

A STUDY OF THE RELATIONSHIPS THAT EXIST BETWEEN
THE DECELERATION IN ACADEMIC ACHIEVEMENT OF
THE INDIAN CHILDREN INTEGRATED IN
THE SEPARATE SCHOOLS OF FORT FRANCES, ONTARIO AND
THEIR SOCIAL ACCEPTANCE AND PERSONALITY STRUCTURE

A Thesis

Presented to

The Faculty of Graduate Studies and Research
University of Manitoba

In Partial Fulfillment
of the Requirement for the Degree
Master of Education

by

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August, 1970



ACKNOWLEDGEMENTS

I wish to express my thanks to the members of the Fort Frances Separate School Board who encouraged this study and who financed the expenditures for testing materials. I also owe a debt of gratitude to the Brandon School Division administration for the time they granted me that I might return to Fort Frances during the second year of the study to gather relevant data.

I wish also to express my gratitude to the teachers on the staff of the Fort Frances Separate Schools for their valuable assistance in administering and correcting test materials, as well as for their continued interest in this study.

To Dean Brown of the Faculty of Education, Dr. K. Wilson and Dr. J. W. Peach, faculty adviser, to Patrick Krecsy who advised me concerning the compilation of data, to Patrick Macdonald who assisted in programming the data at the computer centre, as well as to the other staff members there who assisted me, my thanks are also given.

I am grateful to Mrs. Loretta Leibel who typed the manuscript, to my sister, Mrs. Bernadette Hopfauf, who read the manuscript in its initial stages with keen interest and helpful suggestions. To the Sisters of my religious community I have a profound debt. For the time I was released from other duties to complete this study, for their interest, encouragement and patience I am grateful.

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CHAPTER I

THE PROBLEM AND OUTLINE OF THE STUDY

The position of the Indian in Canadian society is gradually undergoing a change. This change will be accelerated as the Indian Affairs Branch of the federal Department of Indian Affairs and Northern Development strives to implement its policy of complete integration. The Government of Canada's (1969) avowed goal is to break with the past and to lead the Indian people to "full, free and non-discriminatory participation in Canadian society." (p. 5)

Integration, whenever possible, of Indian children into provincial schools has been the growing policy of the Indian Affairs Branch particularly during the past decade. As integration continues to increase under the federal government's (1969) stated policy, that services for Indians shall come "through the same channels and from the same government agencies" (p. 6) as for other Canadians, the problem of assisting Indian children to make the necessary social adjustments and to achieve adequate educational goals has become increasingly important for teachers involved in their education.

Studies of the academic achievement of Indian children in the United States and Canada have shown consistently that: (1) the educational achievement of Indian pupils is below that of non-Indian pupils; (2) the achievement of Indian pupils is not commensurate with their ability; (3) Indian children fall further below the expected

level of achievement with each successive grade in elementary school. Thus the disparity in achievement between Indian and non-Indian pupils increases as the children move upward through the grades.

Many studies have analyzed the relationships which exist between the academic achievement of Indian children and the various factors associated with this educational achievement. These studies indicate that the Indian children do achieve better when they are integrated with non-Indian children. The reports also show that positive relationships exist between educational aspiration, knowledge of English and social acceptance of Indian children and their academic achievement. Much work remains to be done to discover why the achievement of Indian children falls further below the expected norms as they grow older. To what extent are the attitudes of their companions responsible? Does the cause lie in inherent or developed psychological traits of Indian peoples?

I. THE PROBLEM

Statement of the Problem

As an administrator of an elementary school system the writer observed that the Indian children integrated into the schools developed more pronounced problems of social adjustment as they progressed through the grades. They also fell further behind the expected normal level of achievement. Was this phenomenon of deceleration in academic achievement the result of problems of social acceptance, or were these two observable

facts rooted in some more basic cause? The purpose of this study was to ascertain, if possible, whether certain factors which appear to be related to this marked deceleration in academic achievement of Indian children are so in fact. It is hoped that some way of assisting these children might become apparent. The problem was divided into two sub-problems:

1. What changes in the attitudes of their companions accompany the deceleration in academic achievement of Indian children?

2. Are there distinctive personality traits developed in Indian children which could account for their deceleration in academic achievement?

Importance of the Study

The stated purpose of integration has been to prepare Indians to assume the role of citizens in Canadian society. Publications of the Department of Indian Affairs during the past decade indicate that Indian reservations are no longer capable of supporting the growing Indian population; more and more Indian people are moving into urban centres. Indians, however, must be given the educational background and vocational skills necessary to earn a living if they are to be integrated into the main-stream of Canadian life. This imparting of knowledge and skills as well as assisting with problems of adjustment is largely a function of the integrated school. Indian children are usually confused and bewildered in provincial schools which are geared

to Canada's middle-class society. Since it is seldom to their advantage to compare them in academic achievement with the children with whom they are being integrated they are generally made to feel inferior. Unless some light can be shed on the causes of the continuing decline in educational achievement of Indian children, the vast majority of Indians will continue to take their places among the ranks of the unskilled and unemployed--a burden to the society which should be enriched by their positive contributions as members of a self-respecting ethnic group.

II. DEFINITION OF TERMS

Indian: In this study the term "Indian" refers to a child who has treaty rights and privileges under the present Indian Act (1965), no consideration being given to his degree of Indian ancestry.

Non-Indian: In this study the term "non-Indian", therefore, refers to one who is not an Indian as defined by the Indian Act. This definition includes a child whose parents have been enfranchised, giving up their rights and privileges as Indians and ceasing to be Indians according to the meaning of the Act. Based on personal observation alone approximately 10 per cent of these non-Indian children are considered to be of Indian descent.

Integrated School: In this study the term "integrated school" refers to a school under the authority of the provincial Department of Education in which Indian children are educated with non-Indian children.

A formal agreement between the local school board and the Indian Affairs Branch of the federal Department of Indian Affairs and Northern Development provides for the education of the Indian children in the school.

Academic Achievement: In this study "academic achievement" refers to performance in subjects taught in school as measured by standardized achievement tests.

Intellectual Ability: In this study "intellectual ability" refers to learning capacity as measured by standardized intelligence tests.

III. LIMITATIONS OF THE STUDY

This study is limited to the integrated schools under the jurisdiction of the St. Mary's Roman Catholic Separate School Board in Fort Frances, Ontario. It is further limited to the students in grades one through eight enrolled in these schools during the academic years 1966-67 and 1967-68. Any generalizations will be applicable only to these schools or to schools similar to them. Kindergarten and ungraded classes in these schools are not included in the study. The decision not to include them was based on these considerations: (1) It is difficult to measure the ability of children at the kindergarten level with any degree of accuracy; and (2) The children who have been placed in ungraded classes, whether Indian or non-Indian, have been withdrawn from regular classes because low ability, as measured by individual intelligence tests, was reflected in poor achievement.

The Indian children included in the study come from three distinct groups varying in degrees of acculturation:

1. Those who live on the Indian reservation adjacent to the town of Fort Frances and who receive all their education, beginning with kindergarten, in the local separate school system;

2. Those who live on isolated reservations but who receive their primary education in the local federal Indian residential school and are then integrated into the local separate school system in grade four while still living at the residential school; and

3. Those who come from isolated reservations where they have received their early education (usually grades one through six) in federal Indian day schools on the reservation and then come to Fort Frances to complete their elementary education in the local separate school system, living either in the residential school or in billets in the town.

IV. LOCATION OF THE STUDY

Fort Frances, a town with a population of about 10,000, is located in Northwestern Ontario at the point where Rainy Lake empties into Rainy River. Originally the site of the fur-trading posts of St. Pierre established by LaVerendrye and of Lac la Pluie of the Hudson's Bay Company this town, situated on the International Boundary, is now economically dependent on the local paper mill and the tourist trade. Isolated from other major centres of population until the causeway over

Rainy Lake and new highways were built in recent years, the town is surrounded by wilderness areas where numerous lakes separate the rocky land still thick with indigenous trees. Several Indian Reservations formed after the signing of Treaty Number Three in 1871 (Morris, 1880) and located on Rainy Lake are supervised from the Indian Affairs Office in Fort Frances. The Ojibwa Indians of the region are closely related genetically as well as culturally to the Chippewa Indians found in northern Minnesota and Wisconsin. Studies made of the latter group are, therefore, valid source materials.

Some Indians from the local reservation work in the paper mill in town. Other Indians are employed in cutting pulp wood for the mill or in acting as guides for tourists who use Fort Frances as a port of entry. A few are engaged in road work for the Canadian National Railway line which serves the area. Others find employment at the residential school, in the hospital in town, or with local airlines. Saw mills on the reservations employ some of the men. Most of the Indians of the area spend some time in hunting, fishing, and in the gathering of wild rice and berries. Figure 1 is a map of the area; more detailed maps are included in the Appendix of this report.

V. ORGANIZATION OF THE REMAINDER OF THE THESIS

A review of other investigations related to the study will be the subject matter considered in Chapter II. Special attention will be focused on studies of the personality structure of Indian people, and

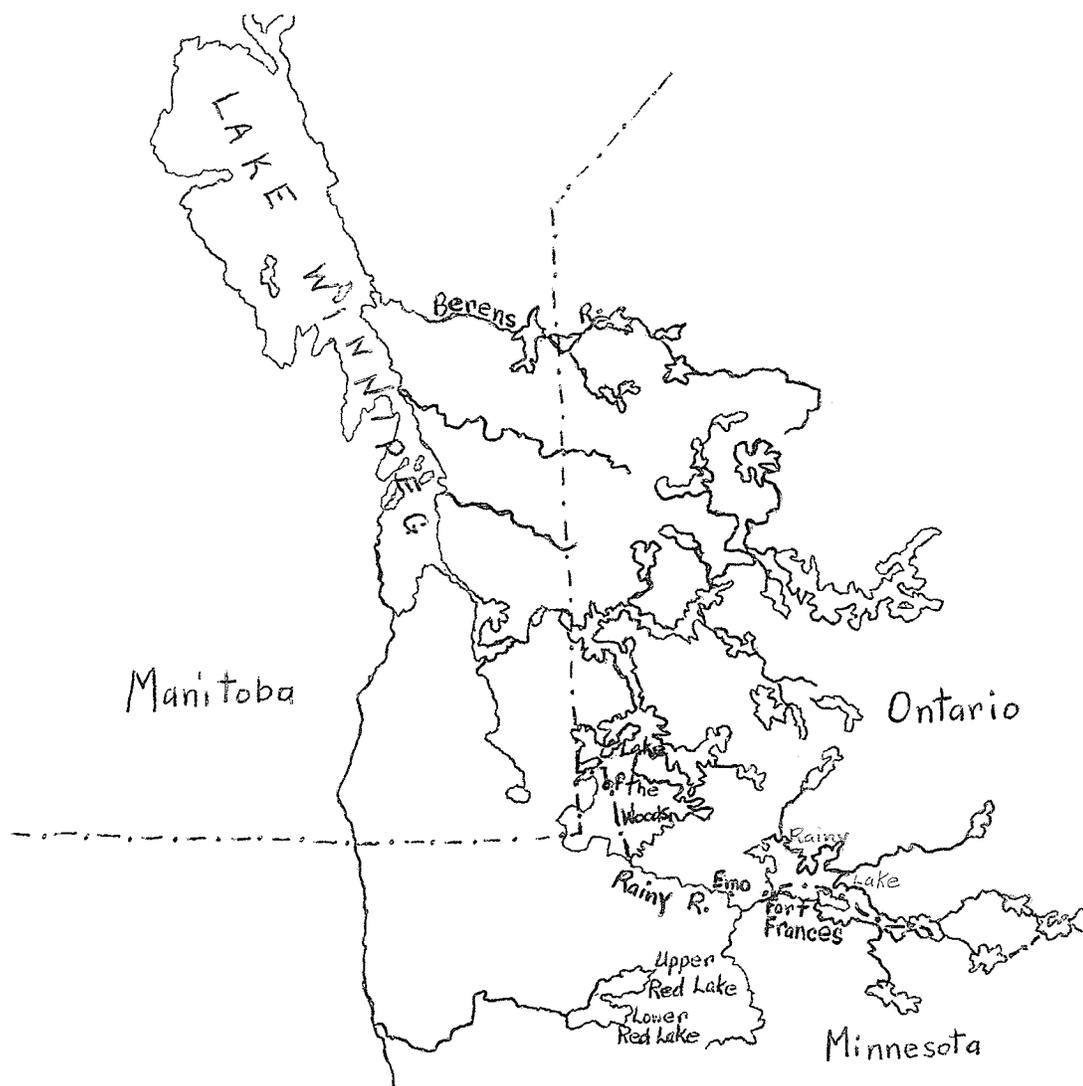


Figure 1. Map of the area surrounding Fort Frances

of the Ojibwa people in particular. Chapter III will outline the design of the study in detail. The analyses of the results of the findings relating to ability, achievement, sociometric and personality tests will be presented in Chapters IV through VII. Chapter VIII will summarize the findings of the study and will present an attempt to

interpret these results. The implications of the findings with recommendations in the education of Indian children and in further research will conclude the final chapter.

CHAPTER II

REVIEW OF RELATED LITERATURE

The literature describing studies of the academic achievement of Indian children in both the United States and Canada consistently points out the phenomenon of their deceleration in achievement. Of particular interest are studies which look for causes in the peer-group relationships of Indian children, as well as those which point to causes that lie in the basic personality structure of the Indian people.

Studies related to the problem will be reviewed under five headings:

1. Studies Related to the Ability of Indian Children,
2. Studies of the Academic Achievement of Indian Children,
3. Theories Concerning the Causes of Deceleration of Indian Pupils,
4. Studies of the Social Acceptance of Indian Children as a Factor in Academic Achievement,
5. Studies of the Personality Structure of the Ojibwa Indian People.

I. STUDIES RELATED TO THE ABILITY OF INDIAN CHILDREN

A recent Congressional Report (1969) outlines a gradual growth in the realization of the Indian's true intellectual ability. Beginning

in 1914, with the first comparative study of ability of Indian and non-Indian children as measured by standardized intelligence tests, the theory of the inferiority of the Indian's native ability became prevalent. Later studies apparently proved that any infusion of white "blood" improved the Indian's intelligence: a positive correlation was found between intelligence test scores and the degree of Indian ancestry. About 1928 researchers began to doubt the validity of intelligence tests then in use for Indian children. Verbal tests in particular were found to discriminate against the Indians, while performance tests frequently showed them to be superior. The survey concludes that "Since 1940 no responsible scholar has maintained that Indians are intellectually inferior" (p. 33).

