

THE UNIVERSITY OF MANITOBA

SCHOOL OF SOCIAL WORK

A COMPARATIVE STUDY OF THE SOCIAL MATURITY OF
INSTITUTIONALIZED AND NON-INSTITUTIONALIZED
TRAINABLE MENTALLY RETARDED CHILDREN

Being a report of a research project submitted
in partial fulfillment of the requirements for
the Degree of Master of Social Work

by

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ABSTRACT

This study was conducted from September, 1966 to April, 1967. It was of a descriptive-diagnostic nature, designed to compare the level of social maturity of two groups of trainable mentally retarded children, residing respectively in private family homes and in a specialized residential institution. The study also took an exploratory look at some present and past aspects of the life experience of these children.

A sample of 20 children residing in private family homes was selected from the enrolment list of the Winnipeg Kinsmen School. A comparable sample of 20 children residing in a specialized residential institution was chosen from the Manitoba School, Portage la Prairie, Manitoba.

The data upon which the study was based was obtained through the administration of the Vineland Social Maturity Scale and a schedule devised by the research group. Both these instruments were administered to the parents, in the case of the children residing in private family homes, and to staff members, in the case of the children residing at the Manitoba School.

In general, the findings revealed that the group of children residing at home had a higher mean level of social maturity than the group of children residing in the residential institution. Further avenues for research were also indicated by these findings. The findings concerning certain aspects of the life experience of the children were inconclusive but suggested possible trends for future research.

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CHAPTER I

INTRODUCTION

This study was undertaken by a group of seven students of the School of Social Work at the University of Manitoba, in partial fulfillment of the requirements for the degree Master of Social Work.

The broad problem of mental retardation was selected for study in 1966-67, by the Research Committee of the School of Social Work, University of Manitoba. The Research Committee offered for choice of study six areas within the problem of mental retardation. From this choice, the present group chose as the purpose of its study an examination of one aspect of the functioning of trainable mentally retarded children, their level of social maturity, in relation to the child's place of residence.

Until recently, the potential of the group of mentally retarded children known as "trainable" was largely unrecognized. This group was once thought to be mainly a custodial problem. Today, the potential of this group to benefit from training in self-care and simple social and vocational skills has been recognized. It is also acknowledged that the mentally retarded child has the right to attain his full social development as does any other child. This awareness and concern is evident in the late President Kennedy's "Panel on Mental Retardation" in the United States in 1961 and in Canada in the "Federal Provincial Conference on Mental Retardation" in 1964. The recognition of the ability of the trainable child to benefit from training is also evident in facilities

developed for this group. Special day schools for children residing at home have been established and residential institutions which provide training and treatment as well as physical care have developed.

These are the two main resources available for the trainable child today. There has been, however, and continues to be considerable discussion as to which setting better facilitates the meeting of the child's needs. The trend in thinking at present is to community-based services for these children as it is felt that their needs are better met in this setting.¹ However, little systematic research has been done with trainable mentally retarded children in this regard as will be discussed in Chapter II.

As a group of social work students we are concerned that all children be enabled to develop to their full potential and we are particularly interested in the child's social development. We are also aware of the importance of the environment in the child's development. We, thus, were interested to determine if there were any difference in the level of social maturity of children in different residential environments. As social workers entering the field, some or even most of us, will at a future time work with parents of mentally retarded children and any increased knowledge in this area will be of value.

The specific focus of this study then became to compare the level

¹Canadian Psychiatric Association, Submission of the Canadian Psychiatric Association to the Federal-Provincial Conference of Mental Retardation, October 19-22, 1964 (Ottawa: Canadian Psychiatric Association, 1964), p. 4.

of social maturity of a group of trainable mentally retarded children, residing at home and attending a special day school, with another group living in a residential training institution. The special day school used was the Winnipeg Kinsmen School and the residential training institution was the Manitoba School at Portage la Prairie, Manitoba. In addition, to comparing the level of social maturity, the study also took an exploratory look at some present and past aspects of the life experience of each child.

It was hoped that this study would serve to add to the research in this area of social development of trainable mentally retarded children and be of value in the establishment of further facilities for this group.

The study was conducted during the interval from September, 1966 to April, 1967.

The physical setting of the study was the Manitoba School at Portage la Prairie, Manitoba and the homes of the children attending the Winnipeg Kinsmen School. The two institutions were selected by the Research Committee as the children in each were considered representative of the groups under study.

The Winnipeg Kinsmen School is a special day school operated by the Canadian Association for Retarded Children, Manitoba Division, in the City of Winnipeg, Manitoba. It primarily serves trainable mentally retarded children, boys and girls, from the metropolitan area of Winnipeg, who are 4-18 years of age and whose intelligence quotients are

from 25 or 30 to 50. There are nineteen classes and two pre-school classes for trainable mentally retarded children. Each class comprises about ten to twelve children. Many children attend school for only one-half day until they reach the mental age of 5 years. Transportation to and from school is provided by a fleet of buses operated by the Association. In addition, older children, who are able, are encouraged to use the public transportation system. The program at the school includes habit, sensory, speech and scholastic training. An arts and crafts program and extra-curricular activities within and outside the school are provided. Older girls are trained in domestic matters and the boys in manual skills. The goal of the school is to equip the child to live in the community, if possible.

The Manitoba School is a residential treatment and training institution operated by the Provincial Government of Manitoba at Portage la Prairie, Manitoba. It serves mentally retarded persons, of all degrees of mental retardation, both male and female, who are 6 years of age and older. This includes mentally retarded adults of all ages. Facilities include nursing care, custodial care, occupational and academic training and rehabilitation. The rehabilitation program includes enabling the mentally retarded person who is able, to live and/or work in the community. An extensive recreational program is carried out including activities within the institution and field trips to the outside community. The population of the institution numbers over 1000 patients.

This study is an aspect of the broader problem of mental retardation and the general theoretical context of the study is the behavioural sciences.

The scope of the study included the measurement of the present level of social maturity of two groups of trainable mentally retarded children, boys and girls, 7-12 years inclusive: one group residing at home and attending the Winnipeg Kinsmen School and the other group residing in the Manitoba School. The study also included an examination of some present and past life experiences of these children. This examination concentrated on the child's residence history and information as to the family constellation.

In order to make the study manageable, certain limitations were set. The study did not include an examination of the cultural or economic background of the children or take into account parental attitudes. Nor was this study concerned with the causes of mental retardation. The type and quality of academic training received by both groups was not examined for variations, if any. It was recognized that these factors may influence the level of social maturity.

This study was limited in that it concerned itself with only the 7-12 years age range, and did not take samples from other residential institutions or day schools. These factors may limit the applicability of the findings.

This study was not a longitudinal study but was limited to the child's present level of social maturity.

In the case of the children attending Winnipeg Kinsmen School, the sample was limited to children whose parents were willing to participate in the study.

The fact that the interviewers obtained the data regarding each child from a third person, the parent or ward nurse, rather than observing the child himself to obtain the information, may be a limitation, to be placed on the findings.

The following hypothesis was formulated for the study:

"A group of trainable mentally retarded children residing at home and attending the Winnipeg Kinsmen School have a higher level of social maturity than a comparable group of children residing in the Manitoba School."

The rationale for formulating this hypothesis was the following. In our society the family is generally considered the environment best suited for the raising of children. This is consistent with the value placed on family life in the Western World. It is felt that the child living with his family in the community has a wider variety of experiences than a child placed in a residential institution and that the former receives more love and attention and therefore stimulation. From data of the behavioural sciences, we know that such factors affect the child's development. The essential human needs of the mentally retarded child are the same as those of the normal child. Research has indicated that institutionalization of infants and young children is damaging to their development.² The special needs that the mentally retarded child

²J. Bowlby, Maternal Care and Mental Health Monograph Series, No. 2 (Geneva: World Health Organization, 1951).

may have can be filled by special facilities, such as special day schools, established in the community which allow the child to remain at home with his family. In light of this, we anticipated that a child who does live at home and does attend a special day school would have a higher level of social maturity than a comparable child who is residing in a residential institution.

The terms contained in the hypothesis were defined or explained.

"Group", for the purpose of this report, signifies 20 children in the 7-12 years age range selected for our population in either one of the study settings.

"Trainable Mentally Retarded" refers to those mentally retarded whose disabilities are such that they are incapable of meaningful achievement in traditional academic subjects, but who are capable of profiting from programs of training in self-care, and in simple social and job or vocational skills.³ For our purposes, "trainable mentally retarded", in addition, refers specifically to individuals whose intelligence quotients are within the range of 25 or 30 to 50.

"Residing at home" means habitually living with one or both parents at the time of the study.

"Attending the Winnipeg Kinsmen School" refers to being enrolled at the Winnipeg Kinsmen School.

³Rick Heber, A Manual on Terminology and Classification in Mental Retardation, A Monograph Supplement to the American Journal of Mental Deficiency, September, 1959, p. 98.

"Residing in the Manitoba School" means habitually living in the Manitoba School at the time of the study.

"Comparable" group refers to being similar in respect to mean chronological age, sex distribution and size and being in that range of mental retardation designated as trainable.

"Higher level of social maturity" refers to attaining a higher score on the Vineland Social Maturity Scale and is stated in terms of social quotient.

