important factor in his case.

The psychiatrist after the first meeting reported the boy as a "likable youngster." "It is interesting how frank he can be when he relaxes. Undoubtedly there is a decided emotional background to his misconduct at school. He likes school, enjoys the social contacts, and does not dislike his studies. The teachers should make an effort to get his confidence and boost him rather than try to force him."

Treatment and follow-up.—Shortly after this first visit to the clinic, Willard was transferred to a class the teacher of which was a most understanding woman. Everything was done here to give him as many outlets as possible in his special interests and abilities. He saw the psychiatrist frequently, and in the fall of 1929 the recommended tonsillectomy and adenoidectomy were performed. His mother had stated that she felt the boy was very highly sexed. When questioned she admitted that she had never discussed the subject with

him—she could not think of doing so—but that she "just sensed" his interest in girls and women. She said that she thought that whatever knowledge he had had come indirectly from his father or from his friends. "But his father is so busy. He really has so little time for Willard."

In 1930 the boy was promoted to a junior high school. The psychiatrist advised that every effort be made to get the boy's confidence; that undoubtedly there were difficulties connected with puberty which the boy was not yet able to discuss frankly. "The problem is an emotional one. People dealing with this young man should give him time to use his mind instead of forcing him to act too quickly, for then he is likely to follow his emotions. A good personal feeling between the boy and the teacher will do more to establish satisfactory relations than any scoldings or compulsion."

In the fall of 1931 Willard, now 14 years of age, began to make more or less regular visits to the counselor's office and to talk about his girl friends. He bragged a great deal and strutted considerably. One afternoon he sat at the counselor's desk and told her a long story about a party at which the boys and girls had had a very free time. The youngster's description of his own conduct was in sad accord with the living picture which the counselor had before her. Here sat an overgrown self-conscious adolescent, face badly broken out with acne, hands and clothes very dirty, hair slicked back on top with some sort of pomade but standing out around the edges like the feathers of a half-grown rooster. He watched the counselor carefully to see if she was believing the story, and when he was about to leave he said, "I guess you don't believe more than half of this." The impression was allowed to stand.

Soon afterward things began to happen at school. Willard's rebellious, cocksure attitude was beyond the toleration of many of the teachers. He was impertinent, quarreled with anyone who tried to dictate to him, and deliberately refused to participate in many classroom exercises. Finally, it was discovered that he had been guilty of a sex offense with one of the schoolgirls. The principal and the visiting counselor investigated. The boy admitted his delinquency. He seemed relieved to be able to discuss his problems, and he had never seemed so serious and frank as during this interview. He asked if he might talk with the doctor soon. "There are a lot of questions about all this that I would like to ask him." A conference was arranged for the following day, and the boy left the office greatly relieved.

The following record appears of the boy's next visit to the psychiatrist:

Willard and the doctor had a frank talk. . Willard was anxious to learn about the significance and implications of his recent conduct. The doctor suggested that the boy help the other boys in his visits with them, especially as they were

nfused about the same sex questions concerning which he had now received formation. The doctor hopes to build up an attitude in the boy which will velop his strength and leadership. In this way he can become a factor for od in the school. There should be close contact between the counselor and y in the next few weeks. The case is at a critical point.

Up until Christmas the boy worked as a volunteer in the counselor's ffice during his spare time. The teachers noticed a slight change for e better in the boy's conduct. He seemed to be more serious and anly. The principal had a frank talk with Willard and told him hat during the next term he would be on probation; that he would be xpected to live up to the very best standards of the school and do l he could to help the school authorities in developing a fine attitude n the part of his friends.

Present status.—During the spring term of 1932 Willard began o receive excellent grades in various subjects. Several teachers ade it a point to report to the counselor, either in person or writing, hat Willard's conduct had changed. "His attitude is splendid." Last term he seemed struggling to do better, but this term he cerainly has made good." "He is so reserved and quiet and gentlenanly. He seems to love to do good work." "Sometimes he beomes impatient and sometimes he is moody, but he usually can do nd does good work."

He sees the psychiatrist less frequently as time goes on, but they oth enjoy the visits when they meet. Willard is proud of his leadrship with the boys in his group and has asked that appointments ith the doctor be "fixed up" for several of his friends. His social djustment is good. "I'm up at 4.30 to deliver my paper route efore school, and I'm mowing lawns most every afternoon." And, s he says, he is too busy to get into trouble.

After Willard was able to ask questions about sex and find out rom reliable sources the meaning of things that had been mysterious o him, his conduct immediately changed for the better. He was no onger rebellious nor suspicious. The principal of the school said at he end of this term that he was entirely satisfied with the boy's onduct and that next year he was to be made a student leader.

4. MARION

The problem.—Everyone present thought Mrs. Paine was about o have a temper tantrum. Her face was scarlet while she stood ringing her hands and spluttering, interrupting anyone who enleavored to speak, especially the little 9-year-old girl who sat facing er in the principal's office. The director of the clinic waited quietly ntil the mother subsided. Mrs. Paine then stated that she was the hild's stepmother and that the little girl's own mother had been ivorced by the father because she was "no good." "You remem-

ber," she inquired of the principal, "I was particularly emphatic i telling you not to allow Marion to play around the school groun after school? I have to watch her every minute. I know wh happened in the other school before we moved here." The child w deeply embarrassed by her stepmother's conduct, and it was evide that she would have to be excused from the interview at this time.

It seems that before the family moved to town the child had be "too fond of playing with boys," as the stepmother expressed i Often her games ended in quarrels and fist fights, but ultimately th intimacy with boys had led to unusual interest concerning sex. was because her present principal had discovered that four or fi little boys had been indulging in sex play with Marion that th mother had been called to the school. Mrs. Paine was uncooperativ very suspicious, and unwilling to allow the child to be examined b the psychiatrist.

Initial examinations—Diagnosis and recommendations.—After fu ther interviews with the director, however, the mother agreed t have the preliminary examinations made by the psychiatrist an psychologist. During the mental test Mrs. Paine insisted on bein present and was in a highly excitable condition. She was cross to th examiner and cross to the child. She criticized and ridiculed th child's answers during the test. Even with this irregularity it w interesting to note that the IQ obtained (137) checked very close with that in the school files.

The stepmother also insisted upon being present at the psychiatr examination. "I shall not allow this child to go into any room alo with any man, whether he is a doctor or not." The little girl flushe but made no comment. This examination disclosed the fact th Marion had a poorly balanced glandular system. Because of t overactivity of the pituitary and thyroid glands she was serious overweight and showed sexual development of a child several yea older. Although she conducted herself with considerable poise du ing the examination, the doctor noted a tremendous tension. H found she was highly emotional and, due to the environment i which she lived, was repressed in her expression. He sounded th warning that she was "so bottled up that there was danger of a explosion at any time." The stepmother's attitude of suspicion an intolerance and her sarcastic remarks were often more than Mario could stand. Mrs. Paine really actively disliked the child, althoug she would not admit this even to herself. In her thinking Mario had "disgraced" the family, "ruined" her own life, and laid Mr Paine open to criticism. The child was very like her own mothe and the stepmother was jealous of the love between the father an daughter. The psychiatrist made three definite recommendation First, give the child many outlets; second, educate the stepmother i

er attitude toward the clinic and toward her daughter; third, dminister glandular therapy.

Treatment and follow-up.—At about this time the bureau of re-earch and guidance began the study of gifted children in public chools of the city. Marion's name was suggested. Even with her ut-of-school escapades the little girl had always been popular with er teachers. In fact, very few of them knew of her sex activities, nd these few were understanding and helpful. She had never been problem in the classroom. When she was recommended as a gifted hild, her musical and literary abilities were emphasized, but attention as called also to athletic and dramatic ability. During the next three ears the child and her stepmother made frequent visits to the clinic. Marion was taking glandular treatment. And finally it was possible o establish a feeling of confidence toward the clinical force so that he mother even agreed that the child could go to the clinic without er.

Present status.—Marion grew in height and lost weight propor-ionately. X rays were taken to study the bony development, and p until the present time there are hopes that the child may still ncrease her height. With the hearty encouragement and direction of he teachers in the junior high school where she is now enrolled, Marion has found many outlets for her vividly enthusiastic nature. he writes poetry, and in March, 1932, received honorable mention in poetry contest among 70 contestants when there were but three rizes given. In April, in competition with approximately 100 chil-ren, she won first place in a piano-playing contest.

During the last year she has been carrying a program much heavier han that of the average child in her grade. Typing was one of the xtra subjects she elected, and in this she won a prize for speed and ccuracy. The physical education teacher finds her an enthusiastic thlete, and if she had more time she would undoubtedly become rominent. The following statements were made by teachers at the nd of the term in a report sent to the clinic: "The little girl has a ecidedly wonderful personality. She is eager and vivid and engaging; as a fine physique and is most attractive." "She has such a variety f interests and does so well in so many things that it is hard to believe hat she is only 12 years old." In all reports on conduct she is escribed as a model child, and at no time since she has gone to the unior high school has anyone intimated that she was unduly inter-sted in boys. Sometimes she becomes quite confidential and has dmitted that she likes boys a lot and that she wishes that she had a rother or two, "because boys and men are much more stimulating." n her last visit to the clinic this term she said that she thought life as a most interesting experience. "It's wonderful that there are so any things to do, and I'm glad mother lets me go out for everything. t's keen, isn't it?"

5. NEIL

The problem.—Most people tried to explain Neil's conduct b saying that he was a badly spoiled only child. He lacked power (concentration, had no sense of responsibility, had very few friend and was constantly teasing and showing off when in a group. He w loud and boisterous and chatted constantly, but really told very lit about himself or his thoughts. His father was inclined to bully hi and perhaps because she resented this the mother was too indulgen For several years before the opening of the clinic he had been und the care of various social workers.

Initial examinations—Diagnosis and recommendations.—The scho mental test record gave an IQ of 123. The pyschologist of th clinic some time later found an IQ of 111. Physically the boy was i good health, but his vitality was low. The psychiatrist called hi asocial rather than antisocial; there were marked shut-in tendencie "Interests must be found in which Neil may develop a constructiv type of thinking instead of the useless and destructive type of ment meandering or daydreaming in which he now indulges." Glandul therapy was also suggested. The school was advised to pay as litt attention as possible to the boy's misdemeanors, but to give him muc individual attention in directing his energy into desirable activitie It was recommended that every effort be made to persuade the fath to become more of a friend to his son and that the mother be encou aged to take a less emotional attitude toward the boy—not to na when displeased, not be too ardent when feeling friendly.

Treatment and follow-up.—Neil was 10 years of age when he vi ited the clinic for the first time. During the subsequent years th picture presented by this case changed but little in general outlin Many reports from the school indicated that the boy was trying har to do good work, but found it difficult to attack a problem and sta with it until it was completed. Other teachers still reported that h was boisterous, rude, and noisy, constantly trying to attract attentio to himself by some unseemly conduct. Three or four of the be teachers in the junior high school accepted him as a challenge. The followed directions faithfully, and at the end of the second year it wa found that the boy was less absorbed in himself and his daydreams He was more open. The points of friction between him and hi mother were gradually being smoothed down. She was more patien and was really trying to use him less for her emotional outlet. It wa difficult to get the father to become a part of the boy's life, for hi business frequently took him out of town, and when he was at hom he wanted complete relaxation rather than the problem of trying t guide a difficult adolescent.

In the spring of 1931 Neil fancied himself a clown. He had alway been able to entertain the children in the lower grades by his naturall

awkward gestures. Now that he was in junior high school he took advantage of this awkwardness in studied clowning. He appeared in several school vaudevilles and held the attention of the entire student body, much to the surprise of the teachers and to the great delight of the students. He wrote a little note to the visiting counselor saying he would like some help about his future: "I have three or four good prospects: (1) Some type of mechanical engineering; (2) design or technical work on aeroplanes; (3) maybe join the Army and fly in the Air Corps. P. S.—Maybe be a comedian."

During that summer Neil went to the Boy Scout camp, and in the fall, when he returned to school, he was full of enthusiasm for his new term's work. The psychiatrist was pleased with the results. "The summer outing has been a wonderful thing for this boy. His many experiences and new friendships were excellent. He has a better physical and mental equipment than he had last year." This term passed rather smoothly. But toward the close of the semester, tired out from a real effort to do better, Neil dropped back into some of his restless and annoying behavior. Jerkiness began to characterize his muscular movements, and the doctor warned that this incoordination, connected with other factors in the boy's mental make-up, was an index that pointed toward the possibility of dementia precox. The doctor saw the boy more often. The following month he again noticed a definite change for the worse. The boy's mind was drifting more easily, his talk was rambling, and he was still more restless. Two individual mental tests given at this time indicated a further drop in IQ (101, 102). He seemed to show real enjoyment in hurting or being hurt. The school was advised not to try to force the boy in his academic work, but to keep him occupied with work in which both his mind and his muscles were active. Since Neil had a fine regard for his scoutmaster, this young man was asked to help on the case. He was told something of the boy's mental condition and was urged to help Neil to become interested in outdoor activities.

Neil's mother had been showing less interest in him for the past year. In fact, it was felt that she was somewhat neglecting him, enjoying a rather exciting time with a group of new friends. Many times Neil came to school without having had his breakfast, and reported that his mother was still in bed because she had been out late the night before. On such days he was in constant trouble in every class. The psychiatrist tried to educate the mother to her responsibility, endeavoring to show her that going to the extreme in neglect was fully as bad as too much attention.

Because the teachers have understood the problem and have done some very conscientious work in making necessary adjustments to the boy's condition, Neil has been promoted from the junior to the senior high school. Since so much depends on the way he is handled

in the next few years, the high-school counselor arranged to have the case carefully reviewed at a conference of high-school teachers who are to work in direct relationship to the boy.

Present status.—Neil is passing through puberty, and much of the conduct which he exhibits is not unusual for the average boy of his age. The doctor feels that his actions are not to be taken too seriously; that he is inclined to bluff, to make himself feel big by all his noise. There is still a tendency toward introversion, one evidence of which is his very clumsy gesturing. However, in his social contacts this very clumsiness has become an asset. He has established quite a reputation as a clown, and fortunately is willing to display his ability legitimately on the school platform rather than in the classroom to annoy the teachers.

On his last day of school in the junior high school his mother and father called to express their thanks and appreciation. The father said, "You have no idea how difficult this boy is at home. His mother is always overlooking much of what I consider unsatisfactory conduct. I only hope that he does as well in the high school as he has done in the junior high." All who are dealing with the boy feel that he is still in a critical condition and may easily be lost to society unless the most careful attention is given to his environment.

6. RAYMOND

The problem.—For several years before the opening of the clinic Raymond had been well known in the north end of town as a thoroughly bad boy. He had been transferred several times from parochial schools to public schools and back again. From his kindergarten days the police had his name, and the list of offenses indicated a thoroughly antisocial attitude. The home had not been at all satisfactory. Raymond's father had partially supported his family through his gambling activities, but at the time when the boy was brought to the clinic his mother had divorced the father and had married a steady, kind-hearted mechanic who supported her and two stepchildren very comfortably.