Though a person's innate intellectual capacity is substantially genetically determined, as shown by a study of the research in this area reported by Erlenmeyer-Kimling and Jarvik (1963), still the direction of intellectual development and the limits of its range are to a considerable extent the results of a person's cultural environment as well as of his interests and individual experiences. Hebb (1966) reported experiments with animals which reveal the importance of early experience. Studies by Dennis and Dennis, as reported by Hunt (1961), demonstrate that sensorily-stimulating experiences are important for the intellectual development of young children. Hebb (1966) cited studies of children who grew up on canal boats in England whose mean IQ decreased with age from a low-average of 90 at age six to one of 60,

indicating mental deficiency, at age twelve. He concluded that after the first four or five years of life the social and cultural environment of these children became progressively inadequate. Ferguson (1954) considering the same study, along with similar ones, interpreted the findings to mean that the abilities tested were independent of the types of activity stressed in the particular culture.

Ferguson also pointed out that when intelligence is measured, the results are not based purely on biological differences. Though a person's intellectual potential is biologically determined, his abilities are determined also by the cultural factors which prescribe what he shall learn and at what age. Individuals, therefore, will develop different patterns of ability according to the demands of the culture in which they are reared.

If intelligence is defined as that which is measured by standard intelligence tests, then a number of cultural variables are related to intelligence. It is not possible at the present time to measure intelligence as a biological attribute except through methods affected by cultural factors. Ferguson concluded that the hypotheses should be accepted that there are no differences in intelligence between racial and cultural groups and that where such differences are found they are the result of cultural factors. He pointed out that if a child's environment is restricted in certain activities he will function below the limit of his potential in these activities and permanent impairment at the adult stage may result. Hebb (1949), too, observed that early

learning or its lack may have a permanent effect on the intellectual level of the adult.

According to Hallowell (1955) one of the major indices of man's intellectual capacity is his ability to transcend his environment and to deal effectively with things outside his immediate perceptual field. Between the stimuli received from his surroundings and his overt behavior come various intervening intellectual variables such as thinking and reasoning. These variables have a common symbolic or representative principle. Directly involved with skill in the manipulation of these symbols in the development of man's intellectual capacity is his ability to deal with abstract qualities. What chiefly characterizes the evolution of a culture is the transition from this intrinsic representation of symbols to extrinsic symbol systems such as speech, gestures, and graphic arts, which become the media of social communication. This social transmission implies learning. The learning process in human beings is unique because of the role such symbolism plays in it. Each person, as a member of his particular culture, becomes structured by making adjustments to the symbolically expressed and mediated norms of his society. Differences in cultures are the results of parental demands and of the ways in which children are handled as they are forced to make personal adjustments to their culture by means of the symbolic system provided by their society. The culture specifies for the individual his values and goals. This socialization process accounts for the differences in the individual's mental approach and also in

the development of certain intellectual abilities. These two aspects of intellectual structure are determined in early childhood. They explain the perseverance of so much native culture which handicaps children and adults in their attempts to integrate. Comparison of the intellectual abilities of Indian children, even at a high degree of acculturation, with those of the non-Indian children with whom they are being integrated will tend to be misleading.

As Renaud (1958) pointed out in speaking of the Canadian Indian child, his apperceptive mass of ideas, the associations, explanations and other types of information which fill his mind in his formative years are far from identical with those of the average Canadian child (p. 34). Usually his parents have had little formal schooling; books and other sources of information found in the average home are missing. Consideration, too, must be given to the material state of the homes of many Indian children.

Renaud also drew attention to the fact that Indian children often think in their native language and that time limits on intelligence tests are unfair to them. Their traditional attitude of not answering unless they are absolutely sure--of not taking a guess--places them at a disadvantage. Other factors which are related to their cultural background also work against ideal motivation in the testing experience.

Standardized ability tests are usually measures of abstract thinking abilities which involve an aptitude for dealing with symbolic materials especially of a verbal or numerical nature. Hallowell (1955),

in his study of the Canadian Ojibwa Indians' mental capacity, noted the acuteness of their senses, their tenacious memory, vigorous eloquence, and ability to recall details. The results of the Rorschach technique used by him with a group of Saulteaux Ojibwa Indians revealed an intelligence that "...functions at a concrete, practical, common-sense level and that their characteristic intellectual approach to things is very cautious and precise" (p. 132). Their sensory abilities, and those connected with manipulation of concrete materials or the perception of spatial relationships are not regarded in the dominant Western culture as having intellectual worth, and are not incorporated into intelligence tests.

According to Anastasi (1958) "...our intelligence tests measure only the ability to succeed in our particular culture" (p.566). The activities which the dominant culture encourages and stimulates become the acme of intellectual attainment and are incorporated into intelligence tests. Validated against such criteria these tests are not true measures of the intellectual ability of culturally-different children.

Summary

When we measure intelligence we are not measuring purely biological differences. Though a person's intellectual potential is biologically determined, his abilities are determined also by cultural factors which prescribe what he shall learn and at what age. Individuals, therefore, will develop different patterns of ability according to the demands of the culture in which they are reared. Since the cultural

environment of Indian children does not stress the abilities which are considered indicative of intellectual capacity in the dominant society, and since it determines a different mental approach to life for the Indian child, it is not reasonable to compare the intellectual abilities of Indian children as measured by standardized tests with those of non-Indian children except as measures predictive of their success in the dominant culture.

II. STUDIES OF THE ACADEMIC ACHIEVEMENT OF INDIAN CHILDREN

The phenomenon of deceleration in academic achievement by Canadian Indian pupils has been reported in various studies. Jamieson (1928) found evidence that Indian pupils achieve less than non-Indians at most levels. Joblin (1948) found there was a considerable difference in the reading achievement of Indian pupils and the published norms for all subtests of the reading survey, and that the disparity increased as the pupils progressed upward in the grades. Renaud (1958) supplied evidence that Indian children are below the norms on standardized tests in all subjects tested. He found in the reading survey that although grade five Indian children were one grade behind the expected norm, by grade eight they were two grades behind. He pointed out, moreover, that their chronological retardation places them academically three or more years behind other Canadian children. A more recent study by Dilling (1965) of the Indian pupils integrated in the public school system of Samia, Ontario, seemed to indicate that Indian children were achieving better under the new policy of integration and that the achievement in the

lower grades is equal to that of non-Indian children. He found, however, that Indian pupils in the higher grades were experiencing the traditional regression in expected normal progress. He listed as one of his findings from the study: The younger the Indian pupils are, and the more closely their ages match those of non-Indian pupils for the grade, the better will their achievement level correspond with achievement by non-Indian pupils.

This phenomenon in Canada is confirmed in similar studies done among Indian students in the United States. Coombs (1961) concluded that the achievement of Indian students was closer to that of non-Indians in the lower grades than it was in the junior and senior high school. "While achievement of Indian children compared very favorably with that of their white classmates...at the fourth and fifth grade levels, it fell progressively behind as the higher grades were reached" (p. 5). Ray, Ryan and Parker (1962) in their study of the bilingual natives of Alaska found that they had little difficulty in the first few years of school until reading and English became tool subjects. The survey of the literature in the Congressional Report (1969) notes that the one theme which runs through the literature is the "realization that formal education (of Indian children) has fallen far short of its goal" (p. 15). The purpose of Indian education has been assumed to be assimilation. More recently, stress has been placed on retaining the Indian's sense of identity and perpetuating some of his culture. The socio-economic status of the present-day Indian is a testimony that these goals are not being

attained. Numerous studies made since 1930 in which standardized achievement tests were used to measure and compare the achievement of Indian children with non-Indian children are cited in the report. Regardless of the tests used, Indian children showed consistently poorer academic achievement.

Summary

As a result of these studies, certain factors are apparent:

1. There is a positive relationship between the academic achievement of Indian children and certain aspects of assimilation such as language.
2. Indian children taught in public schools achieve better than those attending federal and mission schools.
3. There is a progressive decline in the achievement level of Indian pupils.
4. Indian children achieve better in certain academic areas such as arithmetic computation and spelling than they do in reading comprehension or quantitative reasoning.

Besides their being over-age for their grade, other aspects of failure in the educational achievement of Indian children include: (1) poor attendance, (2) high drop-out rate, and (3) unemployment as shown in follow-up studies.

III. THEORIES CONCERNING THE CAUSES OF DECELERATION OF INDIAN PUPILS

Many theories concerning the causes of this academic deceleration have been proposed. Peterson (1948), reporting on a three-year nation-

wide study by the University of Chicago for the United States Indian Service, concluded that the factors which affect the academic achievement of an Indian child are:

1. His cultural background and the degree of familiarity he has with the non-Indian culture,
2. The amount of education his parents have received,
3. The language spoken in his home,
4. The stability of his home,
5. The type of school he attends,
6. The regularity of his attendance.

Of particular interest is the study by Renaud (1958) whose survey of the homes and community background of Canadian Indian children revealed several fundamental causes of poor academic achievement:

1. Vast cultural differences between the dominant culture and the native culture, with Indian children being reared in a truncated cultural tradition. The conflict between the two living cultures results in a difference in the development of modal personalities.
2. A school system, which is neither the product of the Indian community nor under the community's control, whose aim is trans-culturation, i.e. the replacing of the values, attitudes and home training of Indian children with those of the dominant society.
3. An unrealistic appraisal of the socio-economic future of the Indian pupil.
4. The Indian community which is generally indifferent to the

preparation of Indian children by the schools for a culturally more Canadian way of life.

Officer (1956), declaring that World War II had changed Indian attitudes toward education more than any other factor in history, both through the rejection of the uneducated and through the influence of the returned veterans, implied that isolation from the main-stream of national life was the cause of poor academic achievement.

Coombs (1961) believed the cause lay in the fact that Indian children do not have opportunities for learning experiences outside the school of a kind that help in school achievement. As the Indian child progresses through the grades the world of learning broadens into the unfamiliar, and abstract concepts become important. The family and community in which Indian children grow up do not place great value on formal education, and, therefore, are unprepared to meet the child's new academic needs.

The Wax (1964) team working among the Pine Ridge Sioux Indians in North Dakota posited as the possible causes of academic deceleration:

1. The Indian children's lack of fluency in the use of the English language.
2. The isolation of home and school from one another with negligible communication between them.
3. The ridiculing of Indian children by their peers, who laugh at their mistakes, beginning at ages ten and eleven.
4. The teachers' negative attitude toward, and preconceptions

of, their Indian pupils whom they basically do not respect.

Ray, Ryan and Parker (1962), discussing the drop-off in achievement of the bilingual natives of Alaska, pointed out the improbability of bilingualism alone accounting for the retardation, which they considered only symptomatic of a much larger problem.

The survey of the literature in the Congressional Report (1969) brings out, in the chapter on the causes of retardation of Indian children, what sociologists call the "self-fulfilling prophecy." Indian children live up to the opinions and expectations of their teachers, many of whom do not accept the conclusions of social scientists that Indian children have the same innate intellectual ability as have non-Indian children.

Discussion of the possibility that teachers of Indian students may be responsible for their poor achievement was considered under the aspects of (1) poor qualifications, (2) limited background, (3) prejudice toward Indian pupils, (4) lack of awareness of the cultural difference which separates teachers from the Indian children, and (5) isolation of the teacher from the Indian community.

The Hawthorn (1968) report discussed at length the alienation Indian children feel both from their own culture and from the dominant Canadian culture. Gradually torn between the two opposing cultures the child finds himself unable to identify with either. The consequent sense of powerlessness results in a poor self-image, low levels of aspiration, lack of motivation and a failure to achieve, which in turn

accentuate the lack of identity and continually add new depths to the child's problem. The report summarized the cause of retardation in achievement:

Faced with continual criticism for being what he is, the Indian child struggles through a long series of failures still hopeful that he may succeed in time. By fifth grade, he begins to realize the chasm which separates him from others and the futility of his efforts to achieve socially and academically. He then begins to withdraw from any participation in the learning process until he is legally of age when he is able to withdraw completely. Achievement, attendance, self-image and level of aspiration drop markedly (p. 126).

Summary

The causes of Indian children's increasing rate of academic retardation would seem to lie in a conflict rising from the need to adjust to two opposing cultures. Their own native culture fosters in them mental attitudes and abilities which militate against their achievement in the dominant culture. Living in legislated isolation from the ongoing cultural life of the nation there is little real communication between the two social groups in which Indian children find themselves--the Indian culture in which they live and the Euro-american culture in which they go to school. Lack of informative experiences because of this isolation, the irrelevance of curricula which do not consider their socio-economic future realistically, and resistance on their part to the school's evident aim of transculturation are all causes of poor achievement rooted in the native culture. On the part of the dominant culture, racial prejudice, apparent in negative

attitudes toward Indian children, assists in developing negative concepts. A consequent growing feeling of inferiority becomes a major factor in the deceleration of their academic achievement.

IV. STUDIES OF THE SOCIAL ACCEPTANCE OF INDIAN CHILDREN AS A FACTOR IN ACADEMIC ACHIEVEMENT

Acceptance of a child by his peer group demands his acceptance of its interests and values including those related to school. Coleman (1961) found in his study of American adolescents in high schools that overwhelming importance is attached by them to activities which gain them status in their peer group, which he terms a "subculture." Academic achievement was not considered to be important by the students in any of the schools included in his study. In no case was the leading crowd in the school oriented toward the "brilliant-student" ideal. The status system affects the educational goals of students and is frequently a deterrent to academic achievement. Coleman concluded that it often causes the most able students to turn from academic achievement to other activities which bring social rewards from their peer group.

Hurlock (1964) claimed that peer-group attitudes toward school vary according to sex and socio-economic status. In the early grades girls are more interested in school than boys, but at about junior-high school level the peer-group attitude changes. Lower-class boys, who belong to a middle-class peer group, begin to show an interest in school because of a desire for vocational betterment. But, as Renaud (1958)

claimed, Indian children have little hope of attaining such a goal. The preparation by the school of Indian children for a culturally more-Canadian way of life is not an ambition shared and fostered by the Indian community.