"Social Maturity" refers to performances in respect to which children show a progressive capacity for looking after themselves and for participating in those activities which lead to ultimate independence as adults.⁴ For the purpose of this study, this definition is useful in clarifying the type of developmental behaviour being assessed. However, recognition must be given to the fact that the limits of trainable mental retardates are such that "ultimate independence as adults" is an unattainable goal.

The term "social quotient" was also used in this study and is explained as giving an indication of how well the child is able to use his intelligence in caring for himself and how well he is growing toward his ultimate maturity.⁵

⁴Edgar A. Doll's definition, quoted from Edward L. French and J. Clifford Scott, Child in the Shadows, A Manual for Parents of Retarded Children (Philadelphia and New York: J.B. Lippincott Company, 1960), p.74.

⁵Ibid., p. 75.

It is a numerical score and is expressed in relation to a score of 100 obtained by a normal child of the same chronological age. It is computed thus:

$$\text{Social quotient} = \frac{\text{social age}}{\text{Chronological age}} \times 100$$

In this study, certain assumptions were made. It was assumed that the information obtained from the records of both the Winnipeg Kinsmen School and the Manitoba School was valid and reliable. It was also necessary to assume that the scale and schedule used to obtain the necessary data were administered in the same manner by all interviewers. Although the responses by the interviewees in both settings may have been subjective, it was assumed they were of the same degree of validity and that the interviewees were all equally knowledgeable in relation to the child.

The Vineland Social Maturity Scale was chosen to measure the level of social maturity, because it is the most comprehensive standardized scale for measuring the variable under study. In addition, the scale can be administered by non-psychologists without formal training in psychological testing. The fact that the interviewer can administer the scale to a third person without directly observing the child for an extended period of time was also a factor in the choice of this scale.

In addition, the group developed its own schedule to examine some past and present life experiences of the children studied.

A list of names of eligible children attending the Winnipeg

Kinsmen School and living at home was obtained from the Winnipeg Kinsmen School. A list of children residing at the Manitoba School who were eligible for the study was obtained from that institution. From the total population thus given by the Winnipeg Kinsmen School, a sample, stratified as to age and sex, was randomly chosen. A comparable sample was then randomly chosen from the Manitoba School.

A pre-test was administered to four subjects from each group. This pre-test consisted of administering the Vineland Social Maturity Scale and the group's schedule to a third person in each case who was knowledgeable regarding the child. Following the pre-test, the scale and schedule were administered to the total remaining sample.

The details of the method will be discussed in Chapter III.

Following completion of the data gathering, the data was arranged in order to facilitate a comparison of the level of social maturity of both study groups and to allow for correlation with the data obtained on the group's schedule. The analysis of the data will be elaborated upon in Chapter IV; evaluations and conclusions will be presented in Chapter V.

CHAPTER II

BACKGROUND LITERATURE AND PERTINENT STUDIES

As a background to this study, it was felt that a review of the literature and previous relevant research was important and beneficial in placing this study in its broader setting and in relating this study to previous research.

Review of Background Literature

A child may be retarded but first of all he is a child deserving of every consideration due the dignity of a divinely created human person.¹

This may be our present attitude toward the retarded child but a review of the literature indicated that such an attitude is of recent origin. "Prior to the year 1800, Society's record was one of the "most pathetic chapters" in the history of man."²

This record shows, as Dunn goes on to describe, that the mentally retarded, in the past, were allowed to perish, were exploited as "fools" or persecuted as being possessed of the Devil. At the best of times, they were given sanctuary in asylums but these were mainly custodial and no attempt was made to provide treatment or education for the mentally retarded. The philosophy was "Once retarded, always retarded; nothing

¹Sister Mary Theodore, The Challenge of the Retarded Child (Milwaukee: The Bruce Publishing Company, 1963), p. 62.

²Lloyd M. Dunn, "A Historical Review of the Treatment of the Retarded", Mental Retardation, Readings and Resources, ed. Jerome H. Rothstein (New York: Holt, Rinehart and Winston, 1961), p. 14.

can be done,"³

The modern residential institution and its program is traced back to the work of Jean Itard at the beginning of the 19th century. His work with the "wild boy of Aveyron" was the first scientific attempt to train the mentally retarded. Itard's work was expanded by Edouard Seguin, one of Itard's students, who emigrated to America about 1850. He encouraged the development of residential institutions in the United States.⁴

At the turn of the century, another movement began, that of special day schools for mentally retarded children who were not in residential institutions.⁵ Initially, these classes were homogeneous. With the work of Binet and the development of intelligence testing, the three broad ranges of mental retardation were conceptualized. Those individuals with intelligence quotients of 50 to 80 were called "educable". Those whose intelligence quotients were in the range 25 to 50 were called "trainable". Those whose intelligence quotients were below 25 were considered severely retarded. Individuals in the latter two categories, with intelligence quotients below 50, came to be considered "uneducable".

³Ibid.

⁴Ibid., pp. 14-16.

⁵Harold M. Williams and J.E. Wallace Wallin "Education of the Severely Retarded Child", Mental Retardation, Readings and Resources, ed. Jerome H. Rothstein (New York: Holt, Rinehart and Winston, 1961), p. 335.

The concept of the "uneducable" came in many instances, to be applied to the two lower ranges, (below I.Q. 50) and educational provision for them in day schools lagged far behind. While in some programs no specific provision was made for them, in other programs they tended to become rather specifically excluded from school as uneducable. ⁶

Thus, many of the group that we term "trainable" were excluded from the special day schools and received no formal training.

Gradually, parents seeing this gap in services for their "trainable" children formed organizations and special day schools for this group of children were developed. ⁷ The Winnipeg Kinsmen School was started through the efforts of what was mainly a parent organization, The Canadian Association for Retarded Children, Manitoba Division. ⁸

This view that we have only recently focused on this "trainable" group is reinforced by Rosenweig. ⁹ He states:

Although to most of us the trainable child was a "faceless" child five years ago, the early history of mental deficiency reveals that the major concern of the pioneers in this field was for this type of child... (However), for half a century the low grade child has been relatively neglected ... The trainable children up to 1950 were considered to be the exclusive responsibility of the institution or private school ... The institution was intended as an island designed to protect society

⁶ Ibid.

⁷ Ibid., pp. 336-7.

⁸ Class Lecture by Arthur Houle, Executive Director, Canadian Association for Retarded Children, Manitoba Division, September 20, 1966.

⁹ Louis Rosenweig, "How Far Have We Come?", American Journal of Mental Deficiency, LXXIV (July, 1959), 12-18.

from the serious problem of mental deficiency and as an asylum to provide benevolent care for the individual. ¹⁰

Once thought to be incapable of benefiting from training or education of any kind, the potential of the "trainable" has come to be recognized.

It is this group which has astonished even the most experienced mental retardation practitioners by their capacity for achievement. Once considered "Uneducable" (and indeed many Psychologists, Physicians and Educators still cling to this view) many of them now attend public school classes, later profit from simple work training, and work well in a sheltered environment, being able to use public transportation. ¹¹

A new attitude towards and a new philosophy about the trainable child has emerged. Rosenweig describes this new philosophy at some length. ¹² It points out society's responsibility to help each child develop to his maximum potential. We must look not at the child's intelligence quotient, but at what he is doing in his everyday living experiences and how he is meeting these challenges. Such a philosophy has four goals:

- (1) To develop acceptable patterns of personal behaviour;
- (2) To develop acceptable patterns of social behaviour;
- (3) To develop skills that will make the child a more useful member of his family;
- (4) To develop skills that

¹⁰ Ibid., pp. 12-13.

¹¹ Gunnar Dybwall, A Report on Mental Retardation in Montreal with Particular Reference to the Jewish Community (Montreal: The Miriam Home for the Exceptional, 1963), p. 11.

¹² Rosenweig, pp. 14-16.

will make him a more contented and useful member of a social group. ¹³

It would seem, then, that the social functioning of the trainable mentally retarded child, which the social work profession focuses on, has come to be recognized as important as, if not more important than, the intellectual functioning of the child. Along with this, the static view of mental retardation has decreased. In speaking of mental retardation in general, it has been said:

While the goal can rarely be cure, it can almost always be improvement or the achievement of the maximum intellectual and social functioning of which the individual is capable. ¹⁴

This is as equally true of the trainable group as of mentally retarded individuals in general.

As set out in Chapter I, this study deals with the level social maturity of two groups of trainable mentally retarded children: a group living in a residential institution and a group residing at home. A great deal of controversy has been waged over the years about this question of home versus institution. Perhaps at times, opinions were not always based on facts.

¹³Ibid., p. 16.

¹⁴George A. Jervais, "Factors in Mental Retardation", Historical Perspective on Mental Retardation During the Decade 1954-1964. A Compilation of articles in Children (Washington D.C: United States Department of Health, Education, and Welfare, Welfare Administration, Children's Bureau, 1964.), p. 20.

... The opposites thus posed are unrealistic and in a sense represent stereotypes wherein the institution is viewed as cold, impersonal and segregating and the home is viewed as having all the virtues of warmth, friendliness, kindness, and love. In actual practice neither home nor institution are homogeneous. ¹⁵

The feeling of certain other authors is that "an inadequate home is better than an inadequate institution". ¹⁶

Birch and Belmont ¹⁷ in discussing the claims of the evidence of the deleterious effects of institutionalization on mentally retarded children add this caution:

These claims have not gone unchallenged and even if tentatively accepted as over-all averages they in no way contradict the view that under certain special conditions separation from the natural parent may be of significant benefit for the child.