Mrs. Osborn adored her boy. She would not permit his stepfather to have anything to do with him; she wanted to scold him and love him, reward or punish him herself. Too often she concealed his conduct from her husband, and very soon she and the boy were in a conspiracy against the father. It was a natural step for the mother and son to transfer this attitude toward other authorities; so, although the mother apparently wanted to cooperate with the school and the police, she really often stood in the way of any effective work. The case had previously been followed by several workers, but in 1928 the records indicated that it was closed because of poor family cooperation. At this time Raymond and another boy took a bicycle and landed in the police court.

Initial examination—First diagnosis—Recommendations.—The mental test indicated that the boy was very restless and talkative, with poor power of judgment and attention. His IQ was 91. He was alert, quick, but not deep, with slight powers of perseverance. He was likely to act on impulse without deliberation. The doctor felt that he was not really bad, but needed careful guidance; that at this time (when he was 10 years of age) he could be trained through patient, careful handling in the proper environment. "If he were in a good home where he had been taught control and increasing inhibition, he would undoubtedly have become a happy, well-adjusted child." The recommendations to the teachers were: "First, have enormous patience; second, do not crowd the boy, but give him time to relax, and urge him to take time before making decisions; third, find some older man who will have time to be a companion to the boy; fourth, do not make too much of small, unimportant misdemeanors, but in matters of importance follow through. Be persistent and consistent and demand obedience." The visiting counselor was advised to try to develop a similar attitude on the part of the mother and stepfather, and, if possible, to bring the stepfather into a stronger position in the home.

Treatment and follow-up.—There were frequent conferences with the mother, stepfather, child, and school in an effort to develop a good understanding and supervision. The boy was placed in a special class under the direction of a well-trained teacher. It was a small group of children, and everything possible was done to interest Raymond in manual training and in composition. He enjoyed seeing his little articles printed in the school paper. In 1930 he was promoted to the junior high school. At this time the worker on the case felt that the boy was doing very nicely. The home situation seemed to be fairly satisfactory. The mother was trying to permit Mr. Osborn to enter the picture, although she still proved the dominating factor in the family group.

When, however, the boy was allowed the greater freedom of the junior high school he was not strong enough to control his antisocial impulses. He took advantage of the less strict supervision in the school and was soon reported for many petty thefts. The psychiatrist found him less frank than he had been before; his nails were badly bitten—an indication of high nervous tension; he still showed great lack of stability and the need of especially skillful handling. The parents were urged not to give him everything he wanted. The indulgence of the mother had always been a bad feature in the case. Out of school he stepped from one difficulty into another. He was held in the juvenile detention home on several occasions. There was a close understanding between the

police department and the school, but the mother too often shielded or excused the boy's misconduct. A police report for this period showed the following offenses: Stealing beer from a neighbor's cellar; breaking windows with rocks; making indecent remarks to a little girl; taking a little boy's tricycle and throwing it away in a vacant lot.

At about this time, in the spring of 1931, the psychiatrist reported:

> Unless we can have a change of environment for this boy the prognosis in the case is not propitious. The boy is not meeting anything successfully. It is easier for him to lie than to tell the truth, and since he is not particularly clever, he is likely to be constantly in trouble. The mother is weak and the father is a negative factor in the home training. There is no incentive to do other than he does.

Present status.—In the spring of 1932 Raymond entered a neighbor's house and took his watch and fountain pen. He hid these articles under a vacant house, but very shortly the police had a complete confession, and the case was in the hands of the juvenile court.

The school submitted the following report: "The boy's conduct at school has been very good. He seems to have made a definite effort to be well-behaved. His scholarship record is poor, but most of the teachers feel that he is trying harder than ever before." In spite of this report from the school the records at the detention home and at the police station were against the boy and he was committed to the State school for delinquents. The mother's attitude was entirely that of self-pity. She did not see how she could have acted differently, and she bemoaned the fact that now she would not have this happy, cheerful boy at home with her. The effort was made to show her that the family had really been unable to control Raymond's tendency to take things, and that undoubtedly his experience in the new school would be to his advantage. The mother said, "Raymond is a fine boy. He is lovable and obedient, but he has one fault. He will take everything he sees. He has done this since he has been a little baby."

(*This case is presented to show the difficulties which arise when the school and the clinic do not receive satisfactory understanding and cooperation from the parents.*)

PART 2

RT II. AN EXPERIMENTAL EVALUATION[1]

HAPTER I. THE EXPERIMENTAL PROCEDURE

etting which has been described in the preceding chapters at once the background and the foundation for the experi- procedure which marks this study. Very soon after the of the behavior clinic had been begun, two questions pre- emselves, namely:

v does the development of overt problem behavior of so- problem children" who are placed under intensive clinical t compare over a period of years (*a*) with that of "non- ' children who at the beginning of the study presented no roblems of behavior and who therefore received no special reatment; (*b*) with that of other "problem" children who placed under the care of the clinic?

the findings throw any light upon the effectiveness or success nical procedure used?

tempt to answer these questions necessitated the selection of blem group and of a second problem group of children who used as controls for the original problem group. It called gitudinal case study of all individuals involved over a period It required careful and continuous records during the time Finally, it demanded the development of certain statis- ces that might be applied to the evaluation of overt problem of school children.

rm "overt problem behavior" needs some comment. For of this study the term is limited to behavior problems pre- the child in the school and on the playground, supplemented nowledge available of home and community relationships. litional knowledge may be contributed by the visiting of the school or by the juvenile agencies whose attention called to the case; but very frequently also it comes through ipal and teachers themselves, who attempt to maintain a perative relationship with the home.

be recognized that under these conditions no claim is made a complete picture of the undesirable behavior symptoms ild. Manifestly there are situations of which the school e no knowledge and behavior tendencies which only the

id in the tabulation and statistical work involved in this experiment was given by Miss t, Mrs. Helen Russ, and Mr. William V. Emery, all of the Berkeley school department.

most intensive clinical study would bring to light. In order to compare on a common basis the development of behavior in the several groups of children, some of whom have had clinical treatment and others not, restriction is made to an analysis of their behavior as it is expressed in those situations *known for all of them and for which adequate data are available.*

GENERAL PLAN OF THE EXPERIMENT

The general procedure followed in this investigation can best be described by itemizing the steps involved.

(*a*) *Location and incidence of behavior problems.*—In the fall of 1928 principals and teachers were asked to report all "serious behavior problems" in their schools. This canvass revealed 250 such children reported from the kindergarten through the ninth grade. The senior high school was not included in the original canvass, but those pupils who were at first located in the lower grades have been followed up as they proceeded into the senior high school. The average number of pupils belonging in all the kindergartens and grades 1–9 of the entire city during the year 1928–29 was 10,093. The 250 serious behavior problems thus constituted 2.5 per cent of the total number in the grades concerned. This figure is very close to the approximation made by the committee on special classes of the White House Conference,[1] when they estimate on the basis of several studies made in various localities "that approximately 3 per cent of all children stand in need of readjustment as to behavior or incipient behavior difficulties."

(*b*) *Report on behavior problems.*—For each child with whom clinical contact was made, principals and teachers made a detailed record of objective evidence, indicating the behavior difficulties which he presented. The report included also other items of the child's school record, as well as a record of personality traits.

(*c*) *Clinical and guidance program.*—The clinical staff of psychiatrist pediatrician, psychologist, and visiting counselors made contacts during the first year of the study (August, 1928–June, 1929) with 113 problem children, representing 10 elementary schools and 4 junior high schools. The order in which the schools were listed for attention was determined to a large extent[2] by the number and the estimated seriousness of the cases for which help was requested. In each school the principal and teachers were asked to select from 6 to 10 children who in their judgment were in greatest need of assistance. It thus evolved that, even of the 250 "serious behavior problems" originally reported, the 113 actually reaching clinical attention were

[1] White House Conference. Special Education: The Handicapped and the Gifted. New York, The Century Co., 1931. p. 498.

[2] Some administrative considerations entered into this matter also.

among the most serious of them all. In every case it was necessary, however, to secure first of all the cooperation of the parents or guardians before clinical treatment was instituted. This fact ruled out some of the more serious cases, owing to the refusal of those in charge of the child to permit clinical help.

(*d*) *Experimental group.*—These 113 children constituted the original experimental group, and it was planned to give them every aid toward adjustment that the clinical program afforded. Four of these children, however, were of such an unusual type within their own schools that it seemed impossible to equate them with a "control" mate, as designated below. Hence, for purposes of comparative follow-up, they are not considered in the study. The remaining 109 children become then the basis for the statistical analysis that is to follow. This group will be known in the study as the EP (experimental problem) group.

(*e*) *Control group 1.*—In order to compare the development of the overt behavior of the problem group with that of children who at the beginning of the study were considered by principals and teachers alike examples of wholesome normal childhood, exhibiting no problems of behavior that seemed to warrant clinical attention, each one of the 109 problem children who were scheduled for intensive treatment was equated with a nonproblem child of the same age, sex, and general level of intelligence, in the same school and grade, and under the same teacher. Of these factors, age, sex, intelligence, and school were considered first of all and were equated in all cases. If, in order to equate these, it was found necessary to vary the grade by a half year, this was not deemed a serious departure, particularly if both grades were working in the same room and under the same teacher. The teacher factor was kept constant at the beginning of the study in 82 per cent of the cases,[4] the remaining 18 per cent presenting difficulties of equation which made this impossible. On the whole, therefore, it may be said that factors of sex, chronological and educational maturity (as judged by grade location), mental status, and school environment were rendered approximately constant. There remained the major variables of home environment, physical condition, and personality traits. This first control group will be referred to in the study as the NPC (nonproblem control) group.

(*f*) *Control group 2.*—It has been stated that of the 250 problem children originally reported by principals and teachers, 113 made clinical contacts during the first year of the study. The remaining 137 became the basis for the selection of a second control group, composed of problem children who were receiving no clinical attention, owing either to lack of clinical time available or to lack of cooperation on

[4] In the junior high school, enrollment in the same home room was the basis used for equating teachers.

the part of parents. Obviously, these cases could not be equated with the original problem group with the same precision which obtained for the first control group (NPC). In a city of much larger population there would be a better chance for equation even here, for in such a situation a much greater number of problem children would be available from whom to select. Under the limitations of the present experiment, 50 children were chosen who presented behavior difficulties most similar in number and type to those of the clinical group. These will be known as the PC (problem control) group.

Attention must be called to the fact that the only difference in treatment presumably or consciously accorded the children in the control groups and those of the original problem (EP) group lay in the absence of intensive clinical study of the former. All helps which the school afforded through its counseling and classification program, the adjustment of instruction to individual differences, personal help on the part of principal and teachers—in fact, every aid which a progressive school system ordinarily makes available for the personality adjustment of its children was given alike to all the children included in the study. The one differentiating item was the addition of the psychiatric clinic for whatever it might mean to the development of the children in one of the three groups involved.

(g) *Records kept.*—In addition to the initial behavior record (School Record A) which was filled out by principal and teachers for each problem child referred to the clinic, the following records have been kept:

(1) School Record B, filled out at the close of each school semester, giving an objective record of the child's behavior as known to the school. The form used for this record contains the identical list of behavior difficulties which formed the basis of the original record. Thus the progress of each child could be traced from term to term.

(2) Records of psychiatric and physical examinations.

(3) A social case record, giving significant items regarding family history and relationships, developmental factors, and home conditions. This was written by the visiting counselor assigned to the case and followed in general the accepted standards of writing social histories.

(4) Record of mental and achievement tests.

(5) Chronological record: This was used for the EP group only, since it refers to clinical treatment alone. It furnishes details of clinical visits, of recommendations made, treatment given, adjustments carried out, contacts made by the visiting counselor, developments noted in the child's condition, and any other items connected with the case. This record, therefore, gives a complete picture of

[1] See appendix for some of the blanks used.

the history of the problem dating from its first appearance before the clinical staff.

(*h*) *Analysis of results.*—School Records A and B were made the primary basis of analyzing the progress made by the children in each group. A comparison of these records at the beginning and at the end of the study, as well as from term to term, was used as an indication of the general development that had taken place.

Two minor phases of the study were also considered, but will be given only brief mention in this report. These were: (*a*) A comparison of the three groups in educational achievement as measured by the Stanford achievement test; (*b*) an initial comparison of the problem (EP) and nonproblem (NPC) groups in certain personal and social factors which were subject to analysis.

THE BEHAVIOR RECORD

Three important questions arise with regard to School Records A and B, namely: How was the list of behavior difficulties included in the record evolved? How was the record used? Is the record statistically reliable?

(*a*) *How was the list of behavior difficulties evolved?*—It is one thing to say that a boy or a girl is a "disciplinary problem"; it is quite another—and a much more difficult—matter to analyze his or her behavior so as to state definitely in what respects it is antisocial or undesirable. Several such analyses have been attempted by various investigators,[6] and it is interesting to note that they all have many elements in common. Wickman found that the lists of problems as submitted by teachers in different cities were in essential agreement. Teachers seem to find the same difficulties to contend with in pupil behavior the world over.

In the construction of the list of behavior items used in this study, previously developed lists were freely drawn upon for their suggestive value. Abstract personality traits as such were eliminated in order to make the record as specific as possible. Teachers were invited to contribute additions to the list of items as submitted to them. The final result included 44 items classified under the following major headings: Irregularity, disobedience, lack of application, dishonesty, damage to property, cruelty, profanity, emotional instability, sex difficulty, and personal uncleanliness.

It is admittedly true that no list of such items can lay claim to being absolutely complete or infallible. Yet, as Haggerty says, "it is a step in advance when, instead of saying that a boy is a 'bad boy' or is guilty of antisocial conduct, we try to say in just what particular ways his conduct is undesirable"—in other words, to objectify it to such a degree that the specialists working with the child will be able

[6] Haggerty, Wickman, Blatz, *and others.* (See references, p. 70.)

to recognize and identify symptoms, to relate them to one another, and to make intelligent recommendation for treatment.

(*b*) *How was the record used?*—All behavior records were filled out on the basis of the composite judgment of all those teachers in the school who had come in contact with the child in question. This is true both of the initial record which was checked as soon as the child became a subject for study and of succeeding records submitted at the close of each term. Thus the classroom teacher or teachers, the principal, the playground teacher, and any others who had occasion to work with the child had a responsibility in observing his reactions, as well as in helping to minimize the errors of personal equation that may result from one individual's rating of another. To each school and teacher were given at the beginning of the term the names of those children who were to be made the objects of special observation, together with a copy of the record which was to be submitted at the end of the term for each child. In this way attention was called to the need for careful study of the child in specific aspects, and it was known at the beginning of the semester what report would be required at its close.

Reference to the blanks, as given in the appendix, will reveal the fact that the teachers were asked to check not only the occurrence of behavior problems but also the *frequency* of their occurrence during a given term. For the device used in this connection the author was indebted to Haggerty,[7] who employed the same technique but without specific reference (so far as can be determined from the published report) to a given period of time. In the present study the teacher was asked to indicate *for each item* and *for the term which was just closing* whether it had *never* occurred, had occurred *once or twice*, had occurred *occasionally*, or had occurred *frequently*. Some expression was thus secured for every item included in the list, and the possibility of overlooking or neglecting to mark any one of them was eliminated.