Academic achievement among Indians is affected by numerous variables other than intellectual ability. Social acceptance was considered most important by Dilling (1965) if individual Indian pupils are going to reach maximum achievement. The opinion of teachers interviewed in his study of Indian children being integrated in public schools testified that the social acceptance of Indians is better in the primary grades than in the higher grades when racial cleavages tend to form. The possibility cannot be ignored that there is some relationship between this phenomenon and his finding that the younger Indian pupils were, the better their achievement level corresponded with achievement by non-Indian pupils.

Nor is the reticence or "shyness" characteristic of Indians noticeable in young Indian children accustomed to school but who have not yet become fully aware of cultural differences. It becomes remarkable at that age, reported by Wax (1964) as ten or eleven, when peer-group dynamics become a major influence in the lives of children. Wax claimed that the peer society within the Indian group of children solidifies about activities and values that effectively limit or sabotage the educational process. This informally and crudely organized peer society, and the child's place within it, becomes the greatest

factor in the Indian child's performance. Education becomes a struggle between the teacher and the peer society. What is reported in most studies of Indian children as shyness and a lack of confidence in themselves and their ability to compete academically was seen by Wax as hostility and indifference directed at the teachers and education which are regarded as "white."

In the intermediate and upper grades Indian children become noticeably silent, shy, withdrawn, sullen and even seem stupid. There is a noted breakdown in communication between the teachers and Indian pupils, but not among the Indian children themselves. Wax (1964) reported their co-operation in sabotaging any suggestion by the teacher. They devote themselves to their own affairs by a roguish display of insolence or of fear. Their displays of bashfulness were seen as often being genuine--of stupidity as often being assumed. They behave as if they dare not speak and often as if they cannot hear. The older the children, the shyer and less vocal they appear. Their aggression turns into merciless bullying and teasing of each other, and they pick on their victims with cruelty. Fear that "the other kids will laugh at them" becomes a truly inhibiting force. Fear of making a mistake resulting in the jibe--"He should not try unless he knows how" prevents any attempt at achievement. Fear of a correct performance that may be interpreted as collaboration with the enemy, i.e. the teacher, interferes with academic success.

Grade seven and eight Indian pupils are usually over-age. Many

of them are young men and women with considerable experience of life and a great deal of self-discipline which is often regarded as stubbornness. These senior classes are described by Wax (1964) as silent and orderly because of a discipline created by the pupils. They transform their teachers into ridiculous and futile figures whose verbal sallies are met with an unbroken wall of "indifference and boredom". The whole atmosphere acts as a shield behind which any unwilling or unprepared Indian pupil may retreat. Any student who develops a genuine interest in academic studies "dare not engage in any public interaction with the teacher" (p. 100).

An explanation for the changing social roles observed among the Indian children in this study may be found in the discussion of the kinship organization characteristic of Ojibwa society by Landes (1937). The kinship system of the Ojibwa Indians is organized in accordance with their cross-cousin form of marriage which sorts relatives into:

- (1) the class into which one may marry, where a joking relationship is expected in which teasing and raillery are the proper behavior, and
- (2) the class into which one has been born and cannot marry, where a respect relationship can be so heavily stressed that it becomes avoidance.

Sex distinctions are made and can cause considerable modifications in conventional behavior. There is a particular etiquette demanded by each separate relationship: "siblings of the same sex can become great chums...while the strictest respect (restraint that can amount to

avoidance) is maintained between those of opposite sex" (p. 15).

Of interest, too, concerning the achievement of Ojibwa children in school is Landes' observation that "no one...has the prescriptive right to criticize one in public and make one feel ashamed. All criticism should be made privately" (p. 27).

Summary

Every school gives rise to peer group societies by the very nature of its organization. The need to be accepted by their peer group dominates the desire for academic success of many children. As they grow older, social acceptance of Indian children by children of the dominant culture drops off. Indian children find their desire for social or vocational betterment out of reach. Lacking the support of their parents and the respect of their teachers Indian children then band together, and their resistance to the dominant culture includes resistance to education and academic success. The particular social structure of their own society with its unique behavioral expectations can also prove to be a hindrance to the academic achievement of Ojibwa children.

V. STUDIES OF THE PERSONALITY STRUCTURE OF THE OJIBWA PEOPLE

Hallowell's (1955) study of the Indians living along the Berens River east of Lake Winnipeg and belonging to the same Saulteaux Ojibwa culture as the Indians of this study found that their typical character structure is built upon defense mechanisms against anxiety. He found

that there persists a basic psychological pattern despite outward indications of acculturation. He described the Indian personality as formed by the Ojibwa culture as one of emotional restraint and surface amiability. The Ojibwa finds it necessary to inhibit any expression of anger in all interpersonal relationships and to suppress all open criticism of others from fear of retaliation. Parents fear retaliatory measures from their children and treat them with great permissiveness. In the past, sorcery was the means of covert aggression. To avoid displeasing another an Indian restrains himself and complies with the wishes of others. His resentments are kept inside where they become burning desires for vengeance. The result of these cultural phenomena is a person with great emotional restraint who maintains an indifference to everything and who cuts himself off from any profound emotional ties. Independent and individualistic, he can give assent to everything outwardly, but in reality agree with nothing. He is suspicious and fearful of retaliation from others and deceitfully will injure his detractors behind their backs.

In the study of Menomoni Indians of Wisconsin [who belong to the same Central Algonquian language group as the Indians of this study (Voegelin, 1941)] Spindler (1963) found the native-oriented Indians suppressing all overt emotionality, practising equanimity under duress with a quiescent expectancy of help from the supernatural. Silence is not embarrassing for them; no commands are given, even to the children; no direct questions are asked--the matter is approached indirectly.

People go out of their way to avoid arousing ill feeling in others. Restraints are imposed on the expression of aggression. The personality he described as revealed through Rorschach responses appears to be highly introverted, not achievement oriented, lacking in overt emotional responsiveness and exhibiting a high degree of rational control over emotions.

Landes (1938) described the Canadian Ojibwa on the Emo Reservation about twenty-five miles west of Fort Frances as characterized by separateness, i.e. lacking strong interpersonal ties, aloneness, and self-sufficiency, or a desire to stand unaided. She described the community as "saturated with anxiety." The Ojibwa regards his fellows with suspicion and envy and expects from them unfriendly emotions.

In her study of the Ojibwa world-view conducted on the Red Lake Indian Reservation southwest of Fort Frances, Black (1969) found the key property underlying the Ojibwa belief system to be a quality of super-human control power inherent in all creatures and dangerous to people because it controls where they are helpless. Of particular interest was the resistance she met with from one of her acculturated informants when talking about natural phenomena such as lightning, thunder, wind, sun, moon or stars. The respondent refused to continue the interview because she "gets so scared" (p. 183). The Ojibwa consider that all things are to be treated with respect because they are feared or dangerous. This respect is seen by Black as the respect relationship which is the antithesis of the joking relationships found within the

kinship system. "...the best way to talk respectfully is to remain silent" (p. 181). The correct way for an Ojibwa to live is to remain respectful toward any 'living thing' (including what Euroamerican culture considers to be inanimate objects) which can do you harm. Black, too, found that self-sufficiency is highly rated by the Ojibwa and "individual autonomy, in the sense of avoiding control by other, is a valued reward attained by the most powerful Indians" (p. 184).

Baldwin (1957) studying the social problems of the Ojibwa Indians in the Collins area in Northwestern Ontario, drew attention to the profound social disorganization resulting from their contact with new cultural standards. "...the standards of the (Ojibwa) culture are enforced mainly through internal controls...The Ojibwa acts in obedience to (his) impulses and is hence a pronounced introvert...This introversion and isolation of the individual has been accentuated by the breakdown of community life" (p. 95). Baldwin found that the discrediting of old religious practices has left the Ojibwa with no means of dealing with the suspicions and fears arising from the prevalence of sorcery and the general uncertainty of the Ojibwa social environment. To these culturally induced uncertainties has now been added the suspicion of the new civilization. "On the other hand, all of the forms of tension release formerly provided by the Ojibwa society...have now disappeared" (p. 95).

Hallowell (1955) and Honigmann (1954) both agree that the Ojibwa's contact with the dominant Euroamerican culture has resulted in psychological modifications. The most striking fact in the Ojibwa personality

at all levels of acculturation is, according to Hallowell, the "continuity of the same basic psychological pattern through these stages of acculturation. There is a persistent core of generic traits which can be identified as Ojibwa" (p. 351). They may appear like "Whitemen" but psychologically they are still Indians. The personality changes that do occur are characterized by a weakening of the rigid interior controls without any compensating factors. The acculturated Ojibwa reflects apathy. His introverted personality structure is being forced to function without inner resources. No positive substitute has been made for the core of religious beliefs that was a most crucial factor in the aboriginal value system. The Ojibwa have been offered no culturally defined values and goals that have become significant to them.

The ready compliance with which these Indians accepted white domination and control was seen by Barnouw (1950) as the outstanding feature of Ojibwa acculturation. He claimed that they retain resentment, yet the absence of violence is noteworthy. Their sociological patterns of atomism were retained and cooperative ventures failed to develop on their reservations. Their personality characteristics and attitudes persisted into the reservation setting. He concluded that "since the Chippewa acculturation was much less traumatic psychologically than that of the (Plains Indians), the old personality structure seems to have survived without much change" (p. 71).

Friedl (1956) examined the successive sociocultural patterns of the Ojibwa to discover whether they contain any basic continuities

which would account for the persistence in their personality traits over a number of generations. He finds the answer in the nature of the expectations they have concerning the situations in which they find themselves. An Ojibwa learns to expect, and is usually provided with, continually changing circumstances. Every situation in which he finds himself is likely to be relatively unique, immediate and short-lived in its consequences. This persistence in the nature of their expectations is seen as the cause of the persistence in their personality structure.

As Renaud (1958) pointed out, most Canadian Indians are psychologically as well as historically Indians first and Canadian afterwards. Their way of being Canadian is to be Indians. The Indian community must be recognized as a genuine and culturally distinct community with an educational process of its own. Concerning the child-rearing practices of the Ojibwa, Landes (1937), writing of their sociology, stated that "It is incumbent upon the father to punish his child's wrong-doings, but no one else has the right. Actually the mother assumes all the liberties she wishes, chiefly scolding and withholding food. Children help parents in tasks suited to their strength, and obtain their education in easy stages in the course of shared activities... Neighbors would warn parents of a child's wrong-doings; then all would join in ridiculing the child until he conformed" (pp.13-14).

Barnow (1950) saw the Ojibwa characteristics of suspicion of others, repressed fear and spiritual isolation as being "deliberately inculcated by parents in their growing children; for the Chippewa seldom

resort to punishment, preferring to institute discipline through 'scaring techniques'" (p. 19). The atomistic nature of the Ojibwa social structure is reinforced by attitudes of fear and suspicion engendered through the process of child training which multiplies mistrust and inhibits social interaction. As the child grows he acquires more fears and he is encouraged to avoid many human beings within his limited environment. Ojibwa parents fail to "satisfy their children's need for security and protection" (p. 74). Efforts to make children independent at an extremely early age, even though they are frightened into obedience and given a picture of the world that is terrifying and dangerous, is seen by Barnouw to account for the undercurrent need for dependency revealed by his individual respondents.

Caudill (1949) found that the highly acculturated Ojibwa child lives in an environment that is socially, economically and psychologically depriving. Responses to the Thematic Apperception tests indicated that "...there is no interpersonal relationship between the people on an emotional basis, either hostile or warm" (p. 415). Social cohesiveness is almost nil in an environment where the individual is isolated and the family is loosely held together by weak emotional ties. Home is merely a place to eat and sleep. The children receive neither warmth nor hostility. Parents "...fail to provide satisfactorily for the child's dependent and affection-craving needs" (p. 422) and the child knows that their support may be withdrawn capriciously at any moment. Caudill saw the Ojibwa child as developing a "peculiar infantile anxiety that

expresses itself in a passive longing for protection and care" (p. 422). Growing continually more apprehensive and wary as he becomes increasingly aware of the "large amount of unpredictable aggression and violence occurring around him", he has little opportunity to develop any inner resources whereby he may find reassurance within himself. The frustration of his situation is released in immature emotional outbursts.

Indian children were described by Honigmann (1963) as uncertain. They live in an insecure environment that provides little guidance and they confront a bleak future in which they will fail to attain their desired objectives. Their personality structure is seen by him to be self-fulfilling. In speaking of Sioux Indian children he relates how in their responses they project "their own, rather bleak, world and self views." They respond to the world in the way in which they see it and their response, in turn, forces from the world the very reaction they anticipated. "Character structure is self-fulfilling; it condemns an insecure person to spend his life in a persistently hostile environment" (p. 285).

Honigmann (1954) pointed out that certain overt and covert patterns of behavior show great tenacity in time and are retained even when people move or exchange one set of conditions for another. Personality structure once established is highly resistant to change. Hallowell (1952) posited that the set of personality structure in man, being acquired and stabilized early in life and not being under conscious control, could not be changed throughout a society in less than three generations. There is

no evidence at present that the most typical aspects of the Ojibwa personality organization have been affected in spite of an observable accultural gradient. The personality core remains the same at all levels of acculturation with modifications at the higher levels producing stresses, in the efforts of readjustment, of such a nature as to indicate that neurotic strains may develop within the personality structure. "What psychological modification has been produced in the acculturation process seems to be pushing the personality structure "to the limits of its functional adequacy" (p. 111).

Renaud (1958) stressed that in the personality development of any child the most powerful social factor is the steadfast pattern of behavior connected with family living and child-rearing habits. These behavioral pattern, which are the least susceptible to change of any cultural behavior, explain the continuance of those elements of native culture which handicap Indian pupils in school and in the process of integration. Renaud suggests that the Indians themselves must readjust their family living and child-rearing habits with the help and guidance of the dominant culture since their socio-economic betterment is at stake.