Institution versus non-institution comparison studies of mentally retarded children will be discussed specifically under the review of research. However, the current thinking on this question seems to be that the trainable child should be given every opportunity to remain at home.

¹⁵ Stephen A. Richardson, "The Social Environment and Individual Functioning", Brain Damage in Children, The Biological and Social Aspects, ed. Herbert G. Birch (Baltimore: The Williams and Wilkins Co., 1964), p. 115.

¹⁶ L. T. Hilliard and Brian H. Kirman, Mental Deficiency (London: J. and A. Churchill Ltd., 1957), p. 420.

¹⁷ Herbert G. Birch and Lillian Belmont, "The Problem of Comparing Home-Rearing Versus Foster-Home Rearing in Defective Children", Pediatrics, XXVIII (December, 1961), p. 956.

It is, nevertheless, recognized that institutional care may be necessary in some cases. ¹⁸ Along with this there is the feeling that the trend should be toward home and community based services for the mentally retarded child. ¹⁹

REVIEW OF PERTINENT STUDIES

Until a few years ago, there appears to have been very little research in the social sciences as far as mental retardation was concerned. As recently as 1953, it could be said:

There appear to be fewer reports of actual social studies of the mentally deficient than there are articles of opinion about them and their place in the community. ²⁰

Within the past ten years, however, there has been considerable stimulation in the field of mental retardation and an increase in research is evident. ²¹

¹⁸Jerome H. Rothstein (ed.), Mental Retardation, Readings and Resources (New York: Holt, Rinehart and Winston, 1961), p. 332.

¹⁹Canadian Psychiatric Association, Submission by the Canadian Psychiatric Association to the Federal-Provincial Conference on Mental Retardation, October 19-22, 1964 (Ottawa: Canadian Psychiatric Association, 1964), p. 4.

²⁰Don C. Charles, "Ability and Accomplishment of Persons Earlier Judged Mentally Deficient", Genetic Psychology Monographs 1953, Vol. XLVII, N. 1, p. 15, cited by A.D.B. Clarke, "A Symposium: The Social Adjustment of the Mentally Deficient-I Recent English Research", American Journal of Mental Deficiency, LXII (September, 1957), 295-299.

²¹Mortimer Garrison, "Research Trends in Mental Deficiency", Historical Perspective on Mental Retardation During the Decade 1954-1964, a compilation of articles in Children (Washington, D.C.: United States Department of Health, Education and Welfare, Welfare Administration, Children's Bureau, 1964), pp. 64-66.

In reviewing the research for the present study, no previous research with this specific focus was found. However, other researchers have done related studies which bear consideration in a background to this study.

Follow-up studies have been done comparing mentally retarded children raised in an institution with mentally retarded children raised at home. Centerwall and Centerwall²² compared two similar groups of children with mongolism. One group was placed outside the home shortly after birth and the other group was kept at home until 2½ years of age or over. The groups were tested using the Vineland Social Maturity Scale some years later and it was found that the home reared group was significantly superior. Comparable studies were done by Shotwell and Shipe²³ and Stedman and Eichorn²⁴ with similar results.

Birch and Belmont²⁵ criticize the study by Centerwall and Centerwall in that there would seem to have been an initial inequality

²²S.A. Centerwall and W.R. Centerwall, "A Study of Children with Mongolism Reared in the Home Compared to Those Reared Away From Home", Pediatrics, XXV (April, 1960), 675-685.

²³Anna M. Shotwell and Dorothy Shipe, "Effects of Out-of-Home Care on Mongoloid Children, A Continuation Study", American Journal of Mental Deficiency, LXIX (March, 1965), 649-652.

²⁴Donald J. Stedman and Dorothy M. Eichorn, "A Comparison of the Growth and Development of Institutionalized and Home-Reared Mongoloids During Infancy and Childhood", American Journal of Mental Deficiency, LXIX (November, 1964), 391-401.

²⁵Birch and Belmont, pp. 958-9.

in the two groups and this may account for the difference found.

Another study ²⁶ compared an institutional and a non-institutional group of trainable mentally retarded children for language development. The non-institutional group showed superior performance on total score. This study is cited as it is felt that the degree of language development has some influence on the level of social maturity.

A further study ²⁷ compared personality differences between institutionalized and non-institutionalized teenage girls in the educable range. It was found that the girls in the institution had a much more negative set of self-attitudes and less ability to control angry feelings than those who were in their own homes. Such factors, it is felt, influence social maturity. A reservation is expressed about concluding that the difference found is the result of the institutionalization. The researchers cautioned that the negative self-attitudes and inability to control angry feelings by the institutionalized girls may have been the very cause of their institutionalization.

Hobbs ²⁸ compared two groups, one from an institutional setting

²⁶ Dorothy J. Servics and Shirley H. Essa, "Language Development in Institutionalized and Community Mentally Retarded Children", American Journal of Mental Deficiency, LXVI (November, 1961), 413-420.

²⁷ George M. Guthrie, Alfred Butler and Leon Gorlow, "Personality Differences Between Institutional and Non-Institutional Retardates", American Journal of Mental Deficiency, LXVII (January, 1963), 543-548.

²⁸ Mary T. Hobbs, "A Comparison of Institutionalized and Non-Institutionalized Mental Retardates", American Journal of Mental Deficiency, LXVIII (May, 1964), 206-210.

and one living in the community. The median intelligence quotient of each group was 51 and the age range was 13-25 years. The groups were compared as to anti-social behaviour, special education, opportunities for professional help, family non-conformity, broken homes, educational background of parents, rejecting attitudes of parents and family size. The results showed the institutional group inferior in every category except attitudes of parents and family size. One must be cautioned against attributing this inferiority to the result of institutionalization. The researcher again points out that a possible likely explanation is that socially inadequate individuals tend to be institutionalized.

The first study to employ the Vineland Social Maturity Scale was done by Doll and McKay²⁹ in the mid-1930's. Two similar groups of children mean age 12 years and mean intelligence quotient within the educable range were compared on the Vineland Social Maturity Scale. One group consisted of children from the residential Training School at Vineland, New Jersey. The other group were attending special classes in Vineland, New Jersey and living at home. The special class children were generally found to score higher but particularly on those items where self-direction carries most weight. Doll and McKay point out that conclusions from this study are limited in that the intelligence quotient scores of

²⁹Edgar A. Doll and B. Elizabeth McKay, "The Social Competence of Special Class Children", Journal of Educational Research", XXXI (October, 1937), 90-106.

the special class children may have been inaccurate and may have, in actuality, been higher than those of the institutional group. Doll and McKay see the institutional setting as lacking in freedom and this lack as effecting the level of social maturity. However, they do note:

It is significant that the general inferiority in social competence of the institutional group is confirmed throughout the item analysis regardless of advantage or disadvantage resulting from the regimen of the comparative environments. Which tempts us to conclude that the same need for controlled behaviour which brought the child to the institution instead of to the special class produces rather than results from the apparent lack of freedom in the institution as compared to the community. ³⁰

Capobianco and Cole ³¹ compared an institutional group of trainable children with a non-institutional group as to "free play" as measured by the Gradient of Social Participation Scale. They found no significant differences between the two groups. This study did not measure the level of social maturity but did measure an aspect which could affect the level of social maturity.

A final study to cite as background research is a study by Peck and Hereford. ³² They studied four groups of "trainable" children:

³⁰Ibid, p. 106.

³¹R. J. Capobianco and Dorothy A. Cole, "Social Behaviour of Mentally Retarded Children", American Journal of Mental Deficiency, LXIV (January, 1960), 638-651.

³²John R. Peck and Carl Hereford, "Comparative Investigation of Learning and Adjustment of 'Trainable' Children in Public School, Facilities, Local Segregated Facilities, and State Residential Centre", American Journal of Mental Deficiency, LXVI (July, 1961), 62-68.

(1) a class in public schools, (2) a segregated class in the community, (3) an institution class and (4) a control group residing at home without training. The groups were studied over a two year period as to progress measured by various scales: Social Adjustment, Self-Care, Language Development, Physical Development of Gross Muscles, Physical Development of Small Muscles, Arts and Crafts, Economic Usefulness and Music. The results showed no significant difference among the experimental groups. However, the three experimental groups showed more progress than did the control group residing at home and receiving no training. This study is unlike the present research study in that it studied the progress over a period of time.

Generally, the research indicates, with a few exceptions, the superiority of the home group attending a special class over the institutional group. However, none of these studies are similar to the present study as none of the researchers set out to measure and compare the level of social maturity of two groups of trainable mentally retarded children and to examine some present and past aspects of their life experience. Consequently, the results of these studies are not conclusive in regard to the present study undertaken. These studies were investigating aspects related to the present study and, therefore, serve as a useful background for and as some assistance in interpretation of the findings of the present study.

CHAPTER III

METHOD

In Chapter I it was stated that the focus of the study would be to compare the level of social maturity of a group of trainable mentally retarded children residing at home and attending a special day school with a comparable group of children living in a residential training institution. The special day school used was the Winnipeg Kinsmen School and the residential training institution was the Manitoba School at Portage la Prairie, Manitoba. In addition to the above-stated focus, the study also took an exploratory look at some present and past aspects of the life of each child.