(*c*) *Is the record reliable?*—When human judgments enter into the analysis of behavior, unchecked by accurate measurement, we always face the certainty of a percentage of error. Moreover, the personnel of those teachers who are responsible for the records may change from term to term, due to the child's school progress, to his transfer from one school to another, or to some change in the teacher's assignment. There is thus a large number of different personalities passing judgment on different children with reference to a given list of behavior difficulties.

The specific nature of the record asked for and the instructions given to teachers have safeguarded the results to some extent. The report made was one of objective behavior rather than of attitudes,

[7] Wickman and Olson also used the same device in their later published studies.

moods, or traits. The teacher recorded what she saw in the daily actions of the child and made her report accordingly. In last analysis, every individual's social adjustment is expressed by his actions and by other people's reactions. The behavior record used in this study is intended to be only a progressive report of such actions as they are noted by others, the "others" in this case being the teachers with whom the child came in contact. The very fact that teachers were receiving help from the clinical treatment of the problems which they referred for attention made them more eager to cooperate and to give their careful attention to the analysis of the behavior in question.

Obviously there is in a practical school situation, such as that which forms the background of this experiment, no opportunity of checking accurately the reliability of the teacher's observation of behavior by the usual statistical devices. In the first place, no two people could observe the child in identical situations, and it was therefore impossible to secure dual records of the same behavior from different observers. One saw him in the classroom, another on the playground, still another at the lunch hour, while the principal or school counselor might have the greatest knowledge of any problems that arose outside of school. The composite picture of the child which these multiple observers afforded seemed to be, from a practical standpoint, one of the most desirable features of the record.

In the second place, it was just as impossible to secure dual records from the same person. Since each record was to cover a given period of time (i. e., a semester), it was essential that the teacher make her report while the events that had transpired were still vivid in her thought. Any second report made some weeks later would be likely to be colored by more recent occurrences. Behavior is a variable trait, and one week's or one month's record may be very different from that of the next

Yet in order to check the reliability of the record, so far as it was possible to do so within these limitations, the problem scores[1] resulting from the first term's records of the EP group were correlated with those of the second term. The Pearson coefficient is 0.52 ± 0.05. Considering the facts that the whole program was directed toward bringing about changes in children's behavior and that some children would be expected to make adjustment more quickly than others, one must recognize that this correlation between the records of two successive terms indicates a fair degree of reliability of the measuring instrument used. How much higher the true coefficient would be than the obtained figure depends upon the amount of change in behavior which has actually taken place in the interval between the two reports.

[1] The method of computing problem scores will be explained in the next chapter.

CHAPTER II. STATISTICAL PROBLEMS INVOLVED

One of the very first problems which needed to be met in analyzing the results of this experiment was to devise some method of scoring the behavior record upon an objective basis. A numerical behavior score needed to be computed for each pupil. In order to accomplish this, two statistical devices needed to be built up—one to be used as a basis for assigning a numerical value of relative seriousness to each behavior difficulty listed in School Records A and B, and a second one to be used as a basis for weighting each behavior difficulty in accordance with its frequency of occurrence. In other words, two questions needed to be answered: (1) Where does each item stand in relation to every other item on a scale of seriousness? (2) How much more serious is each behavior difficulty when it occurs occasionally or frequently than when it occurs only once or twice?

1. *Evaluation of the seriousness of specific behavior difficulties.*—In meeting this problem it was possible to build upon a foundation which had already been laid in Wickman's investigation. He enlisted the cooperation of 511 classroom teachers and 30 mental hygienists. He submitted to them for relative rating as to seriousness on a scale from 0 to 20 a list of 50 behavior problems. In the Berkeley study a composite list of 60 items (made up of all the items in School Records A and B plus all those used by Wickman but not appearing in School Records A and B) was submitted to a group of 24 educational and psychological specialists of State or national reputation who had done outstanding work in the field of child growth and development or related subjects. These individuals seemed to form an intermediate group between Wickman's classroom teachers, most of whom had little or no specialized training in the problems of child behavior, and his mental hygienists, who were very highly specialized. For comparative purposes the same technique of rating was adopted which Wickman employed, and the reliability of the ratings was checked by asking for a second rating six weeks after the first one had been submitted.[1]

The mean rating of each behavior problem which Wickman secured from mental hygienists and that which was secured from educational and psychological specialists were then averaged, and the resultant figure became the numerical value assigned to the item. These two

[1] Second ratings were obtained from 12 of the judges. The coefficient of correlation (by the method of rank differences) between the mean rating of these 12 judges on each item as given in the first report and that given in the second report was 0.95.

groups of judges were used on the basis that each might be a check on the other, the one contributing a highly specialized and technical knowledge of psychiatric principles, the other contributing an understanding of the educational aspects and reactions of child life. This seemed entirely justifiable, since both groups showed sufficiently high variability to warrant a check on their judgments.

As a matter of fact, the final ratings adopted on 31 problems which were common to both Wickman's and the writer's schedules were in 8 cases identical with those which would have been used had the judgments of mental hygienists alone been followed. In 14 more cases the difference was only one point; in 6 cases the difference was two points; and in only 3 cases did the difference amount to three points. These last were the ratings assigned to "deliberate refusal to obey," "damage to school property," and "heterosexual activity," which the group of educators-psychologists rated considerably higher than the mental hygienists.

The ratings of classroom teachers (as secured by Wickman) were not used, for it seems safe to conclude, as he did, that their reactions were colored by a consideration of the immediate effects of the act upon classroom discipline and control, while mental hygienists and educational and psychological specialists were asked to give special consideration to each item in its relation to the total life adjustment of the child. A comparison of the three groups of ratings shows a much higher correlation existing between the ratings of the two latter groups than between those of either one of these and of classroom teachers. These correlations, computed by the method of rank differences, are as follows:

Mental hygienists and classroom teachers [1]	-0.22 $-.11$
Mental hygienists and educators-psychologists	$+.72 \pm .05$
Classroom teachers and educators-psychologists	$+.43 \pm .08$

It is thus clear that the group of educators-psychologists tended to agree much more closely with the mental hygienists than with the classroom teachers.

Table 1 presents in detail the data which form the basis for the evaluation of each behavior item. In this table it should be noted (1) that only those traits are included which form a part of School Records A and B; (2) that, in assigning numerical values to those traits for which there is no equivalent in the Wickman study, the mean rating of educators-psychologists is used as the basis; and (3) that in a few instances, where a general term in Wickman's study (such as "cheating") seemed to cover several specific phases of the same trait in the present investigation (for example, "cheating in

[1] According to Wickman. Two different groups of teachers were used for comparative purposes. Wickman discusses at length in his book the significance of these correlations.

school work" and "cheating in play"), it was assumed that the same rating of mental hygienists might apply at least approximately to each separate trait of more concrete nature. The ratings of the traits so affected are inclosed in parentheses in Table 1.

Figure 3 shows graphically the mean ratings and standard deviations on each of the 50 traits for which three judgments were available.

TABLE 1.—*Means of ratings given specific behavior traits by two groups of judges, together with the resultant value assigned each trait*

Read the table as follows. On a scale of seriousness extending from 0 to 20, 30 mental hygienists assigned a mean rating of 5.6 to tardiness as a behavior difficulty of childhood; 24 educators-psychologists gave it a mean rating of 5. The average of these two means is 5.3; and the resulting value assigned to that trait for purposes of the present study is 5. For further explanation, see p. 36.

Behavior problem	30MH	24EP	Average	Assigned value
1	2	3	4	5
Tardiness	5.6	5.0	5.3	5
Truancy	10.3	12.8	11.5	11
Deliberate refusal to obey	6.4	11.0	8.7	9
Resistance to punishment	7.1	9.6	8.3	8
Doing work other than assigned	7.3	2.8	5.0	5
Writing notes	.8	2.7	1.7	2
Eating candy, fruit; chewing gum	.....	2.7	.....	3
Restlessness, talking, fidgeting, asking to leave room too frequently	6.4	5.6	6.0	6
Inattention	9.6	10.4	10.0	10
Carelessness, slovenliness in work	7.1	8.4	7.7	8
Laziness	7.2	10.4	8.8	9
Daydreaming	11.3	10.9	11.1	11
Forgetting notes or books	6.8	4.6	5.7	6
Bad posture, slumping in seat	.....	5.9	.....	6
Lying	10.3	13.2	11.7	12
Cheating in school work	(10.3)	11.8	11.0	11
Cheating in play	(10.3)	13.4	11.8	12
Stealing	12.5	14.9	13.7	14
Damage to school property	5.1	11.5	8.3	8
Damage to personal property	.....	12.4	.....	12
Damage to neighborhood property	.....	12.2	.....	12
Hurting animals	(13.5)	13.4	13.4	13
Hurting smaller children	(13.5)	16.5	15.0	15
Injury to others, not smaller	(13.5)	11.4	12.4	12
Profanity	2.9	5.4	4.1	4
Temper outbreaks	11.7	13.7	12.7	13
Impertinence	7.6	8.9	8.2	8
Bullying	13.5	11.9	12.7	13
Fighting	8.3	10.5	9.4	9
Teasing	.....	6.6	.....	7
Exuberance (laughing, giggling, whistling)	8.5	3.5	6.0	6
Showing off	.....	6.3	.....	6
Sulkiness	12.6	10.6	11.6	12
Excessive reticence (timidity, frequent embarrassment)	12.5	10.7	11.6	12
Weeping (cries easily)	13.1	14.9	14.0	14
Vulgar speech	(8.8)	10.1	9.4	9
Sexual pictures or stories	(8.8)	10.5	9.6	10
Masturbation	6.4	9.0	7.7	8
Heterosexual activity	9.9	15.9	12.9	13
Dirty hands, face	(7.2)	2.9	5.0	5
Dirty clothes	(7.2)	4.0	5.6	6
Vermin	.....	6.7	.....	7
Dirty belongings, books	7.2	5.2	6.2	6

From Chart II of this plate it is evident that among all three groups, in the ratings of a number of traits listed, there is a significant lack of agreement, as indicated by the size of the standard deviation of the distribution. It is hoped that, as studies of the progressive development of behavior from the earliest symptoms of maladjustment grow more numerous and more extensive as to the period of follow-up, a somewhat greater unanimity of opinion may be obtained, at least on the part of child-guidance specialists, as to the relative seriousness of early behavior difficulties in their effect upon the child's later social adjustment.

2. *Evaluation of the importance of relative frequencies of behavior difficulties.*—After a numerical score had been assigned to each behavior difficulty, the next problem to be solved was that of weighting that score in terms of the frequency of its occurrence. The technique designed to bring a solution here is based upon the determination of the frequency with which each one of the behavior difficulties listed occurs in an unselected school population of the same age range as is represented in the experimental and control groups. A sampling of the Berkeley school population was secured by picking at random one boy and one girl from each classroom of the city from the kindergarten through the junior high school. These constituted a total group of 568 children. A behavior record covering one semester's time was filled out for each one of these pupils. The frequency of each behavior difficulty was determined for boys and for girls separately and within each sex for the respective age levels 4 to 7 years, 8 to 11 years, and 12 years or more. The classification by age groups showed so few significant differences that it was not considered feasible to vary the scoring basis for so small a margin. The sex difference was maintained, however.

On the basis of the fourfold classification as to frequency of occurrence (never, once or twice, occasionally, frequently) a distribution was made out for each trait, and the percentage of boys and of girls (separately) belonging in each group was computed. By means of the formula[3] $d=\frac{z_1-z_2}{q_1-q_2}$ and by reference to the Kelley-Wood table of the normal probability curve (which was assumed for each trait), it was possible to compute, in terms of the standard deviation, the

[3] Kelley, Truman L. Statistical Method, p. 101. In this formula d=the mean deviation of a portion of a unit normal distribution. q_1 and q_2=the proportions lying beyond the upper and lower limits respectively of the class involved. z_1 and z_2=the ordinates for those proportions as given in the Kelley-Wood table.

mean deviation from the mean of each portion of the distribution. Since this represents the average distance from the zero point to the mid-point of each group, it can be used to assign a numerical value to each one of the frequencies involved.

Practically, the application of this procedure means that the more children there are who are frequently guilty of a given misdemeanor the less serious (relatively speaking) the frequency of its occurrence becomes in any one child. This is a logical assumption to make from a pragmatic point of view, since frequently occurring behavior represents a less serious deviation from the norm or accepted practice than that which is of rarer occurrence.

3. *Final scoring of the behavior record.*—Since a basic rating for each problem has already been determined regardless of its frequency of occurrence, this must be considered the point of departure for any further weighting used. Therefore, in order to combine the initial rating given to each trait by the specialists and the additional weightings on the basis of frequency, the latter were all reduced to multiples of 1, which was the value assigned to the "once or twice" occurrence of the difficulty. The "occasional" and "frequent" occurrences were then given their respective values on this basis,[4] and the final score on each behavior difficulty was secured by multiplying the weighting on the basis of frequency by the initial rating assigned on the basis of expert judgment.

For example, if a child was reported as frequently tardy, he would have on this particular trait the score of 5 (which is the value assigned to tardiness) times 3 (which is the weighting for its frequent occurrence), or 15. Similarly a score would be given to every other trait reported for him, and the sum of all scores on individual difficulties reported for a given term became his score of overt problem behavior for that term. The larger scores, therefore, are indicative of a greater amount of problem behavior.

When every child in each of the three groups included in the experiment was thus given a score of overt problem behavior for each term, it became a simple matter of mathematical calculation to compare the groups from term to term and to note the progress made from the first to the last semester reported.

[4] Finer discriminations were eliminated and the final figures adopted for weighting were 1, 1.5, 2, and 3. These were used, of course, in various combinations for different traits, and they also differed for the two sexes according to the distributions upon which they were based.