Summary

Honigmann (1967) in summarizing the findings of anthropologists concerning the Ojibwa Indian people stated that practically all these Indians show the same centuries-old basic personality with more signs of psychological maladjustment in the groups that participate more fully

in modern life. The Indian personality is particularly introverted. The Ojibwa exhibit rigidly suppressed emotionality. They possess primarily a practical rather than an abstract type of intelligence and strongly prefer independence and individualism to any type of constraint. They have been found to invest little energy in their environment. The personality described is one suffused with anxiety. Honigmann concluded that there has been offered no convincing explanation for the long-term persistence of these personality characteristics.

The picture of the Ojibwa child which emerges from these studies is that of an anxious, restrained and fearful person who is forced by his native culture to be wary, independent, and individualistic. Suffused with a sense of isolation and aloneness he is suspicious of others and must repress his own emotions including his deep need for affection and support. His own society does not offer him effective external controls, and because of the modifications which have occurred in the truncated culture in which he lives he faces life with an apathy produced by his lack of inner resources. He cannot "relate with emotional warmth to others because neither his family nor his society have provided him with sufficient love, guidance or aims in life" (Caudill 1949, p. 422). Hallowell (1952) described him as a child whose inner controls, no longer sanctioned by his belief systems, are weakened and can easily break down. Highly introverted he is now the victim of his impulses. Delinquent behavior becomes the outward manifestation of the frustration and terrific psychological strain he experiences as he attempts to

survive in a situation which offers him no culturally defined values and goals which he has really made his own and which have become psychologically significant for him. Indian children have acquired innumerable cultural traits but western civilization has not provided the psychological means that might implement a satisfactory personal adjustment. (p. 112)

CHAPTER III

DESIGN OF THE STUDY

The purpose of this study was to seek out trends related to the phenomenon of deceleration in academic achievement observable among Ojibwa Indian pupils in both their peer-group relations and their basic personality structure. In order to achieve this purpose several testing instruments were used to compare the Indian and non-Indian children enrolled in the Fort Frances Separate Schools. The data were collected during the two academic years between September, 1966 and June, 1968. A description of the populations included in the study, as well as a discussion of the testing instruments used and of the methodology of the study will be considered in this chapter under the following headings:

1. The Population Included in the Study,
2. Description and Criticism of the Test Materials Used in the Study,
3. Collection of the Data,
4. Treatment of the Findings.

I. THE POPULATION INCLUDED IN THE STUDY

The children included in this study were all the pupils enrolled in the Fort Frances Separate Schools in grades one through eight during the academic years 1966-67 and 1967-68. This populations was distributed among three schools. The distribution, however, is not significant to

the purpose of the study. The percentage of Indian children in schools and classrooms varied, but they constituted 26.0 per cent of the total enrolment for the school system in January, 1968. Table I shows the distribution of Indian and non-Indian pupils by grade according to the January, 1968 enrolment.

TABLE I
ENROLMENT BY GRADE AND INDIAN, NON-INDIAN
DESIGNATION IN THE FORT FRANCES SEPARATE SCHOOLS IN JANUARY, 1968

Grade	Indian	Non-Indian	Total	Indian as % of total
1	19	55	74	25.7
2	9	46	55	16.4
3	13	64	77	16.9
4	21	56	77	27.3
5	17	49	66	25.8
6	22	43	65	33.8
7	25	55	80	31.3
8	18	46	64	28.1
Total	145	413	558	26.0

The increased number of Indian children in the senior grades reflects the integration of pupils from the Indian residential school in grade four

and from Indian day schools in grade seven. It should be noted that this table gives the distribution of pupils at only one specific time during the two-years duration of the study. It does not indicate the grade eight pupils who graduated in June, 1967 or the other pupils who had withdrawn from the system but who are included in the study.

The number of Indian and non-Indian respondents to each of the testing instruments for each year of the study is shown by grade and test in Table II.

TABLE II
DISTRIBUTION OF INDIAN AND NON-INDIAN RESPONDENTS BY GRADE AND TEST

GRADE	ABILITY		ACHIEVEMENT		SOCIOMETRY		PERSONALITY	
	Indian	Non-Indian	Indian	Non-Indian	Indian	Non-Indian	Indian	Non-Indian
1/67	15	43						
1/68	17	54			19	55		
2/67			13	62				
2/68					9	46		
3/67	12	60	11	61				
3/68	12	59			13	64		
4/67								
4/68					21	56		
5/67	19	44	19	44				
5/68	14	47			17	49		
6/67								
6/68					22	43	21	39
7/67			30	49				
7/68	23	50			25	55	21	47
8/67			13	40	15	40	14	40
8/68					18	46	15	44

A certain loss of numbers in the population resulted from the decision to gather the data over a two year-period. Inevitable circumstances such as: (1) pupils repeating the same grade during both years of the study, (2) pupils withdrawing from the system--particularly Indian pupils in the senior grades from isolated reservations--during the second year of the study, and (3) new pupils coming into the system in the 1967-68 academic year who had not been present the previous year, meant that there were some pupils whose data could not be used in the calculation of correlations between test results when the testing instruments had been administered in different academic years.

The number of Indian and non-Indian respondents whose data were used in the calculation of correlations is shown by grade, as in 1967, and by correlated testing instruments in Table III.

TABLE III
DISTRIBUTION OF INDIAN AND NON-INDIAN
RESPONDENTS BY GRADE* AND CORRELATED TESTING INSTRUMENTS

Grade	Ability & Achievement		Ability & Personality		Achievement & Personality	
	Indian	Non-Indian	Indian	Non-Indian	Indian	Non-Indian
2	8	51				
3	11	60				
5	19	44	16	38	16	38
6			18	46		
7					13	43
8					13	39

* 1967

II. DESCRIPTION AND CRITICISM OF TEST MATERIALS USED IN THE STUDY

Lorge-Thorndike Intelligence Tests

The Lorge-Thorndike Intelligence Tests, nonverbal batteries, were used as measures of intellectual ability. The tests provide comparable deviation IQ's with a mean of 100 and a standard deviation of 16 IQ points. The tests require comprehension of oral language and measure "abstract intelligence" defined by the authors in the technical manual (1962) as "the ability to work with ideas and the relationships among ideas."

The alternate-forms reliability coefficients computed on single-grade populations for tests of the regular edition used in this study are given by the authors as ranging from .761 to .814.

The Canadian edition (1967) of the test gives only odd-even reliability for Form 1. The coefficients computed on single-grade samples of the standardization population for the tests used in this study range from .908 to .931.

The nonverbal battery of the regular edition, when correlated with Stanford Achievement test results, yields predictive validity coefficients in the 70's. No data of predictive validity are presently available for the Canadian edition. Correlations of the nonverbal battery of the regular edition with other measures of ability yield correlations in the 60's and 70's. Data for Canadian pupils have not yet been obtained.

A comparison of the Lorge-Thorndike Intelligence Tests, regular edition, in Levels three, four, and five with the single-reusable booklet

of the Canadian Multi-Level edition reveals a use of the same items with considerable rearrangement of the order of items called for by the overlapping of the six different levels. The main difference in the two editions would seem to be differences in the norming populations. The regular edition was standardized with more than 136,000 children in forty-four communities of varying socio-economic status in twenty-two states of the United States; the Canadian edition's norming population, as described by the authors in the manual (1967) was drawn from a "...stratified random sample of Canadian schools in which English was the language of instruction." An effort was made to secure a representative national sample.

The series of tests is described in Buros (5:350) as one of the sounder group instruments available from the point of view of psychological insights shown in selecting and developing the materials, and from the point of view of statistical analysis of the standardization data both with regard to content and concepts of intelligence.

Stanford Achievement Tests

The Stanford Achievement Tests, Partial Batteries, (1964 Revision) Form W were the instruments used as measures of academic achievement. The tests are organized in five batteries to provide at-grade coverage of content and skills. The tests measure chiefly language arts and quantitative abilities and are extremely objective.

Odd-even split-half reliability coefficients range from .77 to .95 for the various subtests at each grade level.

Content validity of the tests was insured through careful item analysis. Items were constructed and selected with careful planning, prejudging and pretesting. Extensive curriculum research and item analysis assure that the tests reflect current instructional goals. The tests are rated "...high among the standardized achievement test batteries designed for use at the elementary school level" (Buros 6:26).

Open-End Sentence Questionnaire and Sociometric Test

An open-end sentence questionnaire was completed by pupils in grades four through eight. The questionnaire was modelled on one used by the Wax team in their study of the formal education of Sioux Indian children in North Dakota. It was designed to estimate pupil attitudes toward school and their future aspirations. The sociometric form was included in this questionnaire to remove the idea that it was a test, for the open-end sentences were designed to permit pupils to give freely their attitudes or reactions toward various aspects of the school programme. A copy of the combined questionnaire and sociometric test is included in the Appendix of this report.

The sociometric form asked for three choices in each of three criteria--free out-door play, classroom project, and organized group activity. The three criteria were selected with the recommendations of Northway (1957) in mind: (1) that three criteria and three choices for each be used, (2) that the criteria be realistic and cover a range of situations the children actually meet, (3) that the criteria and choices remain the same throughout the school system if they are to be used for

comparative purposes, (4) that the wording of the test at each grade level be modified to make it appropriate to the children's age.

Evans (1962) drew attention to the fact that since a sociometric test is a measure of the actual behavior being studied, it is a valid measure of that behavior. Reference to an outside criterion is not necessary and, indeed, would not be possible or meaningful. Northway (1957) quoted a study in which validity of choice measured against the actual selection on the identical criterion was remarkably high.

In his discussion of reliability of sociometric tests Evans noted that the reliability of a measure must consider the stability of the behavior being measured. Social choices are marked, however, by considerable variance. Northway found that the reliabilities based on correlations between choices and different criteria were higher when the criteria were more general than when they were specific. Correlations found on test scores given at different times drop as the interval between the tests increase. As Pepinsky (1949), quoted in Evans, noted, "...the concepts of 'reliability' and 'validity' as traditionally used...by psychologists seem to have little direct meaning or application to the field of sociometry" (p. 17). The real problem is to elicit true samples of behavior. This is achieved by using real situations as criteria, and by making a real use of the test results.

IPAT Jr.-Sr. High School Personality Questionnaire

The Institute of Personality and Ability Testing Jr.-Sr. High School Personality Questionnaire (Title on test is Jr.-Sr. H.S.P.Q.),

published by the Institute for Personality and Ability Testing, in both Form A and Form B was used to measure personality traits. The questionnaire is recommended for ages twelve to eighteen and demands only the normal reading vocabulary of an average child of eleven. The test is easy to administer in a classroom situation taking from forty to fifty minutes for each form. Separate answer sheets must be used. The test yields fourteen personality dimensions and each of the two forms contain ten items each having three-alternative responses referring to each of these factors. Raw scores are converted to a 10-point scale of sten scores with a mean of 5.5 and a standard deviation of 1.0. Sex differences are allowed for in the norms. Age differences are negligible. Buros (6:131) states that the instrument is based upon separate research with adolescents and careful factor studies. It is constructed according to the best statistical requirements. The test user is reminded of the limitations of questionnaire tests with children and cautioned against over interpretation.

The reliability and validity of this measure of fourteen dimensions of personality is considered in relation to the test purpose in the handbook by Cattell (1962), the test author. He lists three types of reliability for each personality factor. (1) Stability, or the correlation of the test (forms A and B) with itself after an interval of two weeks. The full test (forms A and B) gives coefficients for each factor ranging from .68 to .80. (2) Homogeneity, or split-half correlations, which range, for the various factors, from .32 to .60 for

the full test. These are low because the test is constructed primarily with factor validity in mind rather than homogeneity. (3) Equivalence, or the agreement between Form A and Form B on each factor. The coefficients for each factor range from .40 to .69. These reliability coefficients are lower than those obtained on similar questionnaires used with adults. Questionnaires become inherently less reliable the younger the population being tested.

Concept validity for the factors, or the extent to which the scale correlates with each pure factor which it claims to measure, is obtained by multiple correlation of separate items with pure factors as obtained in the original factor analysis. These range from .73 to .88 for the full test; and when derived from equivalence coefficients, from .65 to .83. The latter coefficient is based on the assumption that the two forms of the test are alike only in the factor they seek to measure.

The discovery of effective theories of personality depends partly on a fortunate choice of variables chiefly by means of hypotheses based on observation. Variables belong to one or another of three media having different properties, and requiring strategic use in research. They are: (1) L-data obtained from observed behavior; (2) Q-data obtained from introspection, questionnaire and self-revelatory observation; and (3) T-data obtained from behavior provoked and observed in a test situation.

Self evaluation as a method of gathering personality data on interest check lists such as the High School Personality Questionnaire

has certain weaknesses. Cattell (1957) enumerates them as (1) self-ignorance, (2) motivational self-distortion, and (3) the limitations of repetitive, itemetric test procedures. In the handbook for the questionnaire Cattell (1962) states that since this particular scale deals with young people and the methods of research used in selecting the items make faking difficult, no motivational scale has been added to the test.

III. COLLECTION OF THE DATA

Longe-Thorndike Intelligence Tests

The appropriate level of the regular revised edition in the non-verbal battery of the test was administered to the grades one, three, and five pupils in the school system during the spring term of 1967. This testing was part of the school system's regular testing program and was carried out between February 22 and May 15.

The consumable edition was used in grades one and three, while the reusable edition with separate answer sheets was used in grade five. The writer administered the tests personally, but was assisted by classroom teachers in the hand scoring of the tests and in the calculation of the deviation IQ scores.

During the period January 25-31, 1968 the writer returned to Fort Frances and administered the same test to the succeeding grade one class, while the Canadian Multi-Level edition of the Longe-Thorndike Intelligence Tests (1967), using the single reusable booklet and separate scoring sheets, was given to the pupils in grades three, five and seven. The

score sheets were hand scored by the writer who also did spot-checking and calculated the deviation IQ's. Pupil's birthdates were checked with school records. The computation of means and standard deviations was done with IQ scores.

Stanford Achievement Tests

These tests were administered by the writer assisted by classroom teachers in the grade two, three, five, seven and eight classes during the fall and spring terms of the school year 1966-67.

Teachers assisted with the hand scoring of the test booklets. The writer spot-checked the results and computed the means and standard deviations for all sub-tests at each grade level using raw scores.