Before embarking on the research project, the Research Committee of the School of Social Work obtained permission from authorities in both settings, the Winnipeg Kinsmen School and the Manitoba School, to use samples drawn from both their populations to carry out the research study. Also prior to beginning the research study, the present study group attended a lecture on mental retardation given by Mr. A. Houle, Executive Director, Canadian Association for Retarded Children, Manitoba Division, in September, 1966. This lecture served to acquaint the group with the problem of mental retardation. This present study group also visited the Winnipeg Kinsmen School and the Manitoba School in October, 1966. These visits served the purpose of familiarizing the group with both settings.

Following these visits and research into the literature, the study group formulated the hypothesis stated in Chapter I.

The research method used in this study was diagnostic-descriptive.

For purposes of securing the necessary information for the research project, the study group decided upon face-to-face interviews, as it was felt that this would be the most reliable method. In regard to the children living at home, all the data was obtained in this manner. In regard to the children living in the residential institution, much of the data regarding the present and past life experiences was obtained from the institutional records. These records included the child's file and the visiting record. The data regarding the level of social maturity of this group was, however, obtained from face-to-face interviews. The study group administered the Vineland Social Maturity Scale to obtain the data pertaining to the level of social maturity and to test the hypothesis. The group itself developed a schedule to obtain the data regarding the present and past life experiences of the child. See Appendix A, for a copy of the Vineland Social Maturity Scale and the schedule.

For purposes of the research, a sample of forty was selected. This consisted of twenty subjects residing at home and attending the Winnipeg Kinsmen School and twenty subjects residing at the Manitoba School. This size of sample was chosen as it was felt that a smaller number would not allow for adequate comparisons between the two study populations and a larger sample would not have been feasible in terms of the time available.

In order to be included in the populations from which the samples were selected, a child had to be between the ages of 7-12 years inclusive

on September 1, 1966. Twelve years was selected as the upper age-limit as another research group was doing a study on adolescents attending the Winnipeg Kinsmen School and the total population there over twelve years of age would not support two research studies. Seven years was selected as the lower age limit as the study group planned to include in the sample from the Manitoba School only those children who had been residing in the institution for at least one year. (Children are not generally admitted to the Manitoba School until they are six years of age as mentioned in Chapter I.) In addition, children with severe physical anomalies were eliminated from the total populations. The rationale for this exclusion was that it was felt by the research group that severe physical anomalies could negatively affect the level of social maturity to a significant degree.

After the above requirements had been set the sample was obtained in the following manner. The Winnipeg Kinsmen School provided a list of the total number of children who were enrolled at the School and who did not have any severe physical anomalies. The Research Committee of the School of Social Work then sent a letter to all the parents of these children inquiring if they were willing to participate in the research study. After those who were unwilling to participate in the research study were eliminated the total remaining population of children who were between the ages of 7-12 years inclusive was one-hundred seventy-six. From this total population a sample stratified as to age and sex was drawn. The sample was stratified according to these factors as it was felt that

these factors might have some influence on the level of social maturity. Ten boys and ten girls were included in the sample and at least one representative from each age category was included. Through an error in the original list compiled by the Winnipeg Kinsmen School, one subject selected to be included in the sample of girls, was actually a boy. In addition, the age of one of the girls had been inaccurately recorded on the original list. These errors altered the sex distribution and the mean age of the group of children residing at home. However, the mean age was not altered significantly.

Once a sample of twenty had been obtained from the total eligible population at the Winnipeg Kinsmen School, the study group proposed to obtain a sample in a similar manner from the total eligible population at the Manitoba School. The total number of boys eligible to be included in the sample from the Manitoba School was thirty-one. From this population, a sample of ten boys was drawn stratified as to age. The ages were matched in order to obtain a sample with a mean age comparable to the mean age of the sample of boys residing at home. In regard to the girls residing at the Manitoba School, the total eligible population was ten and consequently, the total population had to be included in the sample. The plan had been to include in the sample children who had been residing at the Manitoba School for at least a year. However, it was necessary to include in the sample three girls who had been residing in the Manitoba School for less than a year in order to obtain the desired number of girls.

The instruments used in this research project were the Vineland

Social Maturity Scale and a schedule developed by the group itself. The Vineland Social Maturity Scale was chosen to determine the level of social maturity of each subject in the sample. It was selected because it is the most comprehensive and standardized measurement for determining the level of social maturity. It was also selected because it can be administered by a non-psychologist and can be administered to a third person who knows the subject well. It was, therefore, not necessary for the interviewer to talk to the subject directly or to observe his behaviour over an extended period of time. The Scale is divided into age levels. Within each age level there are various items or questions. The purpose of each of these items is to represent some particular aspect of the ability of the child to look after his own practical needs. The scale reflects progressive freedom on the part of the child from the need of assistance, direction, or supervision on the part of others. The items are also categorized according to eight sub-areas of social maturity. These sub-areas are: self-help general, self-help eating, self-help dressing, locomotion, communication, occupation, self-direction and socialization. The Scale is similar to other psychological tests in that in administration a basal age is initially established and then credit is given for item successes above this age. The Scale allows for temporary regressions in the child's behaviour and for activities of which the child would be capable but does not in fact engage in because of lack of opportunity for doing so.

In order to obtain some working knowledge of the Vineland Social

Maturity Scale; a briefing session was held for the study group by Miss Lois Fry, Clinical Psychologist on staff of the Society for Crippled Children and Adults of Manitoba. Miss Fry has had much experience in the use of the Vineland Social Maturity Scale. In addition, in order to obtain some standardization in administering the Scale, the interviewers were given a reprint of the manual of directions which accompanies the Scale. The interviewers were able to refer to this extensively and whenever necessary during the administration of the Scale. The manual of directions was also useful in assuring uniformity in the scoring. Individual interviewers scored the responses using the manual as a guide. In instances where interviewers were doubtful as to scoring, the responses were reviewed in group meetings and standard norms were ensured.

The other instrument was a schedule developed by the group itself. This was used to obtain some information regarding some present and past life experiences of the children. Because the schedule was developed by the group, the members were aware of the meaning of each question on the schedule when they were administering it. The schedule consisted of three sections. Section I of the schedule was directed at obtaining factual identifying information about the informant and his relationship to the subject. Section II of the schedule was designed to obtain information about the family constellation of the child being studied. Section III was directed at obtaining data regarding the child himself. This data included identifying information, past residential history of the child, and past and present life experiences of the child such as absences from

the home in the case of children living at home and visits out of the institution by the child or visits by others to the child in the institution in the case of children living in the institution. Section III also inquired into possible special abilities or interests of each child. It was felt by the study group that such factors as the schedule examined could have some bearing on the level of social maturity of the children. It was not the intention of the group in designing this schedule to make a thorough examination of the factors which could affect the level of social maturity. It was rather the intention of the group to take an exploratory look at these factors. The results obtained might suggest certain relationships which would point out questions for future study.

This schedule and the Vineland Social Maturity Scale were administered in a pre-test in December, 1966. The pre-test sample consisted of eight subjects from the total sample of forty: four subjects residing at home and attending the Winnipeg Kinsmen School and four subjects residing in the Manitoba School. No revisions were made in the schedule and it was decided to continue using the Vineland Social Maturity Scale to determine the level of social maturity.

The Vineland Social Maturity Scale and the schedule were administered to the total remaining sample in January, 1966. In the case of the children residing at home and attending the Winnipeg Kinsmen School, the Scale was administered to one or both parents. The data to complete the schedule was obtained from the parents, also. In the case of the children residing in the Manitoba School, Dr. G. Lowther, Medical Director

of the Manitoba School, arranged for the interviewers to interview a ward nurse or supervisor who knew the child well. The Scale was administered through the cooperation of these individuals. Other information to complete the schedule was obtained from the institution's records.

There were two main types of findings obtained in this research project. From the administration of the Vineland Social Maturity Scale, The level of social maturity of each child was determined. From completion of the schedule, data concerning some aspects of the child's present and past life experiences was obtained.

The level of social maturity was expressed in two ways: (1) it was expressed in terms of social quotient score, (2) it was also expressed in terms of the number of items successfully completed in each sub-class of social maturity.

Once the data had been expressed in terms of social quotient, the social quotient scores were compared according to (1) place, (2) sex, and (3) age. The mean social quotient score was used in this comparison rather than individual scores.

Within the classification of "place" there were two categories: "Winnipeg Kinsmen School" and "Manitoba School". The mean social quotient score of the group of children residing at home was compared to the mean social quotient score of the group of children residing at the Manitoba School. The findings thus expressed would support or refute the hypothesis of the study.

Within the classification of "sex" there were two categories:

"boys" and "girls". The mean social quotient of the boys was compared to the mean social quotient of the girls. This data was also separated as to "place" and a cross-classification was established.

Within the classification of "age", there were six categories corresponding to the ages of the children included in the study: seven to twelve years of age. The mean social quotient of each age category was compared to the other age categories. This data was also separated as to "place" and "sex" and cross-classifications were established.