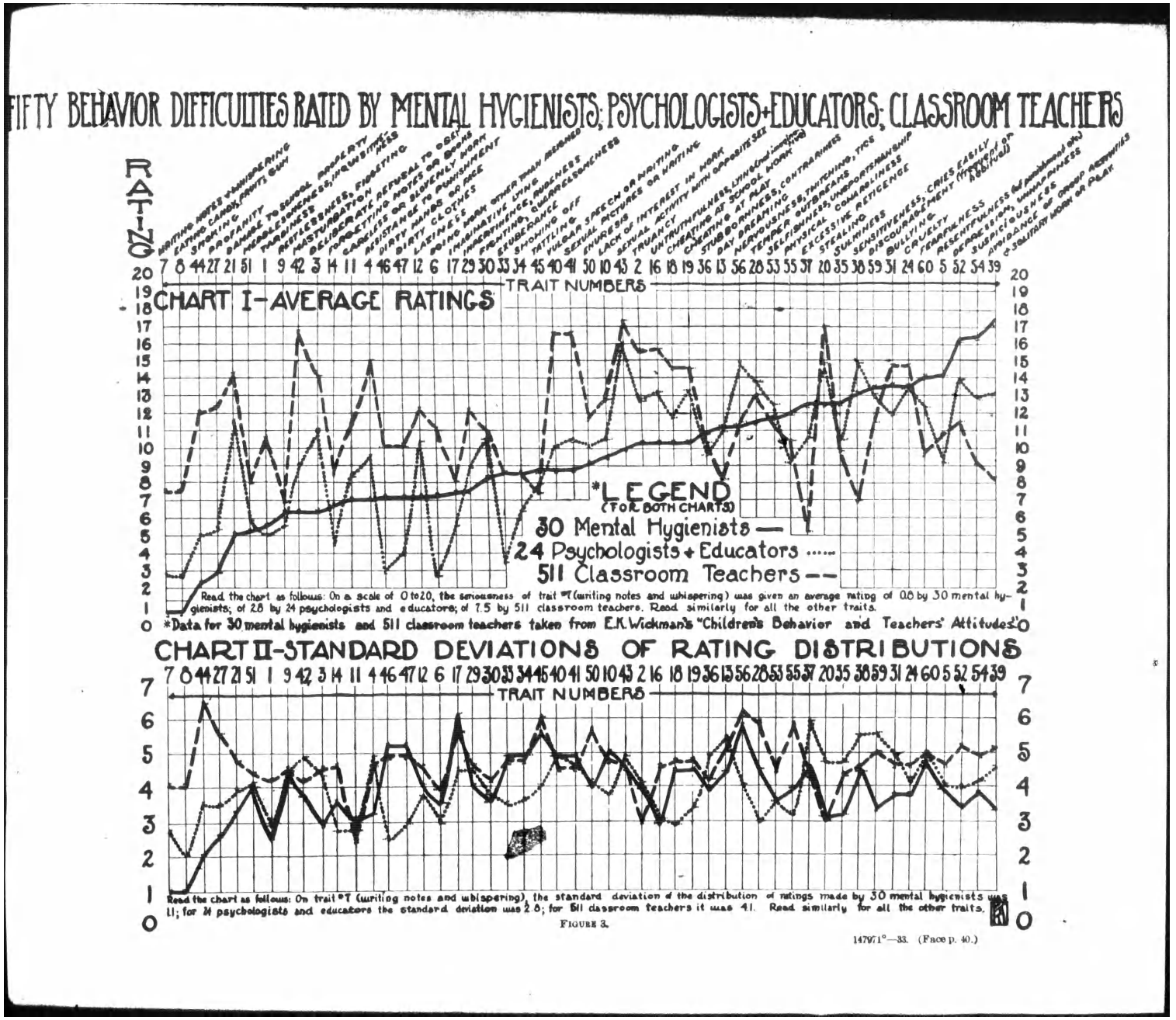

FIGURE 3.

147971°—33. (FACE p. 40.)

CHAPTER III. INITIAL COMPARISON OF THE PROBLEM AND NONPROBLEM GROUPS

The actual analysis of the data at hand will now be considered. Certain basic facts will first be given regarding the personnel of the two groups of problem (EP) and nonproblem (NPC) children. Then the vital factor of the study will be discussed—that of the problem behavior as revealed by School Records A.

Composition of problem and nonproblem groups.—Table 2 summarizes the situation with regard to sex, age, grade, and intelligence quotient as of January, 1929, which date marks an early stage of the study. This table also gives some index of the degree of accuracy with which the two groups of children were equated. Since each problem child had a nonproblem control mate of the same sex, in the same school, and as nearly as possible of the same age, grade, and intelligence, it is to be expected that the figures in the two columns of the table would closely correspond.

TABLE 2.—*Statistical picture of problem and nonproblem groups*

Read the table as follows: There were 84 boys and 25 girls in the experimental problem (EP) group, ranging in age from 4 to 16 years. The interquartile range in age extended from 8–3 to 12–5, and the median was 10–8, etc. The corresponding data for the nonproblem group are given in the last column of the table.

	109 problems (EP)	109 nonproblems (NPC)
Sex:		
Boys	84	84.
Girls	25	25.
Age:		
Range	4 to 16 years	4 to 16 years.
Q_1–Q_3	8–3 to 12–5	8–1 to 12–6.
Median	10–8	10–7.
Grade: Range	Kindergarten to 9	Kindergarten to 9.
Intelligence quotient:		
Range	55 to 163	63 to 148.
Q_1–Q_3	85.5 to 106.1	90.5 to 108.5.
Median	95.9	96.7.

With sex, age, and grade as first considerations in equating the groups, it was sometimes difficult to find a child who had, in addition to these factors, also an identical intelligence quotient. For example, the highest intelligence quotient in the EP group is more than 160. It is not always an easy matter to match this even in the same school, and it was the purpose of the study to equate this boy with some one in his own class. The best one that could be found to serve the purpose was a boy with an intelligence quotient between 140 and 150, which still placed him in Terman's "genius" or "near-genius" class, though not so high in the scale as his problem mate. The middle

ranges of the scale were not so difficult to match within close margins. At the lower end again, however, there were a few extreme cases which could be equated only within a general group rather than within any specified margin of IQ points. The median and upper quartiles of the two groups are almost identical, while the difference of 5 points in lower quartiles is an index of the difficulty that was encountered in making exact matches. Of the total number of 109 cases, 67 per cent were equated within 5 points; 89 per cent were equated within 10 points, while the remaining 11 per cent (12 cases) represented the extremes where general classification rather than specific intelligence quotients needed to be considered the basis of equation.

Behavior difficulties.—The basic item of interest in the comparison of these two groups is their behavior as observed by teachers at school. Each member of the NPC group was specifically chosen early in the spring term of 1929 by virtue of the fact that he was pronounced by his teachers a type of wholesome normal childhood, presenting no problem of behavior that demanded clinical attention. Having once become a member of the control group, he was subject to further study and follow-up from term to term in order that his development might be compared with that of his problem mate. Hence, School Record B was filled out for him at the end of each term. It becomes a matter of importance, therefore, not only to analyze the overt problem behavior of members of the EP group, as indicated by School Record A, but also to compare their records with the first ones submitted for the NPC group.

The first analysis will be made of the problem behavior of the 109 children who were referred for clinical treatment. Table 3 lists the manifestations of such behavior which were included in School Record A, upon which a report was made for each child. A scrutiny of this table will reveal the following salient facts:

(*a*) The problems most frequently reported are those indicating lack of application in school work. Emotional and personality difficulties, defiance of authority, offenses against society, and sex irregularity follow in approximately the order given.

(*b*) The total number of problems reported as of frequent occurrence is about two and one-half times as great as the number of those occurring once or twice. The number of the former reported per child is 8.9, as compared with 3.6 in the latter group. Problem children, in the judgment of the school, are apparently those who transgress not once or twice, or even occasionally, but frequently.

(*c*) The total number of problems reported per child is 18.3,[1] regardless of frequency of occurrence. There seems thus to be not a

[1] Classification was originally made into two age groups, composed, respectively, of those children ranging from 4 to 10 years and from 11 to 16 years. The mean number of problems per child was computed for each group, but they proved to be practically identical (18.3 and 18.4). The age classification was therefore discarded.

TABLE 3.—*Behavior problems reported for 109 problem children (initial record)*

Read the table as follows: Inattention was reported for 1 child as occurring once or twice; for 28 children as occurring occasionally; for 77 children as occurring frequently. The total number of children reported for *inattention* was 106, or 97.2 per cent of the entire group. Read similarly for other behavior problems.

Behavior problem	Number of children for whom problem was reported as occurring—			Total	
	Once or twice	Occasionally	Frequently	Number	Per cent
1	2	3	4	5	6
Inattention	1	28	77	106	97.2
Carelessness, slovenliness in work	13	21	62	96	88.0
Restlessness, talking, asking to leave room too frequently	6	23	61	90	82.6
Bad posture, slumping in seat	7	32	51	90	82.6
Laziness	5	25	44	74	67.9
Forgetting notes or books	15	27	32	74	67.9
Doing work other than assigned	4	20	50	74	67.9
Day dreaming	6	28	35	69	63.3
Teasing	15	26	25	66	60.5
Dirty hands, face	17	16	32	65	59.6
Fighting	22	15	26	63	57.8
Exuberance (laughing, giggling, whistling)	9	17	36	62	56.8
Showing off	9	22	31	62	56.8
Lying	17	11	33	61	55.9
Tardiness	24	17	19	60	55.0
Temper outbreaks	11	28	20	59	54.1
Sulkiness	17	21	21	59	54.1
Eating candy, fruit; chewing gum	16	22	18	56	51.4
Dirty belongings, books	11	13	23	47	43.1
Excessive reticence (easily embarrassed)	5	20	21	46	42.2
Impertinence	9	18	17	44	40.4
Dirty clothes	7	14	20	41	37.6
Cheating in school work	16	11	13	40	36.7
Deliberate refusal to obey	5	12	22	39	35.8
Cheating in play	10	14	14	38	34.8
Stealing	11	12	14	37	33.9
Injury to others (not smaller)	2	10	21	33	30.3
Bullying	5	9	19	33	30.3
Damage to school property	14	9	9	32	29.3
Resistance to punishment	9	10	13	32	29.3
Profanity	11	9	12	32	29.3
Weeping (cries easily)	11	10	10	31	28.4
Damage to personal property	11	6	9	26	23.8
Hurting smaller children	6	5	15	26	23.8
Vulgar speech	10	5	9	24	22.0
Writing notes	7	10	7	24	22.0
Truancy	8	7	8	23	21.1
Damage to neighborhood property	5	7	6	18	16.5
Masturbation (suspected)	3	10	2	15	13.7
Sexual pictures or stories	5	5	4	14	12.8
Hurting animals	3	1	4	8	7.3
Heterosexual activity	1	1	3	5	4.6
Masturbation (known)	0	1	3	4	3.6
Vermin	0	1	1	2	1.8
Total	399	629	972	2,000	
Number of problems per child	3.6	5.8	8.9	18.3	

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single cause but a multiplicity of related causes or misdemeanors which prompt teachers and principals to seek help in the child's adjustment.

With this general characterization of the 109 problem cases in mind, a consideration of the first behavior records submitted for the NPC group will be of interest. These children were selected early in 1929 and were reported upon for the first time in June, 1929. It is assumed that at the time when they were selected as a control group upon the assurance of principals and teachers, their behavior was representative of what was considered by the school as nonproblem behavior. What the records revealed for the term from January to June, 1929, is given in Table 4, which should be considered in its relationship to the data given in Table 3.

Only a glance at the table is needed to make one realize that "wholesome, normal" behavior or general "nonproblem" behavior, in the eyes of principal and teachers, certainly does not connote the total absence of undesirable conduct, for here there is a list of behavior difficulties which might to some seem at the first appraisal almost appalling if they represent the children in our schools who are so-called "nonproblems." A closer analysis, however, will reveal several significant facts, namely:

(*a*) More than 50 per cent of the problems reported have, to the teachers' knowledge, occurred only once or twice during the term. Anyone can make a single slip. Even the courts recognize this fact in the case of minor offenses. The recurrent nature of the misdemeanor is one of the primary factors which cause the teacher to begin to look upon the offender as a "serious problem case." This is one of the conspicuous differences between the data given in Tables 3 and 4. The figures at the end of each table giving the number of problems per child are in striking contrast to one another. The ratios with respect to relative frequency of occurrence are for the nonproblem child approximately 4, 3, and 1, while for the problem child they are 4, 6, and 9. These figures constitute rather clear evidence that it is not the infrequent or occasional breach which in the eyes of the teacher places the child in the problem group, but the persistent display of undesirable conduct.

(*b*) Again, the total number of difficulties reported per child, regardless of frequency, shows a marked difference between the two groups, being 18.3 for the problem and 8.2 for the nonproblem group.[1]

[1] Wickman found that of 51 undesirable traits, the average for "the 60 most maladjusted" children was 16.8.

TABLE 4.—*Behavior problems reported for 109 nonproblem children (initial record)*

(For directions for reading table, see Table 3)

Behavior problem	Number of children for whom problem was reported as occurring—			Total	
	Once or twice	Occasionally	Frequently	Number	Per cent
1	2	3	4	5	6
Inattention	31	33	14	78	71.5
Bad posture, slumping in seat	22	25	14	61	55.9
Excessive reticence (easily embarrassed)	17	20	20	57	52.3
Daydreaming	22	20	11	53	48.6
Restlessness, talking, asking to leave room too frequently	15	24	9	48	44.0
Carelessness, slovenliness in work	16	22	10	48	44.0
Laziness	17	19	9	45	41.3
Doing work other than assigned	23	12	10	45	41.3
Eating candy, fruit; chewing gum	25	10	7	42	38.5
Forgetting notes or books	29	12	1	42	38.5
Teasing	19	15	1	35	32.1
Exuberance (laughing, giggling, whistling)	16	13	6	35	32.1
Dirty hands, face	18	13	3	34	31.2
Tardiness	23	6	2	31	28.4
Sulkiness	20	4	2	26	23.8
Temper outbreaks	16	9	0	25	22.9
Fighting	16	7	1	24	22.0
Weeping (cries easily)	13	6	2	21	19.2
Showing off	11	4	3	18	16.5
Dirty belongings, books	10	3	2	15	13.7
Writing notes	10	2	2	14	12.8
Impertinence	8	4	2	14	12.8
Cheating in school work	9	4	0	13	11.9
Dirty clothes	7	3	3	13	11.9
Injury to others (not smaller)	6	2	0	8	7.3
Cheating in play	5	2	0	7	6.4
Deliberate refusal to obey	3	3	0	6	5.5
Damage to personal property	6	0	0	6	5.5
Lying	4	1	1	6	5.5
Resistance to punishment	3	1	1	5	4.6
Bullying	3	2	0	5	4.6
Stealing	3	1	0	4	3.6
Profanity	1	3	0	4	3.6
Truancy	1	1	1	3	2.7
Damage to school property	3	0	0	3	2.7
Masturbation (suspected)	1	1	0	2	1.8
Vermin	2	0	0	2	1.8
Hurting animals	1	0	0	1	.9
Hurting smaller children	0	1	0	1	.9
Vulgar speech	1	0	0	1	.9
Sexual pictures or stories	1	0	0	1	.9
Damage to neighborhood property	0	0	0	0	.0
Masturbation (known)	0	0	0	0	.0
Heterosexual activity	0	0	0	0	.0
Total number of problems	457	308	137	902	
Number of problems per child	4.1	2.8	1.3	8.2	

The nonproblem child seems, therefore, to evince less than half as many types of undesirable behavior as does the problem child, and only 15 per cent of these (137 out of 902) are observed as of frequent occurrence.

(*c*) When the table is examined in order to see what these acts of frequent occurrence are, it is found that in the main they consist of minor infringements of classroom discipline, such as inattention, carelessness, and doing work other than assigned. More serious offenses are mentioned, however, in a few instances, and one can not help but wonder just how it came about that some of these children were originally recommended as members of the nonproblem control group. One child, for example, is reported as a frequent truant; another lies frequently. Most conspicuous of all is the fact that 20 of these children are reported as repeatedly showing reticence, while 57, or 52.3 per cent, give more or less serious indication of this characteristic. This is the only trait in which the nonproblem children outnumber the problem children, and the reason is not difficult to find. Wickman has shown that teachers are prone to attach only slight significance to reticence or timidity as a behavior problem, while mental hygienists and the group of educators-psychologists used in this study realize its seriousness in preventing adequate life adjustment of the child. The quiet child of retiring nature interferes so little with classroom order and control that his withdrawing traits are likely to win approval, or at least to escape attention, unless they are very extreme or are combined with other undesirable behavior which calls attention to itself.