Open-End Sentence Questionnaire and Sociometric Test

The open-end sentence questionnaire was administered to the pupils in the two grade eight classes during April in the school year, 1966-67. This preliminary study was made to check on the clearness of directions and on pupils' attitudes toward the questionnaire. The form included instructions designed to eliminate any fear of giving straightforward opinions and real sociometric choices. The diversity of answers to the open-end sentences in this pilot study of the instrument showed that they would be useful for arriving at broad generalizations. The sociometric form seemed adequate and therefore, the test was administered to all the children in the schools by the classroom teachers on January 31, 1968. In grades four through eight the questionnaire, including the sociometric test, was given to all pupils by their classroom teachers. In the

primary grades individual tests, asking only for the three sociometric choices in each of the three criteria, were given to each pupil by his classroom teacher. The results were tabulated by the writer in sociometric matrices.

IPAT Jr.-Sr. High School Personality Questionnaire

As a preliminary study the test, in both Form A and Form B, was given to the two grade eight classes on April 14, 1967. The hand-scorable answer sheets were used. The writer administered both forms of the test in each classroom. The number of pupils who were present for both forms of the test was fifty-four: fourteen Indian and forty non-Indian. The answer sheets were hand-scored by the writer and the assumed means of the sten scores for the combined totals of both forms showed the test could be valuable, since it seemed to indicate personality differences between the two groups of pupils similar to those reported by authorities in the study of the Ojibwa personality.

During the period of January 25 to 31, 1968 both forms of the test were administered to all the grade six, seven and eight pupils in the three schools. The number of pupils who completed both forms of the test at this time was 189: 60 Indian and 129 non-Indian. The test was administered by the writer in eight classrooms with the assistance of classroom teachers. The hand-scorable answer sheets were scored by the writer who also did spot checking to ensure accuracy. The raw scores for each factor were transferred to the reverse sides of both sets of answer sheets and totalled separately as a check on the transferring of

scores and on addition. The combined total raw scores were then converted into sten scores with separate norms for boys and girls based on age 14 1/2 years, as given in the supplement supplied by the publisher. Spot-checking on Factor I, which shows the greatest variation between boys and girls, was done to assure that the appropriate table had been used.

The tallies for the first testing were added to these 1968 results giving a total of 74 Indian and 169 non-Indian pupils included in the computation of means and significance of differences between the means for each of the fourteen personality factors for the two groups. Sten scores were used to make these computations.

IV. TREATMENT OF THE FINDINGS

Lorge-Thorndike Intelligence Tests

The mean deviation IQ's were calculated for the Indian and non-Indian samples of the population at each grade level in which the Lorge-Thorndike Intelligence Tests were given. IQ scores were used to make these computations. The significance of the difference between the means for the two groups at each grade level was computed. Correlations with sub-tests of achievement and factors of personality were computed whenever measures of both tests were available for the same group of pupils.

Stanford Achievement Tests

For each sub-test, at each grade level in which the Stanford Achievement Tests were administered, the means and standard deviations

were calculated separately for the Indian and non-Indian samples of the population using raw scores. The significance of the difference between the means for the two groups was computed for each sub-test at each grade level. The mean scores were then converted into grade norms for meaningful interpretation. Correlation coefficients of ability and achievement in each sub-test were calculated using the data at each grade level for all pupils for whom measures had been obtained with both testing instruments. Correlation coefficients between the fourteen measures of personality traits and measures on subtests of achievement were calculated at each grade level where both these measures were available using the data for all pupils who had been present for both tests.

Open-End Sentence Questionnaire and Sociometric Test

The completions to the open-end sentences of the Indian and non-Indian groups were studied and compared to discover if there were evident differences in attitudes and aspirations between the two groups. Attitudes toward school and academic achievement, interactions with other pupils and with teachers, as well as aspirations and plans for the future which might effect academic achievement were particularly noted. The diversity of answers to the open-end sentences made them suitable for arriving at broad generalizations only. No other analysis of the material was attempted.

The sociometric form results were tabulated in matrices for the twelve classes in which the number of Indians in the class approximated,

or was larger than, the percentage of Indians in the total school population. No weighting was given to first, second, or third choices in the tabulation, nor were any differences among the three criteria noted. The findings were summarized and then analyzed to note differences between the Indian and non-Indian populations in their choices across race lines, across sex lines, and across both race and sex lines. Differences within the same population as the children advanced through the grades were also noted.

IPAT Jr.-Sr. High School Personality Questionnaire

Using the sten scores for each of the fourteen personality factors measured by this questionnaire, means and standard deviations were calculated for the entire Indian and the entire non-Indian populations separately. The significance of the differences between the means for each group was computed for each of the fourteen personality dimensions. The same computations were then repeated at each grade level.

A comparison of those personality factors, in which Indian children differed significantly from non-Indian children, with ability and achievement test results at appropriate grade levels was made to examine the relationships which might exist between personality and ability as well as between personality and academic achievement.

Summary

Data collected over a period of two years for the pupils in grades one through eight of the school system were used to substantiate

the findings of research concerning the ability and achievement of Indian pupils with respect to this particular population. The data were then analyzed to examine relationships which might exist between the observed deceleration in academic achievement of these Indian children and (1) their peer group relations in an integrated school setting, as well as (2) their personality structure.

CHAPTER IV

ANALYSIS OF ABILITY TEST RESULTS

The Lorge-Thorndike Intelligence Tests (nonverbal batteries) were given to the Indian and non-Indian children in grades one, three, five, and seven during each year of the study. An exception was the grade seven class in the 1966-67 school year to whom the Dominion Tests were given. Ability test results, therefore, are available for all classes except the two senior classes in the study. The results were used to substantiate the findings of research in Indian education with reference to this particular sample of the Indian population. The same general pattern as had been found in other studies of the ability of Indian children were apparent. The results were also used to (1) compare the two groups with respect to ability as measured by the test, (2) note within the Indian sample whether a retardation in ability matches a retardation in achievement, and (3) examine the ability of the Indian population in relation to any real differences found either in their social acceptance or in their personality structure.

Findings

The results of the nonverbal battery of the test in each year of the study at each grade level are shown in Table IV. These results show no significant difference between the Indian and non-Indian children in the 1967 testing in grade one, but a difference which is significant at the .05 level in the 1968 testing. In each succeeding grade there is a

difference which is significant at the .01 level with the exception of the 1967 testing in grade five when the difference was significant at the .05 level. In all testing instances the results would indicate that the non-Indian pupils possess superior ability.

Means for the non-Indian population seem to hold quite constant after grade one (an exception is the 1968 testing in grade three which will be referred to later). Non-Indian children tend to rate less highly in ability in grade one when compared with their successive testings than do Indian children. The latter group rate highest at the grade one level.

TABLE IV
ABILITY TEST RESULTS OF
INDIAN AND NON-INDIAN RESPONDENTS

Grade and Year	No. of pupils		Mean Scores		Difference in Means	t Scores
	Indian	Non-Indian	Indian	Non-Indian		
1, 1967	15	43	100.00	101.07	1.07	.45
1, 1968	17	54	93.15	100.90	7.75	2.56**
3, 1967	12	60	97.40	108.90	11.50	3.02*
3, 1968	12	59	92.85	103.02	10.17	3.10*
5, 1967	19	44	100.70	109.62	8.92	2.55**
5, 1968	14	47	97.00	110.10	13.10	3.23*
7, 1968	23	50	92.20	110.00	17.80	7.18*

* Significant at .01 level.

** Significant at .05 level.

No real decrease in ability with increased age is apparent in the Indian groups though the mean tends to hold less constant than does the mean for the non-Indian groups. This change could be a reflection of the changing nature of the Indian sample. It should be remembered that the Indian populations in grades one and three are drawn exclusively from the local reservation. In grade five this population includes children from the Indian residential school who received their primary education in that school and were integrated into the separate school system in grade four. The grade seven Indian population includes children who received their education in grades one through six in Indian day school on isolated reservations as well as children from the other two groups. Indian children from these varying backgrounds, however, do constitute the Indian population in the various grades within the school system and it must be considered as such. It is the Indian population so constituted which presents the problem under consideration.

In examining the results, those of grade three, 1968, stand out as not conforming to the general pattern. The 1967 testing in this grade used the regular Primary edition, level two, of the test which is published in consumable booklets. The 1968 testing, however, used the Canadian edition with the multi-level reusable booklets and separate answer sheets. It is questionable whether children this young are capable of transferring answers to separate answer sheets, particularly when the answer sheets are of such high density with the spaces for answers small and crowded. Since both Indian and non-Indian children

to measure the mental ability of Euroamerican children. Indian children do not have opportunities for the same broadening experiences nor do they develop the same personality characteristics oriented toward abstract thinking and test achievement as non-Indian children.

The crux of the problem lies in the purpose of the intelligence test. If it is intended to be a measure of innate intellectual abilities developed through cultural experience, then tests constructed for the dominant Euroamerican culture are not valid for Indian children. If the results of intelligence tests are to be a rough measure of a child's capacity for learning the kinds of things required in school and his ability to succeed in the dominant culture then they are valid for Indian children and it is acceptable to make these cross-cultural comparisons.

Summary

The Indian children in this study follow the pattern reported in previous research by achieving less in measures of ability than the non-Indian children at all levels. But if we accept the conclusions of most social scientists as summarized by Havighurst (1957) and quoted in the Congressional Report (p. 34) that "...Indians of today have about the same innate equipment for learning as have the white children," then it seems rash to accept these results at face value. Discretion would suggest that an explanation lies in the influence of the different cultures, the dominant one of which determines the content of ability tests.

CHAPTER V

ANALYSIS OF ACHIEVEMENT TEST RESULTS

The Stanford Achievement Tests, Partial Battery (1964 Revision) Form W were used as instruments to measure whether or not the Indian children included in this study did in fact follow the pattern of deceleration reported in research studies on the achievement of Indian pupils. The results of the testing are reported and analyzed in this chapter. First, the results from each grade in which the achievement tests were administered are reported and the achievement of the Indian and non-Indian samples of the population at each grade level are compared for each of the various sub-tests. These results and comparisons are made with raw scores. Then, the achievement for the two groups through the grades is analyzed by a comparison and discussion of the patterns of their achievement as they progress from grade to grade. For ease of interpretation mean raw scores are converted to grade norms in order to make these comparisons more meaningful. Finally, an analysis is made of the correlation of measures ability with those of achievement in the various sub-tests at each grade level. These correlation coefficients are considered in a further attempt to distinguish patterns of achievement characteristic of each of the two groups.

It should be borne in mind that in the examination of the progress these groups make from grade to grade it is not the same samples of the population at each grade level which are being studied. It would appear,

therefore, that the phenomenon of deceleration is characteristic of Ojibwa children in general, and is not specific to any select sampling from that population.

I. PATTERNS OF ACHIEVEMENT AT EACH GRADE LEVEL

Grade Two Achievement Test Results

The achievement test results (calculated with raw scores) for the October, 1966 testing in grade two are given for each sub test in Table V.

TABLE V
GRADE TWO ACHIEVEMENT TEST RESULTS
FOR INDIAN AND NON-INDIAN RESPONDENTS

Sub-Test	Mean (Raw Scores)		Difference in Means	t Scores
	Indian (N=13)	Non-Indian (N=61)		
Word Reading	22.24	24.40	2.16	.94
Paragraph Meaning	22.31	23.78	1.43	.58
Vocabulary	19.74	24.06	4.32	2.47**
Spelling	11.00	11.89	.89	.53
Word Study Skills	39.93	40.80	.87	.31
Arithmetic	38.55	42.30	3.75	.99

** Significant at .05 level

The non-Indian pupils did better than the Indian children in all sub-tests. The two groups did not differ significantly on any of the sub-tests, though, except 'vocabulary' where the difference in means in favor of the non-Indian children was significant at the .05 level. The sub-tests which showed the least variation between the two groups were 'spelling' and 'word study skills'.

Grade Three Achievement Test Results

The achievement test results for the Indian and non-Indian pupils in grade three on the October, 1966 testing are given in Table VI for each sub-test. The means were calculated with raw scores.

TABLE VI
GRADE THREE ACHIEVEMENT TEST RESULTS FOR
INDIAN AND NON-INDIAN RESPONDENTS

Sub-Test	Mean (Raw Scores)		Difference in Means	t Scores
	Indian (N=11)	Non-Indian (N=61)		
Word Meaning	16.46	17.09	.63	.32
Paragraph Meaning	28.35	31.10	2.75	.81
Sci. & Soc. Stud.	16.27	18.40	2.13	1.72
Spelling	15.19	14.08	1.11	.50
Word Study Skills	42.10	42.65	.55	.13
Language	38.35	34.00	4.35	2.13**
Arith. Computation	17.00	20.09	3.09	1.39
Arith. Concepts	18.35	21.14	2.79	1.63

** Significant at .05 level.

The Indian pupils achieved higher scores than the non-Indian pupils in both the 'language' and 'spelling' sub-tests. The difference in means for the 'language' test was statistically significant at .05 level. In all other sub-tests the non-Indian children achieved higher scores. The sub-tests which showed the least variation between the two groups were 'word study skills' and 'word meaning'.

Grade Five Achievement Test Results

The achievement test results for the Indian and non-Indian pupils in grade five on the May, 1967 testing are given in Table VII. The means were calculated with raw scores.

TABLE VII
GRADE FIVE ACHIEVEMENT TEST RESULTS FOR
INDIAN AND NON-INDIAN RESPONDENTS

Sub-Test	Mean (Raw Scores)		Difference in Means	t Scores
	Indian (N=19)	Non-Indian (N=44)		
Word Meaning	18.37	20.71	2.34	1.58
Paragraph Meaning	26.80	33.10	6.30	3.25*
Spelling	29.30	25.75	3.55	1.69
Language	71.40	76.30	4.90	1.73
Arith. Computation	16.04	14.88	1.16	.97
Arith. Concepts	11.78	13.67	1.89	1.80
Arith. Applications	14.78	17.48	2.70	1.78

* Significant at .01 level.

The Indian pupils achieved higher scores than the non-Indian children in both 'spelling' and 'arithmetic computation' though the difference in means on neither of these sub-tests was statistically significant. The non-Indian pupils achieved higher scores than the Indian pupils in the other two arithmetic sub-tests, 'arithmetic concepts' and 'arithmetic applications'. The non-Indian pupils achieved significantly higher than the Indian pupils, at .01 level, in the 'paragraph meaning' sub-test.