As mentioned above, the data obtained from the Vineland Social Maturity Scale was also analyzed according to the level of social maturity achieved in the sub-classes of the Vineland Social Maturity Scale. These sub-classes are: self-help general, self-help eating, self-help dressing, locomotion, communication, occupation, self-direction and socialization.

The number of items for which a child received credit within each sub-class was considered to signify the level of social maturity within that sub-class. In this comparison also, the mean item score was used rather than individual item scores. Once this data had been obtained, the mean scores were compared according to (1) place and (2) sex in the same manner as were the over-all mean social quotient scores as described above.

The data obtained from the schedules was also analyzed. This data was examined in relation to the social quotient scores. The following aspects of the child's present and past life experience were examined:

(1) In the case of the group of children residing at home, the data regarding the child's position in the family constellation was examined.

(2) In the case of the group of children residing in the institution, the data regarding the length of institutionalization was examined.

It was not possible to compare the two groups of children, those residing at home with those residing in the institution, in regard to this data as the data did not lend itself to comparative analysis and some of necessary data was not obtainable. Data on the other aspects of the child's life experience did not lend itself to analysis.

The data will be presented in tabular form.

The method of analysis has been presented. The actual presentation of the findings will be given in Chapter IV.

CHAPTER IV

ANALYSIS

Chapter III presented the method of analysis. This chapter will present the actual findings. The data from the 40 completed Vineland Social Maturity Scales and the research group's own schedules is condensed and presented in the form of tables.

In the tables shown, the numerical figures have been rounded off to one decimal point.

In Section I, the tables present the levels of social maturity of the two groups of children, those residing at home and attending the Winnipeg Kinsmen School and those residing in the Manitoba School. Our objective was to translate the data collected into as complete and meaningful a comparative analysis as possible, of the level of social maturity of the children in both groups.

In Section II, the tables present the data obtained from the research group's own schedule. It was not possible in regard to this data to make inter-group comparisons of the children at the Winnipeg Kinsmen School and the children at the Manitoba School, because comparable data was not available on both groups. However, data which would allow for inter-group comparisons between the level of social maturity and certain aspects of children's life experience is presented.

General tables are included in Appendix B. The first general table represents the frequency distribution of the children in the

sample by age and sex, including the mean ages of the Winnipeg Kinsmen School sample and the Manitoba School sample. In addition, two tables presenting the raw data from which the functional tables in Section II were derived are included in Appendix B.

SECTION I

The first major step in the analysis consisted in determining the mean level of social maturity of each of the samples from the data obtained from the completed Vineland Social Maturity Scales. The mean level of social maturity was computed for each of the total samples and for the boys and girls separately within each sample. These findings are presented in Table 1.

TABLE 1

MEAN SOCIAL QUOTIENT OF 20 CHILDREN AT THE WINNIPEG KINSMEN SCHOOL AND 20 CHILDREN AT THE MANITOBA SCHOOL (INCLUDING THE MEAN SOCIAL QUOTIENT BY SEX).

PLACE	BOYS	GIRLS	ALL
WKS ¹	54.2	49.7	52.1
MS ²	38.3	40.1	39.2

¹ Winnipeg Kinsmen School
² Manitoba School

Table 1 represents the mean level of social maturity expressed in

terms of mean social quotient. This table represents the hypothesis of the study. It can be noted that the children residing at home and attending the Winnipeg Kinsmen School scored on the average 12.9 points higher on the Vineland Social Maturity Scale than the children residing at the Manitoba School. No attempt was made to compute the statistical significance of this difference. However, converting this "real" difference into a percentage reveals that the mean social maturity level of the children residing at home and attending the Winnipeg Kinsmen School was 24.8% higher than the mean social maturity level of the group of children residing in the Manitoba School. For the purpose of this study, this was considered a notable difference. It can further be noted that the mean social quotient of the boys attending the Winnipeg Kinsmen School was 15.9 points or 29.3% higher than that of the boys residing at the Manitoba School. In the case of the girls, the girls at the Winnipeg Kinsmen School had a mean social quotient score that was 9.6 points or 19.3% higher than that of the girls at the Manitoba School. Although the statistical significance of this difference was not computed, for purposes of this research this is considered a notable difference. In intra-group comparisons, the boys at the Winnipeg Kinsmen School scored only slightly higher than the girls at the Winnipeg Kinsmen School. In the case of the Manitoba School, there was even less of a difference, with the girls there scoring slightly higher than the boys.

To obtain a more meaningful analysis of the differences in the levels of social maturity, the mean levels of social maturity were computed

for each age group included in the sample. These findings were also analyzed by sex. Table 2 presents these findings.

TABLE 2.
MEAN SOCIAL QUOTIENT OF THE WINNIPEG
KINSMEN SCHOOL AND THE MANITOBA
SCHOOL CHILDREN BY SEX AND AGE.

CHRONO- LOGICAL AGE IN YEARS	SEX	MEAN SOCIAL QUOTIENT		
		WKS	MS	BOTH
7	B 1	69.1	56.0	62.6
	G 2	51.6	-	51.6
	T 3	63.3	56.0	61.5
8	B	-	40.5	40.5
	G	54.9	-	54.9
	T	54.9	40.5	50.1
9	B	76.6	47.1	66.8
	G	41.6	44.5	43.5
	T	59.1	45.0	51.3
10	B	62.7	43.0	52.9
	G	62.7	38.3	50.5
	T	62.7	39.5	47.2
11	B	39.0	25.0	31.9
	G	49.0	36.9	40.9
	T	42.3	30.9	35.8
12	B	40.7	36.7	38.7
	G	56.1	34.2	39.0
	T	43.8	36.2	40.0
13	B	-	-	-
	G	35.2	-	35.2
	T	35.2	-	35.2
ALL AGES	B	54.2	38.3	49.0
	G	49.7	40.1	42.4
	T	52.1	39.2	45.7

1 Boys

2 Girls

3 Total

Table 2 also presents the level of social maturity expressed in terms of mean social quotient scores. The 13 year age group was not originally included in the sample for the study. However, the age of one girl was inadvertently recorded on the original list of the population at the Winnipeg Kinsmen School and she was thus included in the sample. For purpose of comment, the 13 year age group will be excluded as this age group has only one representative. The significance of the differences in the levels of social maturity evident in the inter-group and intra-group comparisons illustrated by Table 2 is questionable, as the number of cases in each age group is small. This can be seen by referring to Table I, Appendix B.

It can be noted from Table 2 that in all age groups, the children attending the Winnipeg Kinsmen School had a higher level of social maturity than the children residing in the Manitoba School. The least difference was in the 12 year age group where the difference was 7.6 points. The greatest difference was in the 10 year age group where the difference was 23.2 points. The significance of this latter difference is questionable because there were only 2 children in the Winnipeg Kinsmen School sample who were in the 10 year age group.

It can further be noted that the highest mean level of social maturity attained by all children in any age group was attained by the 7 year age group and the lowest mean level of social maturity was attained by the 11 year age group.

The next step in the analysis was the break-down of the findings

into the sub-classes of the Vineland Social Maturity Scale. The sub-classes are: self-help general, self-help eating, self-help dressing, locomotion, occupation, communication, self-direction and socialization. The number of items for which a child received credit within each sub-class was considered to signify the level of social maturity within that sub-class. In this analysis, the mean item score is used. These findings analyzed by sex are presented in Table 3.

TABLE 3

MEAN POSITIVE ACHIEVEMENT IN SUB-CLASSES OF THE
VINELAND SOCIAL MATURITY SCALE OF 20 CHILDREN AT
THE WINNIPEG KINSMEN SCHOOL AND 20 CHILDREN AT
THE MANITOBA SCHOOL.

SUB-CLASS	TOTAL POSSIBLE ACHIEVE- MENT	SEX	MEAN POSITIVE ACHIEVEMENT	
			WKS	MS
SHG	14	B	11.8	11.6
		G	11.1	11.8
		T	11.5	11.7
SHE	12	B	9.4	9.5
		G	9.5	9.9
		T	9.5	9.7
SHD	13	B	8.8	7.0
		G	8.2	7.6
		T	8.5	7.3
L	10	B	6.1	4.7
		G	5.2	5.4
		T	5.7	5.0
O	22	B	9.1	5.9
		G	8.1	7.3
		T	8.7	6.6
C	15	B	5.8	4.7
		G	5.7	4.8
		T	5.8	4.7
SD	14	B	0.4	0.0
		G	0.2	0.4
		T	0.3	0.2
S	17	B	5.7	3.9
		G	5.1	4.2
		T	5.5	4.0

SHG - Self-help general
SHE - Self-help eating
SHD - Self-help dressing
L - Locomotion

O - occupation
C - Communication
SD - Self-direction
S - Socialization

Table 3 does not allow for comparisons of the level of achievement between different sub-classes of the Vineland Social Maturity Scale. As indicated in the table, the possible level of achievement varied with each sub-class. However, comparisons can be made of the level of achievement of the Winnipeg Kinsmen School children and the Manitoba School children in each sub-class. Thus, it can be noted from comparison of the above figures, that the children attending the Winnipeg Kinsmen School attained a higher level of achievement in all sub-classes than the children at the Manitoba School with the exceptions of the sub-classes of self-help general and self-help eating. In these two sub-classes, the children at the Manitoba School attained a slightly higher level of achievement.