(*d*) The order of occurrence of these undesirable behavior symptoms in the two groups shows a high correlation (0.90 by the method of rank differences). So-called "nonproblem" children, therefore, seem to exhibit the same general tendencies toward problem behavior as do "problem" children, but to a much less extent. The evidence offered by these tables lends credence to Olson's [3] assumption that "all children are problem children, but that they are so in varying degree." On the basis of this assumption he proceeds to "designate a problem child in mathematical terms on the basis of his position on a distribution of problem tendencies in the general school population."

(*e*) Certainly two conclusions may be drawn from these data. The first one is that teachers do not expect perfection in children's behavior before classifying them as normal. They look for a reasonable amount of overflowing energy and occasional breaches of a social decorum as a phase of developing childhood and adolescence. The second is that the teacher's reaction to the whole child is conditioned not so much by single isolated acts of misconduct as by repeated or numerous related acts.

[3] Willard C. Olson. Problem Tendencies in Children: A Method for Their Measurement and Description. p. 3.

Behavior scores.—The assignment of a numerical value to each behavior difficulty and the method of scoring outlined in Chapter II, Part II, form a basis for further comparison between the EP and NPC groups. Table 5 shows clearly the difference between the two groups. It is to be remembered that the larger scores, in general, indicate a greater amount of problem behavior. A score of 0 would mean that no problems of the type listed in the record occurred during the term. The range actually found to exist in the initial records was for the EP group from 43 to 550; for the NPC group from 0 to 276. It is evident that there is distinct overlapping of the scores of the members of the two groups. Yet the difference between the means of the scores is a large one (155.2), while its standard error is relatively small (11.4). The difference between the means is thus more than thirteen times its standard error. It may therefore be stated with assurance that the difference between the two groups is a real one (so far as the teachers' observation is concerned), despite the fact that there are individuals within each group whose placement or whose score may be questioned.

TABLE 5.—*Behavior problem scores of problem and nonproblem groups (initial record)*

Read the table as follows: One child in the experimental problem (EP) group had an initial behavior problem score between 550 and 599; 1 had a score between 500 and 549; 3 had scores between 450 and 499, etc. Read similarly for the nonproblem control (NPC) group.

Score	Number of children	
	EP group (109)	NPC group (109)
550–599	/	
500–549	/	
450–499	///	
400–449	////	
350–399	𝍸 ///	
300–349	𝍸 𝍸	
250–299	𝍸 𝍸 𝍸 //	/
200–249	𝍸 𝍸 𝍸 𝍸 //	///
150–199	𝍸 𝍸 𝍸 𝍸	𝍸 ///
100–149	𝍸 𝍸 𝍸 /	𝍸 𝍸 𝍸 𝍸 𝍸 /
50–99	𝍸 /	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ////
0–49	/	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 //
Total	109	109
Mean score	238.8	83.6
Standard deviation	106.5	54.0
Difference between the means	155.2	
Standard error of the difference	11.4	

NOTE.—The standard error of the difference between the means of the two distributions was computed by the formula:

$$\sigma \text{ diff} = \sqrt{(\sigma m_1)^2 + (\sigma m_2)^2}$$

(See Truman L. Kelley: Statistical Method, p. 182.)

It must be remembered that the type of difficulty has great bearing upon a child's classification as a problem in those exceptional cases in which the number of difficulties reported may be few. The teacher

who recognizes extreme listlessness or reticence as a serious problem in childhood will refer to the clinic the child who displays such symptoms, even though it occurs alone or almost alone among the difficulties she has been asked to observe. His score is thus determined by a few serious behavior traits which, even at their maximum value, can not within the limits of this scoring method total as large a numerical value as the scores of those much more frequent cases for whom numerous difficulties are reported.

On the other hand, there are also rare cases in which a relatively large score may not, at least in the teachers' estimation, relegate a child to the problem group. A number of undesirable symptoms each occurring only once or twice, or even occasionally, may give the child a total score above that of his problem companion, and yet they may be of such a type that the teacher passes them over lightly. On the whole, however, it may be said that the scoring of the behavior record does definitely discriminate between the problem and the nonproblem group.

Other traits measured.—In the initial comparison of the problem and nonproblem groups, the following factors were also considered: Educational achievement as measured by the Stanford achievement test, physical condition as diagnosed by the examining physicians, certain personality traits, and social and economic status. Statistical details of these comparisons are omitted here in the interests of economy of space. The important findings, however, may be summarized as follows:

1. The educational achievement of the two groups, as measured by the Stanford achievement test, is not significantly different.
2. The nonproblem children show approximately as many physical defects as do the problem children.
3. The problem children have a higher average rating for extroversion, while the nonproblem children have a greater average score for introversion.
4. The only element of social status (within the limits of this investigation) which differentiated the two groups was the family relationship as expressed by a united home life or by a broken home. The problem children came in significantly greater numbers from broken homes.

CHAPTER IV. FINAL COMPARISON OF THE PROBLEM AND NONPROBLEM GROUPS

Two years elapsed from the time when the problem group was first brought to the attention of the clinical staff until the last behavior record was submitted to which consideration is given in this report. Many events transpired during this time which affected the development of the children in question. One hundred and nine problem children were scheduled for intensive clinical treatment, involving psychiatric, physical, psychological, social, and educational attention. One hundred and nine nonproblem children went their way from term to term, being given no further clinical attention than was involved in the initial examinations and receiving only the type of educational and health guidance which was accorded to all pupils alike in the schools of the city.

Both groups were equally subject to those changes in schools or teachers which occur in the life of a child as he advances in his grade progress. In fact, the follow-up study shows that of the children who remained in Berkeley until the end of the study, 60 per cent of the problem group and 69 per cent of the nonproblem group continued in the same school during the period of the investigation. An approximately equal percentage of both groups went on into junior or senior high school. The major difference in school placement that took place during the two years consisted of the transfers which were effected in seven of the problem cases by recommendation of the clinical staff.

1. *What changes took place in the overt problem behavior of the EP group from the first to the last behavior record?*—This is a question of major importance, for certainly, if an expensive clinical organization is to be maintained, the development of the children who are under its care should be adequately checked. The objective means of checking which was used in this study is the record of overt problem behavior as made out by the teachers in the schools. Unfortunately, pupil turnover in a city school population inevitably eliminates from term to term one or more of those who are included in such a study as this. In December, 1930, there were left of the original group 81 pupils. These 81 cases become the basis for the comparative data given in Table 6. The highest behavior scores of the first record (from 450 upward) have disappeared in the last record; the mean score has decreased by 49.5; and the standard error of this difference is 14.9. Since the difference between the means is more than three

times its standard error, it is safe to say that a significant improvement has taken place in the overt problem behavior of these children as judged by their teachers.[1]

TABLE 6.—*First and last behavior problem scores of the experimental problem group (81 cases)*

Read the table as follows: On the first record, 1 child had a behavior problem score between 550 and 599; 1 child had a score between 500 and 549; 3 children had scores between 450 and 499. Read similarly for scores on the last record. For meanings of statistical symbols used, see Table 5 and text.

Score	Number of cases	
	First record	Last record
550–599	/	
500–549	/	
450–499	///	
400–449	//	////
350–399	////	///
300–349	𝍸 ///	𝍸 𝍸
250–299	𝍸 𝍸 ////	𝍸 //
200–249	𝍸 𝍸 𝍸 //	𝍸 //
150–199	𝍸 𝍸 𝍸	𝍸 𝍸 ////
100–149	𝍸 𝍸 /	𝍸 𝍸 𝍸 𝍸 /
50–99	////	𝍸 𝍸 //
0–49	/	///
Total	81	81
Mean	240.2	190.7
σ dis	108.0	105.0
σ m	12.0	11.6
Diff m	49.5	
σ diff	14.9	

NOTE.—Kelley's formula was used for computing the standard error of the difference between two correlated measures, namely:

$$\sigma \text{ diff} = \sqrt{(\sigma m_1)^2 + (\sigma m_2)^2 - 2r_{12}(\sigma m_1)(\sigma m_2)}$$

(See Truman L. Kelley. Statistical Method, p. 182.)

A closer scrutiny of the behavior records of the group will indicate in which direction improvement lay. The relative frequencies of the occurrence of problems per child, as given in the first and last reports, are as follows:

Number of problems per child—	First record[2]	Last record
Occurring once or twice	3.6	6.1
Occurring occasionally	5.8	5.6
Occurring frequently	8.9	5.1
Total number of problems per child	18.3	16.8

These figures are an index of the fact that the improvement in behavior scores was due partially at least to a shift in the frequency

[1] This difference between the mean scores was not a matter of sudden occurence but of gradual development with each succeeding term, as is indicated by the following means taken at consecutive periods during the study: 240.2, 213.9, 192.2 190.7.

[2] Note the identity of the figures in this column with those given for the entire group of 109 children in Table 3. Evidently the 81 children who remained to the end of the study are in this respect a good representation of the original group.

of misdemeanors. The relative order of frequencies is exactly reversed in the two reports. According to these records, then, the children were manifesting problem behavior much less frequently during the last term of the study than during the first term.

Next, the *types* of problem behavior which were reported in the two records will be compared. Table 7 lists all behavior difficulties and the percentage of children who were reported for each one, regard-

TABLE 7.—*Behavior problems reported for experimental problem group on first and last records (81 cases)*

Read the table as follows: Inattention was reported in the first behavior problem record for 96.3 per cent of the problem children concerned; on the last record it was reported for 91.3 per cent. Read similarly for other behavior problems. Behavior problems are listed in descending order of occurrence on the first record.

Behavior problem	Per cent of children for whom problem was reported	
	First record	Last record
Inattention	96.3	91.3
Carelessness, slovenliness in work	83.9	79.0
Bad posture, slumping in seat	83.9	77.7
Restlessness, talking, fidgeting, asking to leave room too frequently	81.4	88.8
Laziness	69.1	69.1
Forgetting notes or books	67.9	71.6
Doing work other than assigned	64.2	74.0
Teasing	64.2	53.1
Day dreaming	62.9	69.1
Fighting	62.9	45.6
Sulkiness	58.0	49.4
Dirty hands, face	58.0	56.8
Tardiness	55.5	55.5
Lying	55.5	35.8
Exuberance (laughing, giggling, whistling)	54.3	61.7
Showing off	53.1	60.5
Temper outbreaks	51.8	37.0
Eating candy, fruit; chewing gum	48.1	56.8
Dirty belongings, books	44.4	37.0
Cheating in school work	39.5	37.0
Cheating in play	38.2	23.4
Excessive reticence (timidity, easily embarrassed)	38.2	33.3
Weeping (cries easily)	38.2	28.4
Deliberate refusal to obey	37.0	23.4
Impertinence	37.0	40.7
Dirty clothes	37.0	43.2
Stealing	35.8	20.9
Profanity	32.1	34.5
Resistance to punishment	29.6	17.2
Injury to others (not smaller)	29.6	25.9
Bullying	29.6	35.8
Damage to school property	28.4	22.2
Damage to personal property	24.7	18.5
Hurting smaller children	24.7	28.4
Vulgar speech	23.4	24.7
Truancy	18.5	14.8
Damage to neighborhood property	18.5	14.8
Writing notes	16.0	16.0
Masturbation (suspected)	16.0	9.8
Sexual pictures or stories	12.3	11.1
Hurting animals	6.1	8.6
Masturbation (known)	4.9	2.4
Heterosexual activity	4.9	2.4
Vermin	3.7	1.2

less of frequency, in the first and the last records. Examination of the table reveals 14 problems for which a greater number of children were reported in the last record than in the first one, but it also reveals 27 problems for which fewer children were reported the second time. In three cases the percentages on the two records are identical. For the 14 cases in which the second percentage is larger than the first, the difference between the two percentages varies from 1.3 to 9.8; the mean difference is 5.4. For the 27 cases in which the second percentage is smaller than the first, the difference between the two ranges from 1.2 to 19.7; the mean difference is 7.9. Five of these latter differences [3] are between two and three times the standard error of the difference, while none of the former reaches even this extent. The whole picture of the two records is one which indicates not only a decrease in the frequency with which a given type of problem behavior is observed in a given pupil by the teacher but also a tendency toward decrease in the number of children in which it is observed at all. Something has happened in the lives of these boys and girls which has made the group as a whole less of a problem group in the eyes of their teachers, although it has by no means eliminated altogether the manifestations of undesirable conduct.

2. *What changes took place in the overt problem behavior of the NPC group from the first to the last behavior record?*—The nonproblem group will now be subjected to the same technique of comparing the first and the last records and of considering the results in relation to those which have just been cited for the problem group. Eighty-five of the former were enrolled in the Berkeley schools in December, 1930. Table 8 shows the distributions of the scores and other statistical data for the initial and the final reports on these children. Two points will at once be noted: First, the increase in the range and consequent variability of the two distributions; second, the significant increase in the means.

Instead of lowering their scores, these children have raised them: instead of eliminating the highest scores of the original records, they have added still higher ones. The difference between the means of the two distributions is 22 in a positive direction. This is more than three times its standard error (7.1), and therefore stands the test of statistical reliability. These children as a group have actually developed significantly more problem behavior during the two years of the study,[4] while the experimental problem group have shown a definite improvement.

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[3] The percentages showing these differences are *italicized* and *underscored* in Table 7.

[4] As with the problem group, so also the change which took place in the problem scores of the nonproblem group was not a sudden one occurring in any one term, but developed from one semester to the next, as is shown by the following means, taken in successive terms: 82, 83.4, 97.6, 104.

TABLE 8.—*First and last behavior problem scores of the nonproblem control group (85 cases)*

Read the table as follows: On the first record no child had a behavior problem score between 275 and 299, or between 250 and 274; 2 children had scores between 225 and 249, etc. Read similarly for scores on the last record. For meanings of statistical symbols, see Table 5 and text.

Score	Number of cases	
	First record	Last record
275–299		/
250–274		/
225–249	//	///
200–224	/	////
175–199	//	///
150–174	卌 /	卌 卌
125–149	卌 /	卌 卌 /
100–124	卌 卌 /	卌 ///
75–99	卌 卌 卌 //	卌 卌 ///
50–74	卌 卌 //	卌 ///
25–49	卌 卌 卌 //	卌 卌 /
0–24	卌 卌 /	卌 卌 //
Total	85	85
Mean	82.0	104.0
σdis	53.7	68.0
σ m	5.8	7.4
Diff m	22.0	
σ diff	7.1	

NOTE.—Intervals of 25 were used in this table instead of intervals of 50, as in Table 6, in order to show the differentiation more clearly. The statistical results of using either type of distribution are very similar.