Grade Seven Achievement Test Results

The Achievement Test results for the Indian and non-Indian pupils in grade seven on the October, 1966 testing are given in Table VIII. The means were calculated with raw scores.

TABLE VIII
GRADE SEVEN ACHIEVEMENT TEST RESULTS FOR
INDIAN AND NON-INDIAN RESPONDENTS

Sub-Test	Mean (Raw Scores)		Difference in Means	t Scores
	Indian (N=30)	Non-Indian (N=49)		
Word Meaning	21.20	29.99	8.79	5.41*
Paragraph Meaning	31.10	41.66	10.56	5.87*
Spelling	40.90	38.41	2.49	1.21
Language	76.65	90.35	13.70	5.25*
Arith. Computation	18.20	19.88	1.65	1.32
Arith. Concepts	13.70	18.95	5.25	5.25*
Arith. Applications	17.00	23.99	6.99	4.63*

* Significant at .01 level.

The non-Indian pupils achieved significantly higher at .01 level than did the Indian pupils in all sub-tests except 'spelling' and 'arithmetic computation'. The difference in means for these two sub-tests was not significant. The Indian pupils, however, achieved higher scores in 'spelling' than did the non-Indian pupils.

Grade Eight Achievement Test Results

The achievement test results for the Indian and non-Indian pupils in grade eight on the May, 1967 testing are given in Table IX. The means were calculated with raw scores.

TABLE IX
GRADE EIGHT ACHIEVEMENT TEST RESULTS FOR
INDIAN AND NON-INDIAN RESPONDENTS

Sub-Test	Mean (Raw Scores)		Difference in Means	t Scores
	Indian (N=13)	Non-Indian (N=40)		
Paragraph Meaning	29.93	36.80	6.87	2.41**
Spelling	42.49	34.53	7.96	2.53**
Language	97.69	105.85	8.16	2.56**
Arith. Computation	21.93	27.35	5.43	2.05**
Arith. Concepts	21.77	26.65	4.88	3.30*
Arith. Applications	14.38	17.13	2.75	2.59*

* Significant at .01 level.

** Significant at .05 level.

The difference in means for the Indian and non-Indian groups were statistically significant for all sub-tests. The sub-tests 'arithmetic concepts' and 'arithmetic applications' showed differences in means between the two groups significant at the .01 level. For all other sub-tests the differences in means were significant at the .05 level. The Indian pupils achieved significantly higher scores than the non-Indian pupils in the 'spelling' sub-test. In all other sub-tests the non-Indian children excelled.

Discussion

To compare the over-all achievement patterns of the Indian and non-Indian pupils in this study the results of the achievement tests by sub-test and grade are summarized in Table X. The mean raw scores have been converted to grade norms to facilitate the interpretation of the data.

The two groups show no real variation in the 'word meaning' sub-test until grade five when a retardation of one year for Indian children compared with a retardation of five months for non-Indian children becomes apparent. In grade seven the difference becomes highly significant at the .01 level when the retardation of Indian children reaches approximately two years. There is no 'word meaning' sub-test in the advanced battery of the tests used in grade eight.

The 'paragraph meaning' sub-test does not distinguish between the two groups in the primary grades. The differences in this sub-test become significant at the .01 level in grade five, where the Indian children show a retardation of one year. It remains so in grade seven, where their retardation reaches one and one-half years. The difference between the two groups is significant at the .05 level in grade eight, again in favor of the non-Indian pupils.

The 'science and social studies skills' sub-test is found only in the Primary II battery of the tests used in grade three. A difference of three months' achievement in favor of the non-Indian pupils is not statistically significant.

TABLE X
 ACHIEVEMENT TEST RESULTS^a FOR INDIAN AND NON-INDIAN
 RESPONDENTS BY GRADE AND SUB-TEST

Sub-Test	Grade 2		Grade 3		Grade 5		Grade 7		Grade 8	
	Norm 2.1		Norm 3.1		Norm 5.9		Norm 7.1		Norm 8.9	
	Ind.	N.I.	Ind.	N.I.	Ind.	N.I.	Ind.	N.I.	Ind.	N.I.
Word Meaning	1.8	1.9	2.7	2.7	4.9	5.4	5.4	6.7*		
Paragraph Meaning	1.8	1.9	2.6	2.9	5.0	5.9*	5.6	6.8*	7.2	8.6**
Sc. & Soc. Stud. Skills			2.4	2.7						
Vocabulary	1.7	2.2**								
Spelling	1.9	2.0	3.2	3.1	5.9	5.4	7.5	7.0	10.7	8.7**
Word Study Skills	2.1	2.2	3.5	3.6						
Language			3.1	2.7**	4.7	5.2	5.3	6.6*	7.8	8.9**
Arithmetic Computation	1.9	2.0	2.6	2.7	5.6	5.4	5.9	6.2	8.2	9.6**
Arithmetic Concepts			2.8	3.1	6.3	6.7	6.1	7.0*	8.6	11.1*
Arithmetic Applications					4.6	5.1	5.7	7.4*	7.6	8.5*

* Significant at .01 level.

** Significant at .05 level.

^aResults in grade norms.

The Primary I battery of the tests is the only one with a sub-test in 'vocabulary'. This test shows a superior achievement of five months for the non-Indian pupils which is statistically significant at the .05 level.

The 'spelling' sub-test shows a variation of one month in favor of non-Indian children in grade two and the same amount of variation in favor of Indian children in grade three. This superiority of Indian children in spelling becomes increasingly apparent in grades five and seven where their achievement surpasses that of the non-Indian children by five months. The difference between the two groups becomes statistically significant at the .05 level in grade eight when the Indian pupils achieve almost two years above the norm.

The sub-test 'word study skills' is found only in the Primary I and II batteries. This sub-test shows a superior achievement of only one month for the non-Indian pupils in both grade two and grade three. This difference is not significant.

The Indian children show a significant superiority in 'language' in grade three at the .05 level. In the succeeding grades, though, they fall behind the non-Indian children in language achievement, the difference between the two groups becoming significant at the .01 level in grade seven, with a retardation for the Indian children of over one year, and at the .05 level in grade eight.

There is not any real variation in 'arithmetic computation' between the two groups until grade eight when the non-Indians achieve significantly

better at the .05 level. The grade norms for the two groups show a difference of only one month's achievement in favor of the non-Indian children in grades two and three, of two months' achievement in grade five, and of three months' achievement in grade seven--always in favor of the non-Indian group. By grade eight, however, this difference is one of fourteen months.

The differences in 'arithmetic concepts' show greater variation between the two groups, again in favor of the non-Indian pupils, with the differences becoming highly significant at the .01 level in grades seven and eight. The sub-test in 'arithmetic applications' follows the same pattern with the non-Indian children achieving better than the Indian children in grade five and with the differences between the two groups becoming highly significant at the .01 level in grades seven and eight.

Some academic progress from grade to grade is noticeable for both groups, but the rate of growth in any subject area is not as great for Indian children as for non-Indian children with the exception of 'spelling'. This confirms the finding of previous research that Indian children fall further behind the expected level of achievement as they advance through the grades. Furthermore, the Indian pupils in grades seven and eight are a more select group than are the non-Indian pupils. Since Indian children are more frequently over-age for their grade, the drop-out rate for those who reach age sixteen before grade eight is greater for Indian children.

III. CORRELATION OF ABILITY AND ACHIEVEMENT

The correlation coefficients obtained, when measures of ability are compared with measures of achievement in the various subject areas, are shown for Indian and non-Indian pupils at the grade two, three, and five level in Table XI. The pupils who were in these grades in 1966-67 and for whom both measures of ability and achievement were available are included in the computations. Some loss of numbers in the sample population at each grade level is accounted for by students who were not present for one or the other of the testing sessions and whose data could not, therefore, be included in these comparisons.

The measures of intelligence for Indian children are not true measures of their innate ability and fall below those of the non-Indian children. An analysis of the information in Table XI reveals that Indian pupils do not achieve comparably as well as non-Indian children even according to measured ability. In no instance is the correlation of the Indian children's ability and achievement statistically significant. They would appear to be underachieving more than non-Indian pupils at the primary grade levels, in reading and study skill subjects particularly. Language and arithmetic computation are the subject areas in grades two and three where their measure of achievement seems to be somewhat commensurate with that of their ability. It will be noted in referring to Table X (p. 66) that it was in these subject areas that their achievement equalled or excelled that of the non-Indian children.

Indian pupils in grade five appear to use their ability to achieve

TABLE XI
CORRELATION COEFFICIENTS OF ABILITY AND ACHIEVEMENT FOR INDIAN
AND NON-INDIAN RESPONDENTS BY GRADE^a AND SUB-TEST

Sub-Tests	Grade 2		Grade 3		Grade 5	
	Ind. (N=8)	N.I. (N=51)	Ind. (N=11)	N.I. (N=60)	Ind. (N=19)	N.I. (N=44)
Word Meaning	.02	.31**	.00	.25	.26	.09
Paragraph Meaning	.20	.43*	.18	.31**	.13	.10
Sc. & Soc. Studies			.17	.38*		
Vocab.	.47	.44*				
Spelling	.15	.39*	.03	.14	.15	.11
Word Study Skills	.16	.51*	.21	.40*		
Language			.56	.06	.41	.15
Arith. Computation	.52	.48*	.32	.34*	.13	.40*
Arith. Concepts			.28	.42*	.28	.52*
Arith. Applications					.41	.60*

* Significant at .01 level.

** Significant at .05 level.

^aGrade as in 1966-67.

more than do the non-Indian children in this grade level in most subject areas except arithmetic. Even though their results on the achievement tests do not indicate the fact, they would seem to be achieving more in accordance with their measure of ability in some subjects than are the non-Indian children.

The correlation of ability and achievement for non-Indian children is highly significant for all sub-tests in grade two, and for all subject areas except 'word meaning', 'spelling', and 'language' in grade three. Only in the arithmetic sub-tests in grade five, however, does the achievement of non-Indian pupils show a significant correlation with their ability. The phenomenon of deceleration in academic achievement, or a growing trend toward underachievement, would seem to be a characteristic of non-Indian pupils as well, though perhaps not to such a marked and noticeable degree.

Summary

The Indian children in this study revealed the same trends of deceleration in achievement, in all subject areas with the exception of 'spelling', that has been found (by other studies) to be a general characteristic of their academic progress. A correlation of their measures of ability with those of achievement revealed that they were not achieving according to their measured ability at any grade level.

On the other hand, however, the correlation of measures of ability and achievement for the non-Indian children showed a significant relationship in all subjects at the grade two level with a gradual dropping off in achievement in grade three and a further dropping off

in grade five.

The phenomenon of deceleration in academic achievement as these children progress through the grades appears to be a characteristic of both the Indian and the non-Indian children alike when they are considered as representative groups.

CHAPTER VI

ANALYSIS OF SOCIOMETRIC TEST RESULTS

A sociometric test given to all pupils in the study was used to measure social acceptance of Indian children in the school system. In grades four through eight this sociometric form was incorporated into an open-end sentence questionnaire. The open-end sentences were used to evaluate in a general way the attitudes of Indian children toward school and their aspirations for the future. This chapter will consider the broad generalizations arrived at from the open-end sentences and will analyze the findings of the sociometric test.

I. GENERALIZATIONS FROM OPEN-END SENTENCES

When studying the completions of the Indian pupils' open-end sentences with respect to their school achievement the broad general impression received is that their attitude is quite negative and fearful. The "worst thing about school" for many of them is "failing." Few of them are satisfied with their marks or their report cards. "Always below average" is a typical response. There seems to be little indication of differences in attitude as they go through the grades except that remarks similar to "...is starting to be low," were more common in grade four than in the senior grades.

Participation in class would seem to be a frightening experience for older Indian children. One child remarked that when he answers a question in class "...the world caves in on me." Other comments such

as "...always say I don't know", "I'm slow to answer", "...hard to find words", "...I can't think" convey their disinclination toward full participation in classroom activities. I feel 'sick', 'funny', 'shaky', 'embarrassed', 'nervous', 'shy', 'unsteady', 'I turn red', 'I lose my voice' are all expressions which tell what a frightening experience such participation is for the majority of them. A feeling that they are being 'laughed at' is quite common. These expressions contrast with answers of non-Indian pupils who replied that when they were asked to participate in class they "...feel sure of myself", "try my best to answer."

The noise of their fellow classmates bothers and disturbs Indian pupils; "...sometimes they are so noisy that they just get on my nerves, especially when I'm doing work", expresses the feelings of many Indian students. The non-Indian children would occasionally mention that their classmates were talkative, but would usually add "...me, too."

Indian children on the whole do not seem to enjoy going to school. They go "...because I have no choice," "...because it is part of my life."

The aspirations of Indian children seem to be considerably less definite than those of non-Indian children. "...get a job...for good pay," is the most common ambition. Many of them described their plans when school was finished as in the immediate future, e.g. "I'll go home on the bus." Some of the boys aspire to be pilots and guides; the girls to be nurses. Most answers, however, were very indefinite such as "...follow my ambition." "I'll wait for a job" may be the answer that best expresses the ambition of many Indian children. Few of them plan for higher education,

especially in the senior grades. Many of them do not seem to aspire even to attend high school.

II. FINDINGS FROM SOCIOMETRIC TEST

The information derived from the sociometric matrices for the twelve classes in which the size of the Indian enrolment approximated the 26 per cent level characteristic of the school system as a whole is compiled in Table XII. An analysis of this data suggests differences in the social acceptance patterns of Indian and non-Indian children.

Non-Indian children make fewer choices of Indian children as they grow older, particularly at the grade seven and eight level. Discrimination toward Indian children would appear to be more pronounced as they move upward through the grades--following the pattern of their academic deceleration. Although the total non-Indian population in the study is double that of the total Indian population, the choices made by non-Indian children across the race line are less than half those made by the Indian children across the same line.

Noticeable, too, is the fact that non-Indian children choose friends of the opposite sex within their own race group more than five times as often as Indian children did. Indian boys, particularly, did not choose Indian girls on any criterion after grade four.