Comparing the level of achievement by boys and girls at the Winnipeg Kinsmen School, it is interesting to note that the boys attained a higher level of achievement in all sub-classes with the exception of self-help eating. In this latter sub-class, the girls attained a slightly higher level.

Comparing the level of achievement of the boys and girls at the Manitoba School, the table indicates that the girls consistently achieved a higher level than the boys. In the sub-class of self-direction, it is especially notable that the boys did not achieve any items.

SECTION II

The findings presented in this section are from the data obtained through completion of the research group's own schedule which examined

some aspects of the life experience of the children under study.

The first aspect selected for analysis was the child's ordinal position in the family. This analysis was made only in regard to the children residing at home and attending the Winnipeg Kinsmen School, as similar data was not complete and was unavailable for the children residing at the Manitoba School. Consequently, it is not possible to compare the two samples in respect to ordinal position in the family. Table II in Appendix B presents the raw data of each child's ordinal position in the family and individual social quotient scores from which the following Table 4 was derived.

TABLE 4

SOCIAL QUOTIENT BY SELECTED ORDINAL FAMILY POSITION CATEGORIES
OF 20 WINNIPEG KINSMEN SCHOOL CHILDREN.

SOCIAL QUOTIENT	ORDINAL FAMILY POSITION				TOTAL
	ONLY	YOUNGEST	OLDEST	OTHER ¹	
24-33	-	1	-	2	3
34-43	1	1	-	-	2
44-53	-	5	-	-	5
54-63	-	5	2	-	7
64-73	-	1	-	-	1
74-83	-	1	1	-	2
Total	1	14	3	2	20

¹ The two children in this category are second-youngest in the family.

From table 4, it can be noted that 14, or 70% of the 20 children attending the Winnipeg Kinsmen School were the youngest children in their families. If the "only" child is included in this "youngest" category,

then 75% of the sample from the Winnipeg Kinsmen School are included in this "only or youngest" grouping. This would seem to be a highly significant percentage. It can also be noted that 12 children or 60% of the sample had social quotient scores in the range of 44-63.

The mean social quotient of the group of "Youngest" children and the group of "Non-youngest" children was computed. For purposes of this analysis, the "only" child was excluded. The "Non-youngest" class included all children who were in the categories of "oldest" and "other". The following mean social quotients were obtained.

Mean social quotient of "Youngest" children	54.1
Mean social quotient of "Non-youngest" children	50.0

The statistical significance of the "real" difference of 4.1 points between the mean social quotients was not computed. However, converting this difference into a percentage, this difference represents a 7.6% higher mean social quotient for the "Youngest" children. This difference, although interesting, is not great and it must be kept in mind that the number of the children in the "Non-youngest" class is only 5.

The last analysis consisted in comparing the length of institutionalization and the social quotient scores for the children residing at the Manitoba School. "Length of institutionalization" included the total length of time the child had been institutionalized at the Manitoba School and in any other institution. A table representing the social quotient

scores and the length of institutionalization in months for each individual child is included in Appendix B, Table III. The mean length of institutionalization was computed to be 48.4 months. The mean social quotient scores for selected lengths of residence in the institution were computed and these findings are presented in Table 5.

TABLE 5
MEAN SOCIAL QUOTIENT OF 20 CHILDREN AT THE MANITOBA SCHOOL BY
SELECTED LENGTHS OF INSTITUTIONALIZATION

LENGTH OF INSTITUTIONALIZATION IN MONTHS	NUMBER OF CHILDREN	SOCIAL QUOTIENT
0-12	4	43.6
13-24	1	25.4
25-36	2	23.2
37-48	4	36.5
49-60	4	36
61-72	0	-
73-84	3	43.16
85-96	0	-
97-108	1	53.3
109-120	1	63.4

In Table 5, it can be noted that there would appear to be an initial downward trend in the mean social quotient as the length of institutionalization increases, until the interval of "37-48" months of institutionalization is reached. Then, there would appear to be a fairly steady upward trend in the mean social quotient as the length of institutionalization increases, with the highest mean social quotient being

registered in the last interval of "109-120" months. This is interesting to note but the significance of these findings is questionable because there is a small number of cases in each interval. In addition, the original social quotient scores of these children upon their admittance to the Manitoba School is not known.

The analysis of the findings has been presented in this Chapter. Any conclusions that can be made will be presented in Chapter V.

CHAPTER V

CONCLUSIONS

The focus of this research project was to compare the level of social maturity of two groups of trainable mentally retarded children, one group residing at home and attending a special day school and the other group residing in a specialized residential institution. In addition, the study took an exploratory look at some present and past aspects of the life experience of these children.

In this chapter, the findings presented in Chapter IV will be examined with reference to (1) the hypothesis and (2) the exploratory aspects. In addition, the study as a whole will be assessed as to its limitations and broader implications.

The hypothesis tested was: "A group of trainable mentally retarded children residing at home and attending the Winnipeg Kinsmen School have a higher level of social maturity than a comparable group of children residing in the Manitoba School." This hypothesis was substantiated and it can be concluded that the group of children residing at home do have a higher level of social maturity than the group of children residing at the Manitoba School. It would be erroneous to conclude, however, that the difference in the environments is responsible for the difference in the level of social maturity. It is possible that the children in the institution had a lower potential in terms of social maturity and that their lower social maturity level was the very reason for their institutionalization. It would be valuable to have had their level of social

maturity upon being admitted to the institution and then to study the change, if any, which occurred in the level of social maturity over time. This is suggested as an area for future research.

In considering the findings of differences in level of social maturity by sex, it can be concluded that the boys and girls at Winnipeg Kinsmen School do have a higher level of social maturity than the boys and girls respectively at the Manitoba School. However, the finding that in the Winnipeg Kinsmen School sample, the boys obtained a slightly higher mean social quotient score than the girls is inconclusive. This difference may be the result of two extremely high social quotient scores obtained by two boys, (82.9 and 82.7). It would be valuable to see if further research also found this difference in social maturity between boys and girls. In the case of the Manitoba School, the finding that the girls obtained a slightly higher mean social quotient than the boys is inconclusive; also, this difference is slight and once again may be the result of one extremely low score obtained by one boy, (12.2). It would be interesting to see if future research would confirm this difference by sex.

In considering the differences in level of social maturity by age, the finding that the Winnipeg Kinsmen School children obtained a higher mean social quotient for all age groupings is consistent with the findings supporting the hypothesis. However, to draw any conclusions from the differences in levels of social maturity for individual age groupings would be erroneous. The number of children within in each age grouping is

small and individual scores profoundly affect the mean score. It would be necessary to repeat the study using a larger sample in order to confirm or refute these findings conclusively.

In considering the sub-classes of social maturity, the findings that the children at the Winnipeg Kinsmen School obtained a higher mean score than the children at the Manitoba School on a majority of the sub-classes is consistent with the findings supporting the hypothesis. A possible explanation for the higher mean score by the Winnipeg Kinsmen School children, especially in the sub-classes of "occupation" and "socialization" might be attributed to the nature of the home-setting. Do the children at home have a greater opportunity to engage in and develop skills in these areas because of more individual attention and stimulation and a greater variety of experiences? The findings that the children at the Manitoba School obtained a higher mean score in the sub-classes of "self-help general" and "self-help eating" might be attributed to the nature of institutional living. The child in the institution may have a greater opportunity to look after himself in these areas and may have an opportunity to perform up to his potential. The child at home may not have this opportunity as his parents may do many things for him in these areas. However, no conclusions can be drawn as to the effects of the different environments on the functioning of the children as their differences in functioning may be the very reason the children are in these different environments. The findings do, nevertheless, suggest areas for further research.

The findings in regard to the exploratory aspects of the study will now be examined. The finding that 70% of the Winnipeg Kinsmen School children are the youngest children in the family constellation is an interesting finding but inconclusive. It would be erroneous, however, to conclude that 70% of the total population of the Winnipeg Kinsmen School are the youngest children in the family. A study using a larger sample could confirm or refute this finding. If this finding is confirmed by future research, there are several possible explanations for such a finding. Do parents fear to have any more children after having a mentally retarded child? Or do they feel that the mentally retarded child requires such additional care that they decide not to have any more children? Or is the mother late in her child-bearing years when the mentally retarded child is born? Unfortunately, the data concerning the ordinal position of the children at the Manitoba School was not available and a comparison could not be made here. Are these children the youngest children, too? If not, is this a possible explanation for their institutionalization? Younger siblings require additional care and the parents may feel unable to give the mentally retarded child the care and attention he requires when a younger sibling is born. The child may consequently be placed in the institution. This again opens an avenue for future research.

The findings indicating a slightly higher mean level of social maturity for the "youngest" children as compared to the "non-youngest" are not conclusive. The number of children in each category, especially

in the "non-youngest", is small. A possible explanation for this difference, if confirmed by future research, might be that the mentally retarded child who is youngest may receive more individual attention and stimulation both because he is the youngest and because of his mental retardation. Older children who are mentally retarded may have to compete with younger siblings for parental attention and may experience frustration when they cannot achieve at the level of their younger "normal" siblings. However, before any conclusions can be made from these findings, future research would have to confirm that the ordinal position in the family does affect the level of social maturity of mentally retarded children.