The more detailed analysis of the respective behavior records corroborates this finding. It was found for the *problem* group that the difficulties reported as "occurring frequently" became less numerous, while those reported as "occurring once or twice" became more numerous. Consequently one phase of improvement lay in the frequency with which a given type of conduct was observed. With the *nonproblem* group all degrees of frequency show some increase, as follows:

Number of problems per child—	First record[1]	Last record
Occurring once or twice	4.3	5.3
Occurring occasionally	2.8	2.9
Occurring frequently	1.1	1.9
Total number of problems per child	8.2	10.1

In analyzing these records still further by computing the percentage of children for whom each problem was reported without regard to frequency, the disparity between the two series may be seen even more clearly. Table 9 gives these data, and one can not help but be impressed by the fact that, whereas for the problem group 27 types of difficulties showed a *decrease* in the percentage reported, in

[1] A comparison of the figures in this column with those of the total number of 109 nonproblem children (in Table 4) will show that the group remaining at the close of the study is in this respect representative of the original larger group.

this group 34 types of undesirable conduct showed an *increase*, and in 6 of these (those *italicised* and *underscored* in the table) the difference between the percentages is from two to four times its standard error. The boys and girls who at the beginning of the study were adjudged by their teachers as evincing no serious overt behavior problems seem to have developed during the two years of study significant tendencies in that direction.

TABLE 9.—*Behavior problems reported for nonproblem control group on first and last records (85 cases)*

Read the table as follows: *Inattention* was reported on the first behavior problem record for 68.2 per cent of the nonproblem children; on the last record it was reported for 74.1 per cent. Read similarly for other behavior problems. Behavior problems are listed in descending order of occurrence on the first record.

Behavior problem	Per cent of children for whom problem was reported	
	First record	Last record
Inattention	68.2	74.1
Bad posture, slumping in seat	55.3	63.5
Excessive reticence (timidity, easily embarrassed)	50.5	48.2
Daydreaming	49.4	60.0
Restlessness, talking, fidgeting, asking to leave room too frequently	47.0	54.1
Carelessness, slovenliness in work	44.7	61.1
Doing work other than assigned	43.5	44.7
Laziness	41.2	48.2
Forgetting notes or books	36.4	44.7
Eating candy, fruit; chewing gum	35.3	36.4
Teasing	31.7	37.6
Dirty hands, face	31.7	40.0
Exuberance (laughing, giggling, whistling)	30.5	40.0
Tardiness	29.4	38.8
Sulkiness	23.5	23.5
Temper outbreaks	23.5	17.6
Fighting	23.5	28.2
Weeping (cries easily)	17.6	18.8
Showing off	16.4	32.9
Dirty belongings, books	14.1	23.5
Writing notes	12.9	22.3
Cheating in school work	11.7	14.1
Impertinence	10.5	17.6
Dirty clothes	10.5	21.1
Deliberate refusal to obey	7.0	9.4
Cheating in play	7.0	7.0
Lying	5.8	10.5
Damage to personal property	5.8	7.0
Injury to others (not smaller)	5.8	8.2
Resistance to punishment	4.7	7.0
Stealing	3.5	1.1
Profanity	3.5	17.6
Bullying	3.5	18.8
Damage to school property	2.3	12.9
Masturbation (suspected)	2.3	2.3
Vermin	2.3	1.1
Truancy	1.1	2.3
Damage to neighborhood property	1.1	.0
Hurting smaller children	1.1	3.5
Vulgar speech	1.1	5.8
Sexual pictures or stories	1.1	3.5
Hurting animals	.0	.0
Masturbation (known)	.0	.0
Heterosexual activity	.0	1.1

TABLE 10.—*Behavior problem scores of 68 pairs of problem and nonproblem children (initial record)*

Read the table as follows: Of 68 problem children, 1 child had an initial behavior problem score between 550 and 599; 1 had a score between 500 and 549; 3 had scores between 450 and 499, etc. Read similarly for 68 nonproblem children. For meanings of statistical symbols, see Table 5 and text.

Score	Number of children	
	68 problem children	68 nonproblem children
550–599	/	
500–549	/	
450–499	///	
400–449	//	
350–399	////	
300–349	𝍸 /	
250–299	𝍸 𝍸 //	
200–249	𝍸 𝍸 𝍸 /	///
150–199	𝍸 𝍸	𝍸 /
100–149	𝍸 ////	𝍸 𝍸 //
50–99	///	𝍸 𝍸 𝍸 𝍸 𝍸
0–49		𝍸 𝍸 𝍸 𝍸 //
Total	68	68
Mean	247.3	81.3
σ dis	111.5	55.0
σ m	13.6	6.7
Diff m	166.0	
σ diff	15.1	

3. *What does the comparison between the EP and NPC groups show if they are limited to those equated pairs which continued unbroken to the end of the study?*—The discussions under questions 1 and 2 have dealt with the entire group of problem and nonproblem children, respectively, for whom records were available at the beginning and again at the end of the study. One further step will now be taken in the comparative analysis by the elimination of every child in either group whose mate in the other group was lost to the study. This process left 68 of the originally equated pairs of problem and nonproblem children who remained for comparison with each other. What that comparison reveals as to behavior scores is given in Tables 10 and 11.[6]

[6] In order to insure the representative character of this group of equated pairs, the *initial records* of each series were compared with those of the complete group of 109 children and were found to be statistically similar, as the following data will signify:

	109 problem children	68 problem children	109 nonproblem children	68 nonproblem children
Mean behavior score	238.8	247.3	83.6	81.3
Standard deviation of distribution	106.5	111.5	54.0	55.0
Standard error of mean	10.2	13.6	5.2	6.7
Total number of problems per child	18.3	19.0	8.2	8.2

TABLE 11.—*Behavior problem scores of 68 pairs of problem and nonproblem children (final record)*

Read the table as follows: Of 68 problem children, 4 had final behavior problem scores between 400 and 499, 2 had scores between 350 and 399, etc. Read similarly for 68 nonproblem children. For meanings of statistical symbols, see Table 5 and text.

Score	Number of children	
	68 problem children	68 nonproblem children
400–449	////	
350–399	/	
300–349	𝍸 //	
250–299	///	//
200–249	𝍸	𝍸
150–199	𝍸 𝍸 //	𝍸 𝍸 /
100–149	𝍸 𝍸 𝍸 ////	𝍸 𝍸 𝍸
50–99	𝍸 𝍸 //	𝍸 𝍸 𝍸 ////
0–49	//	𝍸 𝍸 𝍸 /
Total	68	68
Mean	184.7	106.8
σ dis	106.0	67.0
σ m	12.9	8.1
Diff m	77.9	
σ diff.	15.2	

The following points are worthy of emphasis:

(*a*) When the original groups have been reduced for exact comparative purposes from 109 to 68 pairs of problem and nonproblem children, the difference between the means of their initial behavior scores remains statistically of real significance, being equal to eleven times its standard error. (See Table 10.)

(*b*) In the final records of these 68 pairs of children, the difference between the means of behavior scores has been cut in half, and is equal only to five times its standard error. (See Table 11.) This difference is still large enough to be within the limits of statistical reliability.

(*c*) The marked reduction of the difference between the scores of these two groups of children has been brought about through a significant improvement in the scores of the problem children and a significant deterioration in the scores of the nonproblem children. These changes in opposite directions have brought the groups closer together in their final status.

Additional evidence is provided by the comparison of problem frequency in these same two groups at the beginning and at the end of the study, which may be briefly summarized as follows:

	68 problem children		68 nonproblem children	
	First record	Last record	First record	Last record
Number of problems per child occurring once or twice	3.8	6.3	4.4	5.9
Number of problems per child occurring occasionally	5.8	5.4	2.6	2.9
Number of problems per child occurring frequently	9.4	4.7	1.2	1.9
Total number of problems per child	19.0	16.4	8.2	10.7

These figures show again the reduction of problem behavior on the part of the original problem group and its increase on the part of the original nonproblem group. Also, by comparing the above data with those given on pages 50 and 53, it may be seen that the comparison of the first and last records of the 68 paired groups results in figures almost identical with those obtained from the comparison of the first and last records of 81 problem children and 85 nonproblem children, respectively, who included some unequated individuals. The fact may thus be stressed that the findings secured by studying various groups and combinations of data all consistently support one another by pointing to the same conclusions.

CHAPTER V. THE PROBLEM CONTROL GROUP

In Chapter I, Part II, it was explained that the canvass of serious problem children in the schools resulted in the location of 250 such cases. One hundred and thirteen of these, which constituted, in the estimation of principals and teachers, the most serious of the group and for which home cooperation seemed forthcoming, were scheduled for intensive clinical treatment. At the close of the first year of the experiment and each semester thereafter, a School Record B was filled out for each of the remaining children reported who were still in the Berkeley schools. Of these records, 50 were selected which yielded the highest problem scores on the first record submitted. There are thus for these 50 children three consecutive records which give some basis for an analysis of their development and for a comparison of their progress with that of the problem group which did receive clinical help.

General description of the group.—This group of 50 is made up of 45 boys and 5 girls. The age range extends from 5 to 14 years. The intelligence quotients range from 74 to 130, with a median of 99. Their average educational achievement is not significantly different from what would be expected of any children of the same intelligence. In physical condition they resemble the other two groups studied. In the percentage of broken homes they resemble the experimental problem group.

Behavior records.—In considering the development of the behavior of these 50 children, it is important to note that they were given no special clinical treatment during the time of the experiment. They did receive, however, all the help which the regular procedure of the schools afforded, and it would be expected that much attention was centered upon each one of them by principal, counselor, and teachers in the effort to adjust their difficulties.

It should also be kept in mind that these 50 cases, while they were considered serious, did not represent the most urgent types of maladjustment for which teachers sought assistance. In the first place, the method of selection of cases for clinical treatment, as described in Chapter I, Part II, insured the choice of those which were causing the school the greatest amount of difficulty. In the second place, 23 of the original problem group had police records on one or more counts of juvenile offenses, and 19 of these were among the 81

cases which remained to the end of the study; while in this second group of 50 children, only 3 had police records, and in 2 of these cases the difficulty developed during the period of the study. These two facts are sufficient evidence to justify the statement that, at the beginning of the experiment, the records of these 50 children (had they been taken at that time) would have yielded a mean behavior problem score lower than that of the 109 children in the original experimental group or of the 81 children in this group for whom complete data are available both at the beginning and at the end of the investigation.

At the close of the term (August–December, 1929) for which the first record was taken for these 50 children, their mean behavior problem score was 213.3. For the experimental problem group of 81 children the mean behavior problem score at this time was 213.9. The two groups are, therefore, practically together at this point; but the EP group had already decreased its mean score since the beginning of the study (a year previous) by 26.3 points.[1] Even though there is for the 50 PC cases no behavior record corresponding in time to the first one of the EP group to give statistical proof to the fact, yet from the evidence cited in the previous paragraph it is apparent that any such decrease in their records would have been highly improbable, since their initial problem behavior would not have scored as high as that of the EP group.

How the development of the two groups compares beyond this point (December, 1929) can be traced through subsequent behavior records. In Table 12 are given the distributions of the problem scores of the 50 children who did not receive clinical attention, as of the first and last records available. The means of these distributions show a decrease of 8.3 points from December, 1929, to December, 1930; but the standard error of this difference is 15, almost twice as great as the difference itself. The chances are only 71 in 100 that the true difference is greater than zero. There is little to indicate, therefore, that this group of children, during the three semesters in which behavior records were submitted for them, have shown any change in overt problem behavior which is statistically reliable.

During the same time the mean behavior problem score of the EP group decreased from 213.9 to 190.7. The difference is 23.2—almost three times as great as that which is obtained for the 50 cases in the PC group. The standard error of this difference is 12.8. The chances are 96 in 100 that a significant change has taken place during this one year in the overt problem behavior of the group.

[1] From 240.2 to 213.9.

TABLE 12.—*Behavior problem scores of 50 problem children who were not given clinical attention (problem control group)*

Read the table as follows: Of 50 problem children not given clinical attention, 2 had behavior problem scores for August to December, 1929, between 400 and 449; 5 had scores between 350 and 399, etc. Read similarly for scores for August to December, 1930. For meanings of statistical symbols, see Table 5 and text.

Score	August–December, 1929	August–December, 1930
400–449	//	/
350–399	𝍸	//
300–349	///	𝍸 /
250–299	𝍸 /	𝍸 /
200–249	𝍸 /	𝍸 ///
150–199	𝍸 𝍸 ////	𝍸 𝍸
100–149	𝍸 𝍸 //	𝍸 𝍸 /
50–99	//	𝍸
0–49		/
Total	50	50
Mean	213.3	205.0
σ dis	93.0	92.0
σ m	13.3	13.1
Diff m	8.3	
σ diff	15.0	

When the time is extended to include the year previous to this one, the change in the EP group is doubled and becomes statistically certain, as has already been demonstrated in Chapter IV, Part II. No positive statement can be made regarding the total change (in these two years) which has taken place in the PC group, owing to the lack of behavior problem records for the first year of the study. But even if the amount of change during the first year equaled that which occurred during the second year (as it did for the EP group), the total amount of change for the two years would not constitute a reliable difference. The statistical evidence of the records for both groups during the second year of the study plus the deductions which may be made for the first year of the study would point to the conclusion that the change which took place in the PC group during the two years was not a significant one.

Uncooperative cases in the experimental problem group.—In attempting to carry out a program of behavior adjustment, every child guidance clinic experiences at times a lack of understanding, insufficient cooperation, waning interest, or all of these together, on the part of parents or guardians, which blocks the realization of its plans for treatment. This obstacle was encountered in the Berkeley program also. During the two years of the study there were 20 of the experimental problem cases which in reality had little actual clinical treatment, because those who were responsible for the child in question became indifferent or even refused to follow the clinical recommendations. This occurred despite the fact that at the beginning of the program they had expressed their desire to cooperate.

All these 20 cases were continued in the EP group to the close of the investigation. This was done on the basis, first, that each of them had at the initiation of the study been matched with a nonproblem control mate, and the unit character of the study demanded that they be retained; second, that clinical contacts had at least been begun and some influence might have carried over to subsequent attitudes or actions of the family; third, that principals and teachers had, through these initial clinical contacts, been given insight into the nature of the child's difficulties and might well have made some change in their own treatment of him by reason of such knowledge; fourth, that the retention of these children in the group would be in the interests of conservatism in evaluating the development of the clinical group as a whole.

When these 20 cases are isolated, the significant fact appears that their mean behavior problem scores in the first and last records submitted (two years apart) differ by only three points. The first mean is 212.2 and the last one is 209.1. While the sample is too small for detailed statistical treatment, this finding lends corroboration to that reported for the 50 children in the PC group, namely, that the chances are small that the true difference between the first and last problem scores is greater than zero.

An even more significant point is noted in the development of the EP group when these 20 cases are subtracted from the 81 for whom complete records are available from beginning to end of the study. For the remaining 61 children who were actually under clinical care during the entire period of the investigation, the mean behavior problem score on the *first* record is 248.7 (instead of 240.2 as it was for the total group of 81 children). The mean behavior problem score on the *last* record is 185.1 (instead of 190.7 for 81 children).