Indian children made choices of non-Indian children of the opposite sex almost four times as often as non-Indian children chose Indian children of the opposite sex. Choices of Indian children of the

TABLE XII
 SOCIOMETRIC TEST RESULTS COMPILED AS CHOICES ACROSS
 RACE AND SEX FOR TWELVE CLASSES IN WHICH INDIAN
 ENROLMENT APPROXIMATED 26 PER CENT

Class	Population				Choices											
	Ind.		Non-I.		Across Race not Sex				Across Sex not Race				Across Race and Sex			
	<u>Ind.</u>		<u>Non-I.</u>		<u>Ind.</u>		<u>Non-I.</u>		<u>Ind.</u>		<u>Non-I.</u>		<u>Ind.</u>		<u>Non-I.</u>	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Grade 1	5	2	11	5	22	9	12	3	1	3	14	16	2	3	1	0
Grade 2	4	3	6	11	20	11	6	4	2	1	4	4	0	0	0	0
Grade 3	2	5	9	6	12	20	5	12	0	0	6	4	0	0	1	0
Grade 4	3	11	10	5	14	13	11	7	1	0	4	1	0	0	1	0
Grade 5&6	8	8	8	8	10	14	13	12	0	2	0	4	5	0	0	3
Grade 5	4	4	10	10	26	12	10	6	0	2	19	17	2	3	0	0
Grade 6	4	4	13	11	12	21	10	16	0	0	5	1	0	0	0	0
Grade 7A	6	1	6	10	3	9	3	0	0	0	3	1	1	0	0	0
Grade 7B	3	4	10	9	9	7	3	1	0	6	1	0	0	2	0	0
Grade 7C	3	6	6	6	9	11	6	3	0	0	0	0	0	0	0	0
Grade 8A	3	6	10	10	25	17	0	1	0	2	0	0	0	4	0	0
Grade 8B	4	6	13	11	7	15	4	7	0	0	0	6	0	0	0	0
Race Total	109		214		328		155		20		110		22		6	

opposite sex by non-Indian children is almost nil at all grade levels. None of these choices is made after grade six.

A summary of this information is given in Table XIII considering choices made as a percentage of possible choices. The three choices in each of the three criteria, none of which was weighted differently, made a total of nine possible choices for each respondent. For the Indian group of 109 children this yields 981 possible choices; for the non-Indian group of 214 children there are 2,026 possible choices.

TABLE XIII
CHOICES MADE AS A PERCENTAGE OF POSSIBLE CHOICES
FOR INDIAN AND NON-INDIAN RESPONDENTS

	Across Race but not Sex %	Across Sex but not Race %	Across both Race and Sex %	Within both Race and Sex %
Indian	33.4	2.04	2.2	62.4
Non-Indian	7.2	7.1	.3	85.4

To eliminate the variable of differences in size of enrolment of the Indian and non-Indian groups within a class the choices made by each group of respondents was calculated as a percentage of the number of Indian or non-Indian pupils in the class. The one class with the largest Indian enrolment at each grade level was chosen for this comparison. The results are given in Table XIV. The same general tendencies as noted above were apparent:

TABLE XIV
 CHOICES MADE BY INDIAN AND NON-INDIAN RESPONDENTS
 AS A PERCENTAGE OF POPULATION WITHIN A
 SINGLE CLASS AT EACH GRADE LEVEL

	Grade 1 Ind N-I	Grade 2 Ind N-I	Grade 3 Ind N-I	Grade 4 Ind N-I	Grade 5 Ind N-I	Grade 6 Ind N-I	Grade 7C Ind N-I	Grade 8B Ind N-I
Across Race but not Sex %	443 94	443 59	457 113	193 106	475 80	412 108	222 75	220 46
Across Sex but not Race %	56 187	43 47	0 67	7 33	25 180	9 25	0 0	0 25
Across both Race and Sex %	71 6	0 0	0 7	9 7	63 0	0 0	0 0	0 0

1. A considerably greater number of choices are made across race lines by the Indian children with a drop in such choices for both groups in the senior grades.

This poorer social acceptance of Indian children may be the result of their conspicuousness as a minority group. It may also stem from the fact that they are denied participation in any significant phases of school life because they live on the reservation. It does not appear that the Indian children voluntarily withdraw from the society of non-Indian children for they choose non-Indian children for companions twice as often as they are chosen.

2. A greater number of choices of the opposite sex from within their own group is made by the non-Indian children. A drop in this tendency in the senior grades is noticeable for both groups. No such choices are made by Indian children beyond grade five.

Ojibwa society with its emphasis on the impropriety of interpersonal relationships with non-marriageable members of the opposite sex, as well as the teasing relationships which exist with marriageable members of the opposite sex become more apparent at the age of puberty.

3. The disinclination for both groups to cross both the race and sex line after grade one is noticeable. No such choices are made by either group beyond grade five.

The enrolment of one class of 32 pupils was equally divided among Indian and non-Indian pupils, and again among boys and girls within each group. A sociograph depicting the mutual choices of the children in this

grade five and six class is presented in Figure 2. It will be noted that among the girls the choices across the race line are made exclusively by the Indian girls. The only choices across the sex line were made by a non-Indian girl within her own race group. Choices across the race line among the boys, though more numerous than for the girls, are limited to a few boys within each race group. One Indian girl made no choices whatever.

Summary

Indian children in general do not feel "at home" in the school situation. For many of them classroom participation can be an almost traumatic experience. Their aspirations for the future are immediate and limited.

The social acceptance of Indian children follows the same pattern as their academic achievement. They both drop off as the children move upward through the grades. Apparent discrimination against Indian children, by those of the dominant culture, and the withdrawal of Indian children from contact with the non-Indian group become more pronounced as they grow older and advance through the grades. With the exception of isolated individuals there are few choices of Indians by non-Indians after grade six. The within-race differences in choice of those of the opposite sex among the two populations are also significant.

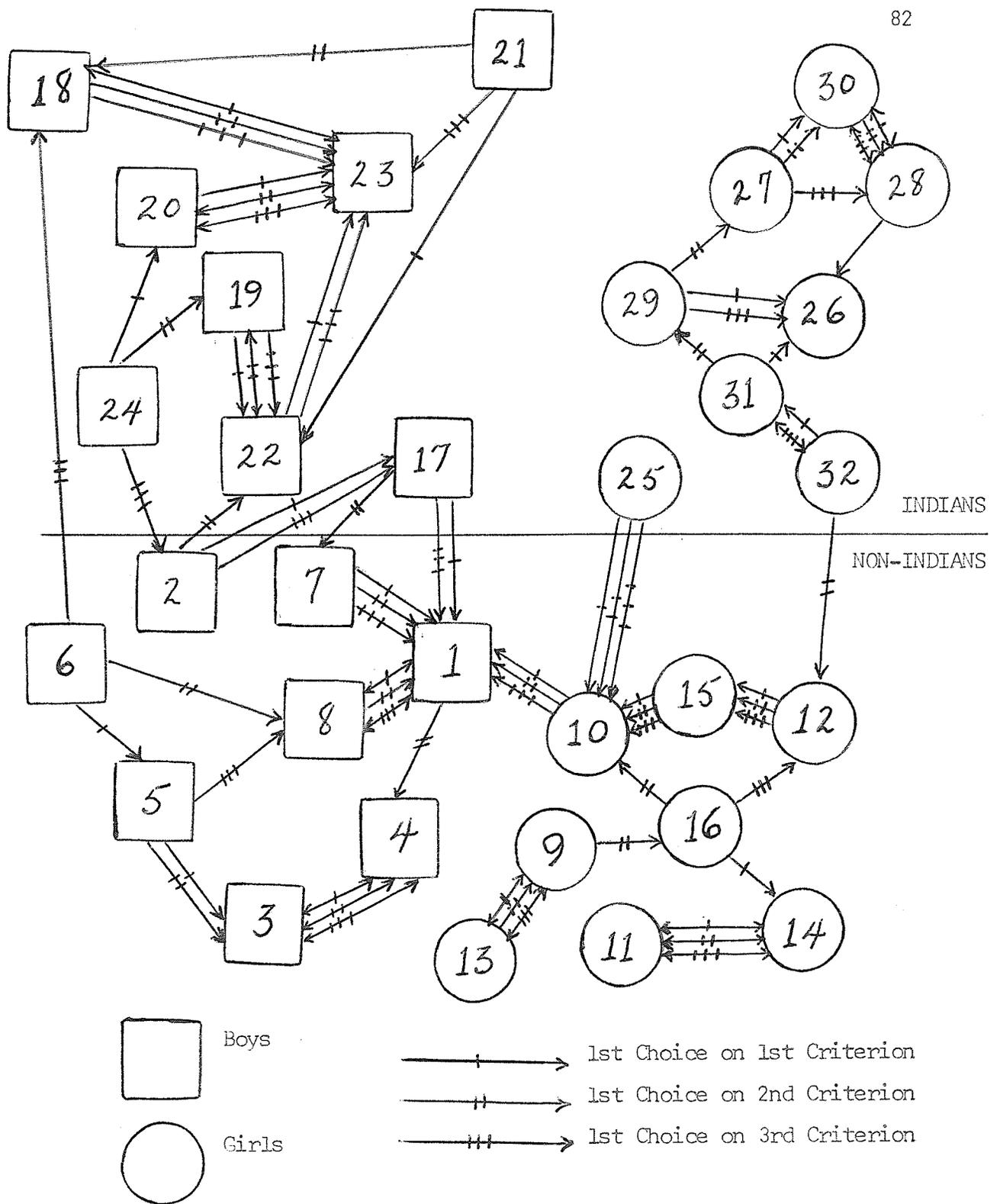


Figure 2. Mutual choices in a grade 5 & 6 class

CHAPTER VII

ANALYSIS OF PERSONALITY QUESTIONNAIRE RESULTS

To consider the possibility that the cause of comparatively poor academic achievement might lie in the area of the basic personality structure of Indian children, the IPAT Jr.-Sr. High School Personality Questionnaire in both Form A and Form B was administered to all the grade eight pupils in the school system in April, 1967, and to all grade six, seven, and eight pupils in January, 1968. On seven of the fourteen personality dimensions measured, the Indian pupils differed significantly from the non-Indian pupils. There was a remarkable coincidence between these findings and those of authorities in the field of Indian personality. This chapter will consider: (1) the source traits of these seven significant factors, (2) the determination of these personality factors, (3) the global personality of the Indian child which emerges from this study, (4) the patterns of personality change of Indian children, (5) correlation of personality dimensions with ability, and finally, (6) correlation of personality dimensions with achievement.

I. SOURCE TRAITS OF SIGNIFICANT FACTORS

The source traits' titles and their constituent trait-elements are listed in bi-polar fashion. This shows what the source trait is like at both extremes and indicates that it is a "dimension of personality." It is important to remember that the trait-elements describe the extremes of a bi-polar continuum. In the present study the greatest variation of

the mean sten score of the Indian group was 1.4 standard deviations from the mean of the general population. On seven factors their mean sten score differed significantly from that of the non-Indian group. The mean sten scores for the total Indian and non-Indian populations in each of the fourteen personality factors are given in Table XV with an indication of those in which the two groups differed significantly. The Indian children's mean score was significantly lower than that of the non-Indian children, indicating a variation toward the negative end of the continuum, on Factors A, B, F and G. Their mean scores were significantly higher, indicating a variation in a positive direction, on Factors I, J, and Q₂.

Factor A¹ Schizothymia - (aloof, stiff) vs. Cyclothymia + (warm, sociable)

The psychiatrist, Kretschmer (Cattell, 1950a) pointed out that the contrast between the withdrawn, emotionally obscure, opinionated schizophrenic and the sociable, directly emotional but cyclically unstable manic-depressive exists to a lesser degree among 'normal' people. The shy, aloof, rigid temperament he call schizothyme and the open, emotional, unsteady temperament, cyclothyme. Cattell states that factor analysis yields such a variable, one of the most important differentiators of personality, corresponding to this syndrome.

He claims that this single source trait suffuses the whole field of human behavior and makes possible a considerable amount of prediction

¹Factors are arranged in decreasing order and assigned alphabetic symbols according to the amount of variance they account for in a typical adult population.

TABLE XV
PERSONALITY QUESTIONNAIRE RESULTS FOR INDIAN
AND NON-INDIAN RESPONDENTS

Factor	Mean (Sten Score) ^a		Difference in Means	t Scores
	Indian (N=74)	Non-Indian (N=169)		
A Schizothymia - vs. Cyclothymia +	4.28	5.18	.90	3.9*
B Low General Mental Capacity - vs. General Intelligence +	4.08	4.95	.87	4.4*
C Emotional Instability - vs. Ego Strength +	5.39	4.93	.46	1.7
D Phlegmatic Temperament - vs. Excitability +	5.84	6.17	.33	1.2
E Submissiveness - vs. Dominance +	5.30	5.73	.43	1.8
F Desurgency - vs. Surgency +	4.69	5.61	.92	3.5*
G Expedient - vs. Conscientious +	4.76	5.40	.64	2.3**
H Threctia (Shy) - vs. Parmia (Venturesome) +	4.88	5.30	.42	1.7
I Harria (Tough Minded) - vs. Premsia (Sensitive) +	5.59	4.69	.90	3.9*
J Zeppia (Active) - vs. Coasthenia (Individualism) +	6.80	5.92	.88	3.4*
O Confident Adequacy - vs. Guilt Proneness +	5.91	5.66	.25	1.1
Q ₂ Group Dependency - vs. Self-Sufficiency +	6.45	5.65	.80	3.6*
Q ₃ Undisciplined Self-Conflict - vs. Controlled +	5.05	5.27	.22	.8
Q ₄ Low Ergic Tension - vs. High Ergic Tension +	5.88	5.69	.19	.7

* Significant at .01 level.

** Significant at .05 level.

^aA ten-point scale with a mean of 5.5 and a standard deviation of 1.

when properly delineated and measured. Interesting characteristics of this trait relevant to the present study and pointed out by Cattell are indications that people who score low in this factor are sensitive lovers of nature and are less able to respond to sudden demands for speed of output. In the test handbook he notes that these people like introspection, while those who score on the positive side generally achieve superior social adjustment. Persons on the negative side of the continuum are described as being introverted, reserved, detached, critical and cool; they are unsociable, unresponsive and apathetic. The Indian children in this study scored more than one standard deviation below the norm for the general population on this factor.