The findings concerning the length of institutionalization compared with the level of social maturity are likewise inconclusive. Although the findings indicated an initial downward trend in the level of social maturity after admittance to the institution and then an upward trend, this is misleading. The number of cases in each interval of "length of institutionalization" is small. In addition, the original social quotient scores of the children at the Manitoba School upon being admitted to the institution are not known. Further research, using a larger sample and done on a longitudinal basis, is indicated. If such research did confirm an initial downward trend and then an upward trend, a possible explanation could be that upon being admitted to the institution, the child goes through a period of adjustment and when this is over, his level of social maturity once again rises.

There are several limitations to this study which are evident now that the research is completed. One major limitation is the size of the sample. This is especially evident when the sample was "broken-down" by age and sex. It would be valuable to repeat this study using a larger sample.

The unavailability of individual intelligence quotient scores is another limitation. The range of social quotients was extremely wide: 12.2 to 82.9. The fact that some children obtained such extremely high or low social quotients leads one to question if all these children were indeed within the "trainable" range and if the two groups were indeed comparable in this respect. A further study in this area should have available the individual intelligence quotient scores of the children in order to ensure that the groups are comparable in this respect.

The unavailability of certain data on both groups was also a limitation and made some inter-group comparisons impossible.

Any broader implications arising out of the study as to improvement of facilities for the care of mentally retarded children cannot be made at this point. Before recommending any changes in the care of mentally retarded children, further research would have to confirm that the differences in social maturity evident in this study are the result of the different environments. If future research confirmed that institutionalization adversely affects the level of social maturity of mentally retarded children, this might suggest that better community facilities be established so that children can remain at home with their parents when possible. In addition, changes in the institutional care of mentally retarded children might also be indicated.

BIBLIOGRAPHY

BIBLIOGRAPHY

BOOKS

- Bernard, Jessie. Social Problems at Midcentury. New York: Holt, Rinehart and Winston, Inc., 1957.
- Birch, Herbert G. (ed.) Brain Damage in Children: The Biological and Social Aspects. Baltimore: The Williams and Wilkins Co., 1964.
- Bowlby, J. Maternal Care and Mental Health. Monograph Series, No. 2. Geneva: World Health Organization, 1951.
- Clarke, Ann M. and Clarke, A.D.B. (eds.) Mental Deficiency: The Changing Outlook. Glencoe, Illinois: The Free Press, 1958.
- Davies, S.P. The Mentally Retarded in Society. New York: Columbia University Press, 1958.
- Dittman, Laura. The Mentally Retarded Child at Home. Washington, D.C.: United States Department of Health, Education and Welfare, Childrens' Bureau, 1959.
- Ellis, Norman R. (ed.) Handbook of Mental Deficiency. New York: McGraw Hill Book Co., 1963.
- French, Edward L. and Scott, J. Clifford. Child in the Shadows, A Manual for Parents of Retarded Children. Philadelphia and New York: J.B. Lippincott Co., 1960.
- Goldstein, Harris K. Research Standards and Methods For Social Workers. New Orleans: The Hauser Press, 1963.
- Heber, Rick. A Manual on Terminology and Classification in Mental Retardation. A Monograph Supplement to The American Journal of Mental Deficiency, September, 1959.
- Hilliard, L.T. and Kirman, Brian H. Mental Deficiency. London: J. & A. Churchill Ltd., 1957.
- Historical Perspectives on Mental Retardation During the Decade 1954-1964: A Compilation of Articles in Children. Washington, D.C.: United States Department of Health, Education and Welfare, Childrens' Bureau, 1964.

- Loewy, Herta. More About The Backward Child. London: Staples Press Limited, 1957.
- Kirk, Samuel and Johnson, Orville. Educating the Retarded Child. Cambridge, Mass.: Houghton Mifflin Co., 1951.
- Masland, R.L., Sarason, S.B. and Gladwin, T. Mental Subnormality: Biological, Psychological and Cultural Factors. New York: Basic Books Inc., 1958.
- Polansky, Norman A. (ed.) Social Work Research. Chicago: University of Chicago Press, 1960.
- Ross, Alan O. The Exceptional Child in the Family. New York and London: Greene and Strattan, 1964.
- Rothstein, Jerome H. (ed.) Mental Retardation. Readings and Resources. New York: Holt, Rinehart and Winston, Inc., 1961.
- Stevens, Harvey and Heber, Rick. Mental Retardation: A Review of Research. Chicago: University of Chicago Press, 1964.
- Theodore, Sister Mary. The Challenge of the Retarded Child. Milwaukee: The Bruce Publishing Co., 1963.
- Tredgold, A.J. A Textbook of Mental Deficiency. Baltimore: The Williams and Wilkins, 1947.
- Turabian, Kate L. A Manual for Writers of Term Papers, Theses and Dissertations. Chicago: University of Chicago Press, 1955.
- Wallin, John Edward Wallace. Education of Mentally Handicapped Children. New York: Harper Brothers, 1955.

ARTICLES AND PERIODICALS

- Birch, Herbert G. and Belmont, Lillian. "The Problems of Comparing Home-Rearing Versus Foster-Home Rearing in Defective Children", Pediatrics, XXVIII (December, 1961) 956-961.
- Capobianco, R.J. and Cole, Dorothy A. "Social Behaviour of Mentally Retarded Children", The American Journal of Mental Deficiency, LXIV (January, 1960), 638-651.

- Centerwell, S.A. and Centerwell, W.R. "A Study of Children with Mongolism Reared in the Home Compared to Those Reared Away From Home", Pediatrics, XXV (April, 1960), 675-685.
- Clarke, A.D.B. "A Symposium: The Social Adjustment of the Mentally Deficient - I Recent English Research", The American Journal of Mental Deficiency, LXII (September, 1957), 295-299.
- Doll, Edgar A. and McKay, B. Elizabeth. "The Social Competence of Special Class Children", Journal of Educational Research, XXXI (October, 1937), 90-106.
- Guthrie, George M. and Butler, Alfred and Gorlow, Leon. "Personality Differences Between Institutional and Non-Institutional Retardates" The American Journal of Mental Deficiency, LXVII (January, 1963), 543-548.
- Hobbs, Mary T. "A Comparison of Institutionalized and Non-Institutionalized Mental Retardates", The American Journal of Mental Deficiency, LXVIII (May, 1964), 206-210.
- Peck, John R. and Hereford, Carl. "Comparative Investigation of Learning and Adjustment of 'Trainable' Children in Public School Facilities, Local Segregated Facilities, and State Residential Centre", The American Journal of Mental Deficiency, LXVI (July, 1961), 62-68.
- Rosenweig, Louis. "How Far Have We Come?", The American Journal of Mental Deficiency, LXIV (July, 1959), 12-18.
- Servics, Dorothy J. and Essa, Shirley H. "Language Development in Institutionalized and Community Mentally Retarded Children", The American Journal of Mental Deficiency, LXVI (November, 1961), 413-420.
- Shotwell, Anna M. and Shipe, Dorothy. "Effects of Out-of-Home Care on Mongoloid Children: A Continuation Study", The American Journal of Mental Deficiency, LXIX (March, 1965), 649-652.
- Stedman, Donald J. and Richorn, Dorothy H. "A Comparison of the Growth and Development of Institutionalized and Home-Reared Mongoloids During Infancy and Childhood", The American Journal of Mental Deficiency, LXIX (November, 1964), 391-401.

REPORTS

Dybwall, Gunnar. A Report on Mental Retardation in Montreal with Particular Reference to the Jewish Community. The Miriam Home for the Exceptional. Montreal, 1963.

Department of National Health and Welfare. Mental Retardation in Canada. Report of the Federal-Provincial Conference, October 19-22, 1964, Ottawa, Canada.

OTHER SOURCES

- Class Lecture by Miss Lois Fry, Chief Psychologist, The Society for Crippled Children and Adults of Manitoba, November, 1966.
- Class Lecture by Mr. Arthur Houle, Executive Director, The Canadian Association for Retarded Children, Manitoba Division. September, 1966.

APPENDIX

APPENDIX A

SCHEDULE

I. The informant:

Name: _____

Relationship to child: _____

Length of acquaintance: _____

Date of Interview: _____

II. The Family: (Identifying data)

a) Parents:

Father: living _____ deceased _____

At home: _____ regularly

_____ rarely

_____ never

Mother: living _____ deceased _____

At home: _____ regularly

_____ rarely

_____ never

b) Siblings:

No. of brothers _____ Ages _____

No. of sisters _____ Ages _____

No. residing at home _____

at the institution _____

SCHEDULE - GROUP B

III. The Child: (Identifying Data):

A. Name _____

B. Sex:

boy _____ girl _____

C. Date of Birth:

day _____ month _____ year _____

D. Physical status: (specify any physical disability)

E. Mental status:

test(s) used _____ date _____ score _____

_____ date _____ score _____

(social data)

A. Present place of residence:

own (or private) family _____

institution (MS) _____

B. Previous residence history:

- with own family since birth _____

- with own from _____ to _____

from _____ to _____

- in foster family care:
(including care by relatives)

from _____ to _____

- in institutional care:
(specify institutions)

_____ from _____ to _____

_____ from _____ to _____

(social data) -- cont'd

C. Social Residential Specifics.

1. During Institutional Placement

a) Vacation Absences:

	family	camp	other (specify)
place:	_____		
frequency:	_____		
duration:	_____		

b) Visits to child:

Person who visits:

	parents	siblings	other (specify)
frequency:	_____		
duration:	_____		

2. During Home Residence

a) occasional absences from home:
with whom?

	family	camp	other (specify)
frequency:	_____		
duration:	_____		

D. Special Abilities, qualities, interests of the child:
(describe or specify):



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*Vineland Social
 Maturity Scale*

NAME..... Sex..... Grade..... Date.....
Last First Year Month Day

Residence..... School..... Born.....
Year Month Day

M.A..... I.Q..... Test Used..... When..... Age.....
Years Months Days

Occupation..... Class..... Years Exp..... Schooling.....