Two facts are evident from these comparisons: First, the reliable difference already reported as existing between the initial and final problem scores of the EP group becomes even more certain when the 20 uncooperative cases are subtracted; second, this is true despite the fact that the 61 children remaining include more serious cases with high initial behavior problem scores, as may be seen by comparing the means of the respective groups.

There are thus consistent indications that the problem children who received continued clinical attention during the two years of the study improved significantly in behavior, as measured by behavior problem score, while the problem children who received no clinical attention or who were deprived of its continuance due to lack of cooperation remained altogether or almost stationary in the development of overt problem behavior.

CHAPTER VI. SUMMARY AND INTERPRETATION OF THE EXPERIMENT

1. This experiment represents an attempt to treat and to evaluate statistically the development of overt problem behavior in a group of 109 school children who were considered the most serious problem cases in the schools, and who were referred for treatment to a behavior clinic. For comparative purposes two other groups of children were studied according to the same technique. One was a group of 109 *nonproblem* children, who were selected upon teachers' recommendations as a control group and were equated individually with the experimental group on the basis of sex, age, grade, school, and intelligence quotient. The other was a group of 50 *problem* children who also presented behavior problems, but who were not given any clinical attention. The members of this latter group obviously could not be equated with those of the experimental group, but statistical analysis showed them to be quite similar as a whole in factors of sex, age, grade, and intelligence.

2. The immediate objectives of the investigation are to compare during two years of time the development of these three groups of children with respect to overt problem behavior and to interpret the findings in their relationship to the clinical treatment given.

3. The findings indicate that these problem children, as observed by their teachers, are predominantly boys; that they come from all age groups and from all ranks of intelligence; that their average intelligence is only slightly below normal; that they can without difficulty be matched with a group of nonproblem children of the same general level of intelligence; and that their educational achievement is not significantly different from what one would expect of any children of the same age and intelligence.

4. Further statistical comparison reveals no reliable differences among the three groups in physical condition as analyzed by examining physicians. According to these data, problem children present no more physical defects than do nonproblem children with whom they have been equated on the basis of sex, age, grade, and intelligence.

5. Social data available reveal no reliable differences between the groups except in the percentage of broken homes represented. Both problem groups include a significantly larger percentage of children coming from such homes than does the nonproblem group.

6. A technique was evolved by which the overt problem behavior of each child was expressed in terms of a numerical score. This score

was computed at the close of each term on the basis of (*a*) an objective record of problem behavior which represented the composite report of the principal and teachers in the school which the child attended; (*b*) a statistical evaluation of the relative seriousness of each type of problem reported; (*c*) a statistical evaluation for each problem of the relative seriousness of varying frequencies of occurrence.

7. This scoring method showed a real differentiation between the problem and the nonproblem groups, the difference between the means of their scores on the first records taken being equal to more than thirteen times the standard error of the difference. Teachers' initial recommendations relative to the classification of a child as a problem or nonproblem proved to be consistent with the reports on overt problem behavior which they made out on the basis of their observations during the term.

8. While there is a reliable statistical difference between the scores of the problem and nonproblem children, yet teachers' records show that they do not expect perfection in a child before classifying him as a nonproblem. The concept of normal childhood carries with it a recognition of the fact that the child is a developing personality subject to all the mistakes, missteps, and failures of immaturity. The fact that on the initial records teachers report 8.6 overt behavior problems per nonproblem child indicates the acceptance by them of a certain amount of problem behavior as normal. The types and the frequency of such behavior are determining factors in relegating a child to the problem group.

9. During the two years of the experiment a significant change for the better took place in the behavior scores of the problem children who were under intensive clinical treatment. The difference between the means of the behavior problem scores of the first and last records taken is equal to more than three times its standard error. This improvement is apparent also when one compares the types and the frequency of behavior problems as reported on the two records.

10. During the same period of time a significant change for the worse took place in the behavior scores of the nonproblem children, the difference between the means of the behavior problem scores on the first and last records being equal also to more than three times its standard error. An analysis of the records from the standpoint of types and frequency of problems reported shows this change from another angle. These children received all the benefits of the regular program of school counseling and adjustment, but were not given any clinical attention.

11. These changes in opposite directions served to bring the two groups of problem and nonproblem children closer together, until at the end of the study the difference between the mean behavior problem scores was only five times the standard error of the

difference. This is, however, within the realm of statistical reliability, and the two groups are thus still distinct as problem and nonproblem groups. The relative amount of improvement of the problem children was approximately equal to the amount of deterioration of the nonproblem children.

12. The control problem group of 50 children who were not referred for clinical attention shows no significant change during the year for which records of problem behavior are available for them. Deductions drawn from the method of selecting the most serious cases for treatment and from the relative progress made by the two problem groups during the second year of the study indicate that the change in the overt problem behavior of the problem control group, even for the two years of the complete program, was insignificant.

13. A group of 20 problem children who were originally scheduled for clinical attention as members of the experimental group were denied such assistance due to lack of cooperation on the part of parents or guardians. An analysis of the records of these 20 children over two years of time corroborates the deductions made in paragraph 12 above, since their behavior problem scores remained stationary from first to last record.

14. The subtraction of these 20 cases from the original group of 81 experimental problem children increases the already significant improvement noted for the entire group. This fact is true despite the fact that the 61 children remaining include more serious cases with high initial behavior problem scores.

The causal factors of problem behavior.—An important fact to be kept in mind in the interpretation of this experiment is that the investigation compared a group of problem children not with an unselected school population but with an equated group of nonproblem children who at the beginning of the study displayed good social adjustment. Yet they were of the same age, showed the same levels of intelligence and achievement, had just as many physical defects, and represented the same economic status as the serious problem children. Even the broken home, although it occurred significantly more often in the problem group, appeared also in the nonproblem group.

Evidently no one of these items itself could be held responsible for the undesirable behavior of the problem group, though each may have involved a contributing factor. The "whole child" and the "total situation" have become familiar terms in psychology and education. The former may be defined as the integrated psychobiological organism which the individual represents. The latter may be defined as the sum total of all physical, intellectual, social, and emotional influences which act upon that organism and

to which it reacts. With such interaction between the individual and his environment and with all the multiplicity of relationships which obtain, it may be expected that the same factor occurring in different total situations would affect different individuals in different ways. The causal factor of problem behavior is thus conceived as infinitely more than a single element. It comprises rather the totality of all elements in the child's environment in their relationship to one another and to his own individuality. No attempt has been made in this study to isolate or to analyze these elements.

Application to the nonproblem group.—The records of the nonproblem children show a tendency toward the development of problem behavior. The significant change that took place for the worse in their mean problem scores during the two years of the study indicates that fact. It appears as though some of the elements contributing to problem behavior were latent at the beginning of the study, but none the less existent in their lives. It appears also that with the changes which occurred in the total situational unit during the ensuing two years the influence of these elements began to come to the foreground and to express itself in the actions of the boys and girls concerned.

Even during the semester at the close of which the first behavior records were submitted for the nonproblem group, this process seems to have begun in the lives of some of the children in the group. Each child was admitted into the nonproblem group at the beginning of the semester only upon the assurance of principal and teachers that he had given no evidence whatever of troublesome behavior. Yet at the end of the same semester there were rare instances in which the child was reported for frequently occurring acts which were evaluated even by the teachers as among the more serious types of behavior difficulty.

This fact must be accounted for either by a change in the child's total overt behavior pattern or by a lack of previous careful observation of his behavior by the teachers in question. Either one or both of these possibilities might, of course, have been true; but in the light of the subsequent changes in the behavior records of these children, it is only logical and consistent to suppose that such changes may well have dated from the early days of the study, and that hitherto hidden influences were already beginning to make felt their power to modify conduct.

The problem group versus the nonproblem group.—With the experimental problem group there were also influences at work; yet here the line of development took the opposite direction. Overt problem behavior decreased, and continued to decrease during the two years of the study. The important question to be answered is, Why should

these two changes have taken place in opposite directions with the two respective groups?

Within the limits of this study there was no observable difference between the two groups in physical condition or in economic status. Family relationships favored the nonproblem group. Both groups were exposed to the same type of teaching in the same schools and were equally entitled to the benefit of any types of school adjustment which appeared on the surface to be needed. Except for a small number of the problem children who were transferred from one school to another by clinical recommendation, both groups were equally affected by those changes in schools and teachers which occur in the educational life of a child.

Concerning the nonproblem group, some may urge that the very attention which teachers were asked to give to their behavior during the term would serve to increase the number of undesirable acts observed. Yet, if this were true with these nonproblem children, then it should have been true also with the problem children, who were the object of even greater attention. Both groups seemed thus equally affected by this or any other type of error in the teachers' observations.

Since the two groups were equated individually on the basis of age, they were both equally subject to the influence of those physical and mental changes which accompany the process of sheer growth. Since they were equated on the basis of intelligence, no explanation for their varying development can be sought there.

So far as this investigation goes, the only outstanding element of difference in the situation surrounding the two groups was the intensive individual study and clinical treatment accorded the members of the experimental problem group. Principal, teachers, visiting counselor, psychologist, pyschiatrist, and pediatrician were all centering attention upon them, working with parents or guardians, studying the family and environmental situations, prescribing physical, medical, and social adjustments in keeping with the needs of the individual child, following up their recommendations through repeated visits of the child to the clinic and through repeated contacts of the visiting counselor with the home.

This procedure carried on for two years might be expected to bring about some results in the total behavior pattern of the child. The fact that the behavior pattern of the group as a whole was changed according to the observations of the school—and changed for the better—has been demonstrated.

The children in the nonproblem group, on the other hand, were members of a class and a school situation. Whatever behavior difficulties arose were met by teacher and principal. The examinations of physical condition which were made by the clinical staff were not

followed up by that body. Any health problems which demanded attention were met by the parents or guardians in their own way, with the ordinary help that might be given in needy cases by the city health center. Visiting counselors had no contacts with the children or with their homes except to make a brief report on the items considered in this study. And these children showed a progressive deterioration in their scores on problem behavior which was almost as significant as was the improvement in the scores of the problem children under clinical treatment.

Whether or to what extent this process of deterioration would continue in the nonproblem group, the present investigation does not attempt to show; nor does it attempt to predict whether or when the two lines of development would meet which represent the changes in opposite directions of the problem and nonproblem groups. The nature of the data is such that it does not warrant elaborate statistical treatment for the purpose of making prediction; hence none is offered. Only through continuance of the clinical program and through continued records of all the children concerned in the study can additional evidence be forthcoming which will either substantiate or weaken the findings which are here presented. At the present time, however, there seems to be sufficient reason to conclude on the basis of the experimental statistical data regarding these two groups that there is a positive association between clinical attention and the decrease of overt problem behavior in school children.

The problem control group.—When to the evidence cited above there is added that which is furnished by the study of the development of the problem children who were given no clinical attention, the conclusion which has been offered seems even more reasonable, for these children, while similar to the other problem group in observed characteristics, showed no appreciable change in their problem scores, maintaining to the end of the study the same general level of problem behavior. Yet they were subject to all the opportunities of adjustment which the school within itself might have to offer, lacking in this respect only the intensive study and treatment of specialists on the clinical staff.

Limitations of the study.—There is no question that the limitations imposed upon this experiment affect the assurance with which any final conclusions may be drawn. The first of these is the restriction in the number of subjects and in the time limits of the program. Had it been possible to follow the development of 1,000 children in each group instead of slightly more than 100, the results of the study would have been significant by just so much more. Had the program extended over a period of five years instead of two, the trend which has appeared in the present study would have been either verified or denied.

The second major limitation of the study concerns the lack of absolute control of the subjects. Hereditary factors, home situations, and other environmental influences may have entered in, which have not been given due weight in the evaluation of the development of these children. The equation of the problem and nonproblem groups was carried out to include a number of important factors, but obviously this could not take into account all those variable elements which enter into the analysis of a human life.

Finally, the instrument of measurement which was used to evaluate objectively the development of problem behavior is admittedly crude. While it has differentiated *groups* of problem and nonproblem children (as observed by their teachers) to a significant degree, its application to *individuals* is dependent upon further refinement. Repeated testing of its validity and reliability with other groups of children would yield additional evidence regarding its value.

Conclusions.—With full recognition of these limitations of the study, one can point to three major conclusions which all the findings consistently support. These are as follows:

1. That all children really are "problem" children in that they do now or may present overt behavior difficulties which should receive attention looking toward early adjustment, and that such overt problem behavior varies in degree from that which is close to zero to that which places a child in the ranks of juvenile delinquency.

2. That serious problem behavior among children is the resultant of a combination of numerous factors, no one of which has been isolated as exclusively responsible, and that this principle of multiple causation demands careful observation of all children in order to detect the initial symptoms of maladjustment.

3. That prolonged intensive study and clinical attention by a group of psychiatric, psychological, medical, and social specialists has a direct positive relationship to a progressive change for the better in the overt problem behavior of children.

Significance of conclusions.—If the foregoing conclusions are accepted, then there can be but one way to go. That will lead us toward the realization of clinical services which shall reach into every school community and which shall have as its objective the total welfare of every child. Even with the phenomenal increase in clinical facilities which has taken place during the past 10 years, there are still hundreds of thousands of children who are in need of help, yet with no means of securing it. The schools are doing what they can, or what they think they can; health agencies are making their contribution; churches, clubs, recreational agencies are offering opportunities; social welfare groups give assistance where there is economic need; and juvenile police officers pick up the cases that everyone else has failed with. Could all of these forces unite in

building up an efficient, coordinated clinical program that shall make available to every child who needs them the services of sane, practical mental hygiene, they would be taking a long stride toward the realization of their common objective. Physical well-being, educational adjustment, social and spiritual content are all aspects of the same child. They can no more be treated as separate entities than can the trees and the trails and the brook that make up a woodland scene. We are beginning to see that this is true; now it is time to follow sight with action.

It is time for the school to give up its attitude of aloofness and to take its place as only one of numerous social agencies affecting the development of childhood. It is time for health enthusiasts to recognize the forces outside of their own immediate field that contribute to physical well-being. It is time for the police forces to reach out the hand of education and prevention rather than the hand of punishment. And it is time for all these agencies (and all others of which the community may boast) to join hands in a well-organized effort to modify the undesirable behavior of children before it assumes serious proportions. Not until society is willing to devote itself to continued, coordinated, and effective treatment of problem behavior of *children* can it hope to succeed in any effective curtailment of crime and psychosis among *adults*.

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APPENDIX

BERKELEY PUBLIC SCHOOLS

Study of Special Cases

SCHOOL RECORD A[1] (INITIAL REPORT ONLY)

School _____ Date _____
Name _____ Sex (girl) (boy).
Date of birth _____ Age _____ yrs. _____ mos.
Grade _____ (Indicate section X, Y, Z, special class, or other grade adjustment.)
Signature of teacher responsible for this record _____

A. INITIAL SCHOOL RECORD

(This record should represent the best composite judgment of all those who have worked with the child during the past six months)

Age at entering school _____ yrs. _____ mos.
No. times not promoted _____ In which grades? _____
No. grades skipped _____ Which ones? _____
No. days absent during last semester: (0–5) (6–10) (11–15) (more than 15 days).
Average scholarship during last semester: (Good) (Fair) (Poor).
Average scholarship during current semester: (Good) (Fair) (Poor).

Behavior difficulties: Encircle in each case the number and letter (10a, 10b, etc.) which apply to the behavior difficulty in question. Consider the child's total behavior as known to the school for the *past six months*. Make some one designation for every difficulty. On the long dotted lines add any others not included in this list.

	Occurrence			
	Never	Once or twice	Occasionally	Frequently
Irregularity:				
Tardiness	10a	10b	10c	10d
Truancy	10e	10f	10g	10h
Disobedience:				
Deliberate refusal to obey	11a	11b	11c	11d
Resistance to punishment	11e	11f	11g	11h
Doing work other than assigned; e. g., reading stories during lesson	11i	11j	11k	11 l
Writing notes	11m	11n	11o	11p
Eating candy, fruit, or chewing gum	11q	11r	11s	11t
Lack of application:				
Restlessness, talking, fidgeting, asking to leave the room too frequently	12a	12b	12c	12d
Inattention	12e	12f	12g	12h
Carelessness, slovenliness in work	12i	12j	12k	12 l
Laziness	12m	12n	12o	12p
Daydreaming	12q	12r	12s	12t
Forgetting notes or books	12u	12v	12w	12x
Bad posture, slumping in seat	12y	12z	12xx	12yy
Dishonesty:				
Lying	13a	13b	13c	13d
Cheating in school work	13e	13f	13g	13h
Cheating in play	13i	13j	13k	13 l
Stealing	13m	13n	13o	13p

[1] School Record B contains the same list of behavior items as Record A. It is adapted for use at the end of each semester.

	Occurrence			
	Never	Once or twice	Occasionally	Frequently
Damage to property:				
School property	14a	14b	14c	14d
Personal belongings or wearing apparel of others	14e	14f	14g	14h
Neighborhood property	14i	14j	14k	14l
Cruelty:				
Hurting animals	15a	15b	15c	15d
Hurting smaller children	15e	15f	15g	15h
Injury to others, not smaller	15i	15j	15k	15l
Profanity	16a	16b	16c	16d
Emotional instability:				
Temper outbreaks	17a	17b	17c	17d
mpertinence	17e	17f	17g	17h
Bullying	17i	17j	17k	17l
Fighting	17m	17n	17o	17p
Teasing	17q	17r	17s	17t
Eruberance (laughing, giggling, whistling)	17u	17v	17w	17x
Showing off	17y	17z	17xx	17yy
Sulkiness	18a	18b	18c	18d
Excessive reticence (timidity, easily embarrassed)	18e	18f	18g	18h
Cries easily	18i	18j	18k	18l
Sex difficulty:				
Vulgar speech	19a	19b	19c	19d
Sexual pictures or stories	19e	19f	19g	19h
Masturbation (suspected)	19i	19j	19k	19l
Masturbation (known)	19m	19n	19o	19p
Sex relationship	19q	19r	19s	19t
Personal uncleanliness:				
Dirty hands, face	20a	20b	20c	20d
Dirty clothes	20e	20f	20g	20h
Vermin	20i	20j	20k	20l
Dirty belongings, books	20m	20n	20o	20p

BERKELEY PUBLIC SCHOOLS

BUREAU OF RESEARCH AND GUIDANCE

OUTLINE FOR SOCIAL HISTORY

I. IDENTIFICATION:

Name_____

Address_____ Phone_____

Date of birth_____ Place of birth_____

School_____ Grade_____ Sex_____

II. SOURCES OF INFORMATION AND WORKERS' CONTACTS (WITH DATES)

III. STATEMENT OF PROBLEM (ALL PROBLEMS REVEALED BY HOME, SCHOOL, AGENCIES, AND CHILD).

IV. FAMILY HISTORY:

A. *Paternal*—

Grandparents: Any evidence of particularly positive or negative history, health, or characteristics.

Father: Name; age; history; occupation; recreation; health; education; description; attitudes; personality.

Fraternity: Any evidence of particularly positive or negative history, health, or characteristics.

B. *Maternal:* Same for each as above. Add to history of mother her attitude to pregnancy, desire for children, etc.

C. *Siblings:* Name, age, occupation, or school grade. Any outstanding positive or negative characteristics. IQ, scholarship, attitudes, and relationships.

D. *Substitute parents:* Same as for father and mother.

V. PERSONAL HISTORY:

A. *Health*—

1. Prenatal.
2. Birth (including weight).
3. Development—
   - Teething.
   - Walking.
   - Talking.
   - Note any tendency to left-handedness.
4. Diseases.

B. *Personality, habits, attitudes*—

1. Food habits.
2. Sleeping habits; night terrors; somnambulism.
3. Chorea.
4. Enuresis.
5. Epilepsy.
6. Temper tantrums.
7. Autoeroticism.
8. Fears and fixations.
9. Behavior traits.
10. Special abilities and disabilities.
11. Special likes and dislikes.
12. Ambitions and aspirations (social and economic).

C. *Significant incidents in child's life.*

D. *Sex knowledge and experience.*

E. *Home responsibility.*

F. *Religious life and training.*

G. *School history.*

H. *Play life; recreation; hobbies; play preferred; playmates; clubs.*

VI. ENVIRONMENT:
A. *Home*—
1. Description: Material home, regularity of life, evidences of poverty, cultural refinement, etc.
2. Relationship—
a. Husband and wife.
b. Parent—child.
c. Brothers—sisters.
3. Others in household and relationship to child.
4. Atmosphere, attitudes, discipline.
NOTE.—If former homes were different, make note of same.
B. *Neighborhood*.—Note whether rooming house, apartment, small home, down town, etc.
General atmosphere; room to play; any constructive or destructive influence.

BERKELEY PUBLIC SCHOOLS

BUREAU OF RESEARCH AND GUIDANCE

SUMMARY OF NEUROPSYCHIATRIC EXAMINATION OF SCHOOL CHILDREN

Name ..... Date .....
Sex ..... Age ..... School grade ..... IQ .....
Efficiency in school considering age, yrs. retarded .....
Complaints (in order of importance):
1. .....
2. .....
3. .....
Physical findings: W ..... Chest ..... H..... Span ..... Index .....
Nutrition and elimination .....
Respiration .....
Circulation .....
Endocrine system .....
.....
Signs of disease .....
.....
Physical type (pyknic, asthenic, athletic, dysplastic) .....
Physical irritants and defects .....
.....
.....
Nervous system:
Vegetative .....
Sympathetic .....
Sensory .....
Motor .....
Mental state:
Perceptions, including memory .....
Association .....
Emotional sphere .....
Volition .....
Abnormalities .....
Etiologic factors:
Developmental: Direct effect .....
Compensation .....
Diseases: Direct effect .....
Compensation .....
Toxic factors: Direct effect .....
Compensation .....
Injuries: Direct effect .....
Compensation .....
Endocrine abnormalities .....
Direct physical effect .....
.....
Compensation .....
.....

Mental factors:
Mental reaction type: Extroversion _____
Introversion _____
Psychoneurotic _____
Psychopathic _____
Acquired detrimental factors, specify:
Family _____
_____
_____
School _____
_____
_____
Associates _____
_____
_____
Diagnostic statement _____
_____
_____
_____
Recommendations:
1. Endocrine _____
_____
_____
_____
2. Medical _____
_____
_____
_____
3. Surgical _____
_____
_____
_____
4. Family _____
_____
_____
_____
5. School _____
_____
_____
_____
6. Others _____
_____
_____
_____

BERKELEY PUBLIC SCHOOLS

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PHYSICAL EXAMINATION

Date _____
Name _____ Sex _____ Age ( ) yrs. ( ) mos.
Date of birth _____
Appearance: Color _____ pallor _____ neat _____ clean _____
alert _____ tired _____ type _____ development _____
nutrition _____ posture _____ effeminate boy _____
masculine girl _____
Skin and mucosae: Color _____ moisture _____ warmth _____
moles _____ scars _____ scaling _____ eruption _____
_____ pigment _____ anomalies _____ fat: amount
and distribution _____ pads _____

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Hair: Scalp: amount _____ color _____ texture _____ absence _____ _____ eyebrows: thickness _____ beard _____ chest _____ back _____ abdomen _____ axilla _____ arms _____ legs _____ pubic _____ male distribution _____ female _____ anomalies_____

Head:

Skull: Shape: assymetrical _____ deformities: tower _____ macrocephalus _____ microcephalus _____ flattened occiput _____ receding forehead _____ low forehead _____ measurements.[2]

Face: Assymetrical _____ facies: infantile _____ senile _____ Mongolian _____ bulldog _____ masked _____ blurred _____ adenoid _____ receding jaw _____ protruding jaw _____ dimples _____ Tic: eyes _____ cheek _____ forehead _____ mouth _____

Eyes: Exophthalmos _____ oblique _____ dark rings under _____ glasses _____ right _____ left _____ lids: aperture _____ œdema _____ epicanthus _____ cornea: inflammation _____ scars _____ conjunctivae: inflammation _____ discharge _____ Pupils, reflexes and muscle tests. See neurological.

Ears: Malformations: Darwinian tubercle _____ adherent lobule _____ Other malformations _____ variations in size and shape _____ _____ inpacted cerumen _____ discharge _____ otoscopic examination _____ hearing.[2]

Nose: Deformities _____ broad _____ flat _____ obstruction _____ _____ discharge _____ deflected septum _____

Mouth: Size _____ shape _____ bad odor _____ patches _____ lips: thick _____ short upper lip _____ mustache _____ hare lips _____ tongue: size _____ coated _____ fissures _____ tremor _____ atrophy _____ palate: high-arched _____ narrow _____ deformities _____ cleft _____ gums: bleeding _____ ulceration _____ teeth: dirty _____ size _____ spacing: regular _____ irregular _____ malocclusion _____ caries _____ abscesses _____ persisting milk teeth_____ anomalies_____

Throat: Tonsils: removed _____ hypertrophied _____ inflamed _____ uvula: absent _____ bifurcated _____ voice hoarse _____ high pitched _____ low pitched _____

Neck: Thyroid: enlarged _____ small _____ absent _____ thymus _____

Glands: Cervical: R _____ L _____ axillary: R _____ L _____ epitrochlear: R _____ L _____ inguinal: R _____ L _____

Thorax: Shape _____ prominent clavicle _____ scapulae winger _____ scaphoid _____ pigeon-breast _____ ribs—flaring _____ beaded _____ Harrison groove _____

Heart: Size _____ enlarged _____ shape _____ apex _____ sounds _____ murmurs _____ thrills _____ rate.[2]

Lungs: Excursion _____ breath sounds _____ rales _____ cough _____ dullness _____

Spine: Curvatures: lordosis _____ kyphosis _____ scoliosis _____ motility _____ D'Espine _____

Abdomen: Tenderness _____ rigidity _____ masses _____ spleen _____ liver _____ distended _____ tympanitic _____ umbilical herpia _____ _____ inguinal hernia _____

Genitalia:

Male: Development: infantile _____ phimosis _____ circumcized _____ hyposadias _____ inflammation _____ Testes: hernia _____ hydrocele _____ variococele _____ descended _____ absent _____ _____ size _____

Female: (Where indicated) development _____ inflammation _____ clitoris: hooded _____ hymen absent _____ imperforate _____ uterus _____

Anus: Hemorrhoids _____ fissures _____ relaxed sphincter _____ spastic _____

[2] See section on measurements.

Upper extremities: Deformities _____
atrophy _____ hypertrophy _____ large wrists _____
fracture _____ dislocation _____
Fingers: Shape: spatula _____ tapering _____ clubbed _____ webbed _____
curved small finger _____ shortened small finger _____
Nails: Bitten down _____ nutrition _____ inflammation _____ lunula _____
Lower extremities: Club feet _____ flat feet _____ knock knees _____ bowed
legs _____ posterior bending _____ sabre shin _____ roughened
tibia _____ wide ankles _____ fractures _____
Joints: Mobility _____ deformities _____ inflammation _____
hypotonicity _____
Vasomotor: Sweating: localized _____ general _____ cyanosis _____
cold extremities _____ flushing localized _____ general _____
shiny skin _____ œdema _____ purpura _____
stroking shin (dermatography) _____
Neurological cranial nerves: Visual fields: right _____ left _____
pupils: react to light _____ accommodation _____
irregularities _____ inequalities _____ dilated _____
ophthalmoscopic examination _____
_____ strabismus _____ nystagmus _____
cilio spinal reflex _____
ocular movements _____
sensory of face _____ motor _____ taste _____
paresis of face _____ whistling _____ smiling _____
forehead _____ eyes _____
pharyngeal reflex _____ palate _____ taste _____
tongue: deviation _____ movements _____
General sensation: Touch _____
(muscle sense _____ joint sense _____ position sense _____
vibration _____ where indicated).
co-ordination: finger to finger _____ finger to nose _____
heel to knee _____
Muscle power: Local weakness _____
Motor: Paralysis _____ atrophy _____ tremor _____
tics _____ athetoid movements _____ choreiform movements _____
hypotonicity _____
Gait: Abnormalities _____ spastic _____ hop _____
station _____
Reflexes: Superficial: abdominal _____ cremasteric _____
ciliary _____
deep: knee jerks _____ Achilles _____
triceps _____ biceps _____ wrist _____
pathological reflexes: Babinski _____ clonus _____
Speech: Stutter _____ lisp _____ letter substitution _____
oral inactivity _____

Summary

Development _ nutrition _ posture _ skin _ hair _ skull _____
face _ eyes _ ears _ nose _ mouth _ teeth _ throat _____
thyroid _ thymus _ glands _ thorax _ heart _ lungs _____
spine _ abdomen _ genitalia _ anus _ extremities _ joints _____
vasomotor _ cranial nerves _ sensation _ motor _ gait _____
reflexes _ speech _____ writing _____

Summary:
Recommendations:

Measurements

Measurements:

Height: ___ sitting height ____ span ____ height to top of pubic bone ___
Weight: _____
average height for age ___% + or − ( ). Average weight for height and age _____% + or − ( ).
Temperature: _____
Blood pressure: Sitting ____ 5 minutes later ____ 10 minutes later _____
15 minutes later _____
Pulse: Standing _____ sitting _____
exercise 10 dips ____ 15 seconds ____ 30 seconds ____ 45 seconds _____
60 seconds _____
Head: Cephalic length ___ cephalic breadth ___ cephalic circumference ___
facial height _____ facial diameter _____ bigonal diameter _____
interpupillary space ____ gonial angle ___ vertex ___ subcostal angle ___
chest: circumference ___ A. P. diameter 3rd rib ___ lateral diameter 3rd rib _____ biacromial ____ interacromial _____ biiliac _____
Vision: Snellen vision chart _____ right _____ left _____
_____
_____
_____
Hearing: Watch: right _____ left _____
Dynamometer: Right _____ left _____
Steadiness test: Ring _____
_____
_____
tiptoeing: _____
_____
fingers on knees: number of jerks of fingers ____
hand observed _____
_____
Rhomberg one minute: Times eyes open _____
swaying of body _____
Remarks: _____
_____
_____
_____

Later measurements

Date	Height	Span	Weight	Pulse