Father's Occupation..... Class..... Years Exp..... Schooling.....

Mother's Occupation..... Class..... Years Exp..... Schooling.....

Informant..... Relationship..... Recorder.....

Informant's est..... Basal Score*.....

Handicaps..... Additional pts.....

REMARKS:

Total score.....

Age equivalent.....

Social quotient.....

Age Periods
O - I

Category†	Score*	Items	LA Mean
C	1. "Crows"; laughs .....	.25
SHG	2. Balances head .....	.25
SHG	3. Grasps objects within reach .....	.30
S	4. Reaches for familiar persons .....	.30
SHG	5. Rolls over .....	.30
SHG	6. Reaches for nearby objects .....	.35
O	7. Occupies self unattended .....	.43
SHG	8. Sits unsupported .....	.45
SHG	9. Pulls self upright .....	.55
C	10. "Talks"; imitates sounds .....	.55
SHE	11. Drinks from cup or glass assisted .....	.55
L	12. Moves about on floor .....	.63
SHG	13. Grasps with thumb and finger .....	.65
S	14. Demands personal attention .....	.70
SHG	15. Stands alone .....	.85
SHE	16. Does not drool .....	.90
C	17. Follows simple instructions .....	.93

† Key to categorical arrangement of items:
 SHG — Self-help general C — Communication L — Locomotion
 SHD — Self-help dressing SD — Self-direction O — Occupation
 SHE — Self-help eating S — Socialization

* For method of scoring see "The Measurement of Social Competence."

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I - II

L	18. Walks about room unattended	1.03
O	19. Marks with pencil or crayon	1.10
SHE	20. Masticates food	1.10
SHD	21. Pulls off socks	1.13
O	22. Transfers objects	1.20
SHG	23. Overcomes simple obstacles	1.30
O	24. Fetches or carries familiar objects	1.38
SHE	25. Drinks from cup or glass unassisted	1.40
SHG	26. Gives up baby carriage	1.43
S	27. Plays with other children	1.50
SHE	28. Eats with spoon	1.53
L	29. Goes about house or yard	1.63
SHE	30. Discriminates edible substances	1.65
C	31. Uses names of familiar objects	1.70
L	32. Walks upstairs unassisted	1.75
SHE	33. Unwraps candy	1.85
C	34. Talks in short sentences	1.95

II - III

SHG	35. Asks to go to toilet	1.98
O	36. Initiates own play activities	2.03
SHD	37. Removes coat or dress	2.05
SHE	38. Eats with fork	2.35
SHE	39. Gets drink unassisted	2.43
SHD	40. Dries own hands	2.60
SHG	41. Avoids simple hazards	2.85
SHD	42. Puts on coat or dress unassisted	2.85
O	43. Cuts with scissors	2.88
C	44. Relates experiences	3.15

III - IV

L	45. Walks downstairs one step per tread	3.23
S	46. Plays cooperatively at kindergarten level	3.28
SHD	47. Buttons coat or dress	3.35
O	48. Helps at little household tasks	3.55
S	49. "Performs" for others	3.75
SHD	50. Washes hands unaided	3.83

IV - V

SHG	51. Cares for self at toilet	3.83
SHD	52. Washes face unassisted	4.65
L	53. Goes about neighborhood unattended	4.70
SHD	54. Dresses self except tying	4.80
O	55. Uses pencil or crayon for drawing	5.13
S	56. Plays competitive exercise games	5.13

V - VI

O	57. Uses skates, sled, wagon	5.13
C	58. Prints simple words	5.23
S	59. Plays simple table games	5.63
SD	60. Is trusted with money	5.83
L	61. Goes to school unattended	5.83

VI - VII

SHE	62. Uses table knife for spreading	6.03
C	63. Uses pencil for writing	6.15
SHD	64. Bathes self assisted	6.23
SHD	65. Goes to bed unassisted	6.75

VII - VIII

SHG	66. Tells time to quarter hour	7.28
SHE	67. Uses table knife for cutting	8.05
S	68. Disavows literal Santa Claus	8.28
S	69. Participates in pre-adolescent play	8.28
SHD	70. Combs or brushes hair	8.45

VIII - IX

O	71. Uses tools or utensils	8.50
O	72. Does routine household tasks	8.53
C	73. Reads on own initiative	8.55
SHD	74. Bathes self unaided	8.85

IX - X

SHE	75. Cares for self at table	9.03
SD	76. Makes minor purchases	9.38
L	77. Goes about home town freely	9.43

X - XI

C	78. Writes occasional short letters	9.63
C	79. Makes telephone calls	10.30
O	80. Does small remunerative work	10.90
C	81. Answers ads; purchases by mail	11.20

XI - XII

O	82. Does simple creative work	11.25
SD	83. Is left to care for self or others	11.45
C	84. Enjoys books, newspapers, magazines	11.58

XII - XV

S	85. Plays difficult games	12.30
SHD	86. Exercises complete care of dress	12.38
SD	87. Buys own clothing accessories	13.00
S	88. Engages in adolescent group activities	14.10
O	89. Performs responsible routine chores	14.65

XV - XVIII

C	90. Communicates by letter	14.95
C	91. Follows current events	15.35
L	92. Goes to nearby places alone	15.85
SD	93. Goes out unsupervised daytime	16.13
SD	94. Has own spending money	16.53
SD	95. Buys all own clothing	17.37

XVIII - XX

L	96. Goes to distant points alone	18.05
SD	97. Looks after own health	18.48
O	98. Has a job or continues schooling	18.53
SD	99. Goes out nights unrestricted	18.70
SD	100. Controls own major expenditures	19.68
SD	101. Assumes personal responsibility	20.53

XX - XXV

SD	102. Uses money providently	21.5 +
S	103. Assumes responsibility beyond own needs	21.5 +
S	104. Contributes to social welfare	25 +
SD	105. Provides for future	25 +

XXV+

O	106. Performs skilled work	25 +
O	107. Engages in beneficial recreation	25 +
O	108. Systematizes own work	25 +
S	109. Inspires confidence	25 +
S	110. Promotes civic progress	25 +
O	111. Supervises occupational pursuits	25 +
SD	112. Purchases for others	25 +
O	113. Directs or manages affairs of others	25 +
O	114. Performs expert or professional work	25 +
S	115. Shares community responsibility	25 +
O	116. Creates own opportunities	25 +
S	117. Advances general welfare	25 +

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APPENDIX B

TABLE I

FREQUENCY DISTRIBUTION OF 20 CHILDREN AT THE WINNIPEG KINSMEN SCHOOL
AND 20 CHILDREN AT THE MANITOBA SCHOOL BY SEX AND AGE, INCLUDING THE
MEAN AGE

AGE IN YEARS	W.K.S.			M S			ALL		TOTAL
	BOYS	GIRLS	ALL	BOYS	GIRLS	ALL	BOYS	GIRLS	
7	2	1	3	1	0	1	3	1	4
8	0	2	2	1	0	1	1	2	3
9	2	2	4	1	4	5	3	6	9
10	1	1	2	1	3	4	2	4	6
11	2	1	3	2	2	4	4	3	7
12	4	1	5	4	1	5	8	2	10
13	0	1	1	0	0	0	0	1	1
Total	11	9	20	10	10	20	21	19	40
Mean Age in Years	10.2	9.7	10	10.4	10	10.2	10.3	9.8	10.1

TABLE II
 SOCIAL QUOTIENT AND ORDINAL FAMILY POSITION
 OF 20 CHILDREN AT THE WINNIPEG KINSMEN SCHOOL

SOCIAL QUOTIENT	ORDINAL POSITION OF CHILD IN FAMILY
82.9	youngest
82.7	oldest
70.4	youngest
62.7	youngest
62.7	oldest
57.4	youngest
56.1	youngest
55.5	youngest
55.1	youngest
54.0	oldest
52.3	youngest
51.9	youngest
51.6	youngest
49.0	youngest
48.6	youngest
35.5	only
35.2	youngest
28.1	youngest
26.1	other
24.6	other

TABLE III
 SOCIAL QUOTIENT OF 20 CHILDREN AT THE MANITOBA SCHOOL
 BY LENGTH OF INSTITUTIONALIZATION

LENGTH OF INSTITUTIONALIZATION IN MONTHS	SOCIAL QUOTIENT
119	63.4
102	53.3
83	33.2
82	42.2
79	54.1
60	43.0
59	28.3
54	24.5
52	48.0
46	47.1
43	40.5
43	41.6
37	18.6
31	12.2
31	34.2
23	25.4
11	55.0
5	56.0
4	32.0
3	31.2