Factor B Mental Defect - vs. General Mental Capacity +

Factor B appears to be no more than the general ability or intelligence factor demonstrated as Spearman's 'g' or Thurstone's second-order factor in cognitive performances. It manifests itself in wide circles of personality modification and operates to a considerable extent in the realm of character. Intelligence is a source of variance in certain particular personality behaviors (Cattell, 1957). It correlates with such trait-elements as conscientiousness, reliability and self control and affects much of the personality.

In the handbook for the test Cattell admits that the trait-elements for this factor are not very highly loaded, being of the order of .3 and .4. Of interest to the present study is his observation that a positive rating indicates a better adjustment to school life. The

scale is very brief and not as reliable as longer tests. Since the High School Personality Questionnaire is essentially untimed, this intelligence test is a power measure of 'crystallized' ability. The score for the B factor correlates .65 with Cattell's Culture Fair Intelligence Scale 2.

The trait-elements for this factor at the negative end of the continuum are listed as indolent, changeable, unself-controlled, emotionally dependent, immature and irresponsible (Cattell, 1946 p. 315). The Indian children in this study scored almost one and one-half standard deviations below the norm for the average population in this factor.

Factor F Agitated Melancholic Desurgency - vs. Surgency +

There is evidence that in its extreme form the negative pole of Factor F comprises what is common to anxiety neuroses and agitated melancholia (Cattell, 1950b). A low rating in this factor correlates with sensitive introspection, brooding suspicion, anxiousness and fearfulness. Trait-elements of this factor which have been discovered are listed by Cattell (1946, p. 324). They included such characteristics as apathetic, worrying, seclusive, shy, aloof, quiet, introspective, scared, brooding, suspicious. The trait-elements are probably identifiable with those affected by mood changes of elation and depression. Daily variation in this source trait, therefore, is more common than in others. In children and adolescents this factor seems to be the largest single factor in personality (Cattell, 1957). The Indian children in this study scored .8 standard deviations below the mean score for the norming population on this factor.

Factor G Immature Dependent Character - vs. Positive Character Integration +

This factor is not to be confused with Spearman's 'g' which is symbolized in personality measurement as B.

The extremes of this factor are described as lack of acceptance of group moral standards versus character or super ego strength (Cattell, 1962). Other associated variables at the negative pole include quitting, indolent, neglectful of social chores, emotionally dependent, immature and irresponsible, self-pitying, no sense of fair play, unstable in mood, unpunctual, not self reliant, disobedient in class (in children) (Cattell, 1957). The Indian children scored .7 standard deviations, on this factor, below the mean of the normal population.

Factor I Rigid, Tough Poise - vs. Sensitive, Imaginative, Anxious Emotionality +

Factor I is presented by Cattell as one of the most subtle yet very powerful (in terms of contribution to personality variance) source traits. It is defined as rigid, tough poise versus sensitive, imaginative emotionality (Cattell, 1962). The Indian children in this study rated on the positive side of this factor which shows the following forms of behavior: tenderhearted, sensitively sympathetic, emotionally dependent, introspective, intuitive. Cattell (1957), listing other items associated with this factor, states that persons rating high in Factor I have fits of anxiety for no reason, think ultimate values are more important than supporting a family, and are regarded as soft-hearted rather than practical. They are characterized as being infantile, demanding, impatient and self-centered with strong dependency needs and general emotionality with

maladjustment. Again the trait-elements undependable, emotionally immature, and irresponsible are listed as characteristics of the score obtained by the Indian children in this study (Cattell, 1946, p. 330). They scored only .09 standard deviations above the mean for the general population on this factor, while the non-Indian respondents scored almost one standard deviation below the mean of the norming population. The difference between the two groups in this study was significant at the .01 level.

Factor J Vigorous "Obsessional Determined" Character - vs. Neurasthenia +

Factor J is another source trait in which the Indian children differed significantly from the non-Indian children in this study in a positive direction. The mean for both groups is above the mean for the general population; that of the Indian children being 1.3 standard deviations above. Cattell (1957) describes the positive pole of this dimension as culture-pressure conflict asthenia. It is characterized by such behavior as: acts individualistically, passively obstructs, slow to make up mind, inactive, quiet, self-sufficient, reserved, pessimistic and depressed. "The central characteristics are obstinacy, passive resistance to the psychological environment...marked refusal to be stampeded and some tendency to depression" (p. 138). In small children it includes the following: day dreams, plays alone, does not comply, does not laugh and smile (p. 137). In his list of the principal source traits discovered for this factor Cattell (1946, p. 332ff) enumerates on the positive side of the factor: emotionally dependent, undependable, emotionally immature,

as well as slow, quitting, subjective and evasive.

Factor Q₂ Group Dependency - vs. Self-Sufficiency +

Q factors have been established only for certain through questionnaire responses and are correlated with behavioral criteria. Cattell (1962) states the Q shows itself more in internal attitudes than in external behavior. It is another factor in which both groups obtained ratings on the positive side of the mean for the general population; the Indian children's score being one standard deviation above. This factor is said to be one of the major second-order factors of introversion. A positive rating indicates a person who is resolute and accustomed to making his own decisions alone.

Seclusiveness, emotional balance, stubbornness are listed as trait-elements. A person with a high positive rating shows characteristics such as avoiding society because it wastes time, not because of emotional rejection; knowing his thinking is well enough organized to solve problems for himself (Cattell, 1957).

II. DETERMINATION OF SIGNIFICANT FACTORS

It is important in this study to give special consideration to the causes which determined the personality traits that distinguish significantly the Indian children from the non-Indians. Only then can there be understanding of the problems Indian children face and a hope of providing assistance. In the following discussion only the end of the continuum toward which the Indian children tended is treated.

Factor A - Schizothymia (Reserved)

This factor is seen by Cattell (1957) as a temperamental tendency. There is evidence that it is of strong hereditary determination. "It is largely innately determined as to its level, though appreciable environmental effects arise within the family" (p. 197).

Factor B - Low General Mental Capacity

Since this factor equates with general intelligence it can be assumed that it is genetically determined but that cultural values and attitudes will determine the individual's characteristic mental approach and the development of certain specific mental abilities.

Factor F - Desurgency (Agitated Melancholy)

Genetic studies show that this factor has negligible hereditary determination and is almost entirely an environmentally determined variance. The essence of desurgency is described as a "sobering inhibition by the experience of punishment or failure" (Cattell, 1957, p. 117). It "is a consequence both of a difficult environment and of some tendency of the individual to make his environment more difficult by taking on more long-term goals and responsibilities" (p. 118). It is hypothesized that this F dimension in the negative direction "represents the degree of deflection strain from the long circuiting of paths to ergic goals, occasioned by punishment, deprivation, internal conflict and unattainability...of moral and general life goals" (p. 120). Desurgency is built into the personality through a history of deprivation.

Factor G - Expedient (Immature Dependency)

What evidence there is on the nature-nurture ratio for this factor suggests large environmental influences. Cattell (1950 b) discussing the associated criterion variables of the negative pole of this factor states that it includes group and aggressive stealing, defective moral environment, delinquent siblings with the absence of "temperamental causes" for delinquency. The negative aspect of this factor is presented, in fact, as the central feature of the delinquent profile. Evidence suggests environmental influences on this factor which is a socially molded trait.

Factor I + Dependent, Sensitive

Cattell (1957) claims that there is evidence from genetic studies that this factor is to a very high degree of environmental determination. Genetic studies with Q-data show this factor to be one of the most environmentally determined dimensions of personality with larger ranges in eleven year olds than in adults. Since the factor is a sociological pattern, Cattell (1950 b) states that marked cultural differences are found and claims initial evidence that both family background and cultural pattern play a role in its development. The family or culture at the positive pole is overprotective and would account for the pattern of dependent, demanding, hypochondriacal, and anxious behavior in face of rougher realities beyond the family. However, as Cattell points out in the handbook for the H.S.P.Q. (1962), the central feature of I + is the emotionally indulgent, over-protected home, not the refinement of

the home. I + people are rated as not contributing socially. It must be noted that the significant difference between the Indian and non-Indian groups on this dimension of personality is the result of the non-Indian children's scoring almost one standard deviation below the mean of the norming population. The Indian children approximated the average.

Factor J + Individualism

"Anyone inclined to a sociological or cognitive explanation of personality might be impressed enough by the obvious 'liking thinking' (characteristic of this factor) to settle for some such notion as 'a thoughtful temperament', but it is more likely that the thoughtfulness is a product of revolt and dejection. A dynamic conflict in early life, with rejection of parents, particularly the father...is strongly indicated by our background data" (Cattell, 1957, p. 139). Cattell's hypothesis is that at the positive pole factor J is a pattern of thwarted revolt, rooted both in a temperament that is inhibited and tenacious, and in "an environmental situation of heavy cultural pressure...being brought to bear too early and powerfully" (p. 140).

Factor Q₂ + Self Sufficiency

Cattell (1957) posits the connection of this factor with particular cultural developments such as religion or secular philosophy. He claims that it is reasonable to expect that this 'thinking introversion' is a 'pattern passed on in an educated family tradition, but perhaps requiring some inherited emotional stability for its successful development" (p. 211).

III. GLOBAL PERSONALITY OF INDIAN CHILDREN

The global picture of the Indian child's personality structure which emerges from this study appears to be one of withdrawal and introversion. Socially hostile and aloof, fearful and anxious, he seems to reject stubbornly--through a passive but obstinate resistance--any infringement on his person. Withdrawn from the group he appears shy, quiet, seclusive and retiring. His unstable moods move toward self-pity, pessimism and depression, and he becomes suspicious, secretive and brooding. Not achievement oriented he is presented as being immature and irresponsible and characterized by such traits as 'indolent', 'quitting', 'slow', 'apathetic' and unable to respond to sudden demands for speed of output. He is self-sufficient and individualistic, yet he reveals a gentle sensitivity, a love for nature, and a need for emotional dependency.

This picture is, of course, extreme; but then let it be remembered that the means for Indian children differed by as much as 1.4 standard deviations from the mean of 5.5 for the general population. The highly significant differences in these personality factors between the Indian children and the non-Indian pupils with whom they attend school may be the real causes for the observed differences in their social acceptance and academic achievement.

The Ojibwa child's personality is largely determined by the culture in which he is reared. Ojibwa family practices develop in the children a type of intelligence and patterns of thinking which differ markedly from those of children raised in the dominant culture. Deprived of external

manifestations of affection both at home and at school, and taught from an early age to hide their own feeling, Ojibwa children show hidden dependency and affection needs. The deprivation experienced in their difficult environment has a sobering and inhibiting influence on them. They become introspective, apathetic, alone, suspicious and anxious because of the cultural pressures which bear down on them when they are still very young. Their instinctive reaction to revolt, as they grow in this social milieu, is thwarted, and dejection becomes a prominent characteristic of their personality. Reserved and obstinate they then resist and passively obstruct the influences of the society.

Other characteristics of introversion, reserve and independence result, too, from the Ojibwa child-rearing methods of forcing children at an early age to become self sufficient and to live in emotional isolation. The inner conflict resulting from the contradiction of socially-forced aloneness and independence on the one hand, and the need for dependency and emotional acceptance on the other, must be suppressed by Ojibwa children because of the demands of their culture. Ojibwa culture, which formerly relied on control by super-human powers, does not develop in the children inner resources for self control and direction. Lacking the external controls common to their culture in the past, and not understood by authority figures in the dominant culture, many of these children become delinquent.

Their low scores on intelligence tests, rather than indicating a true lack of mental ability, reflect this variance in the upbringing of Indian children from that of the dominant culture for whose purposes

the tests are designed. Ojibwa children, because of these socially-induced dimensions of personality find it difficult to meet the demands and pressures of academic competition.

Anxiety and fear, reflected in their brooding suspiciousness, result from their experience of failure and punishment. Unable to achieve, they know continuing failure, and as they grow older they lose interest in school while the desire to succeed gives way to apathy and they passively resist educational influences. These behavior patterns bring on more punishment and further failure which in turn augment the problem. Ojibwa children fall further and further behind the expected level of academic achievement as they pass through the grades.

IV. PATTERN OF PERSONALITY CHANGE OF INDIAN CHILDREN

To determine whether or not there was a gradual development with age in the personality factors which distinguished Indian children from non-Indian pupils the significance of the difference between the means for the two groups at each grade level was calculated. Table XVI gives the mean and critical ratio at each grade level for each factor which distinguished the two groups at the statistically significant levels of confidence of either .05 or .01.

At the grade six level there are only two personality factors which distinguish the Indian children from non-Indian children statistically, and those at the .05 level of confidence. The Indian children scored significantly lower in Factor G (expedient vs. conscientious), which

TABLE XVI

RESULTS FOR SIGNIFICANT PERSONALITY FACTORS DISTINGUISHING
INDIAN AND NON-INDIAN RESPONDENTS BY GRADE

FACTOR	Grade 6/68		Grade 7/68		Grade 8/68		Grade 8/67	
	Mean (Sten Score)	t						
	Indian (N=21)	Non-Ind. (N=39)	Indian (N=21)	Non-Ind. (N=47)	Indian (N=15)	Non-Ind. (N=44)	Indian (N=13)	Non-Ind. (N=39)
A	4.57	5.13	4.52	5.49	4.27	5.39	3.47	4.72
B	3.62	3.59	3.81	5.00	4.07	5.23	5.08	5.51
E	5.33	5.31	5.67	5.79	5.27	5.64	4.92	6.13
F	5.10	5.64	4.62	5.51	4.60	5.45	4.54	5.79
G	4.62	5.56	4.95	5.66	4.60	5.55	4.62	4.87
I	5.33	5.13	5.57	4.62	5.87	4.61	6.08	4.36
J	6.86	6.23	6.02	6.48	6.27	5.75	7.69	5.69
Q ₂	6.19	5.21	6.52	5.51	6.40	5.68	6.85	6.18
								1.19

* Significant at .01 level.

** Significant at .05 level.

fact would indicate that they are less mature, dependable and stable. As students they are less self-reliant and neglect their studies, being more indolent and inclined to quit. Factor Q₂ (group dependency vs. self-sufficiency), on which they scored significantly higher than the non-Indian pupils, indicates that the Indian children at this grade level are more self-sufficient and stubborn than are non-Indian children.

These grade seven Indian children are also more self-sufficient, seclusive and stubborn than the non-Indian children. The difference again being significant at the .05 level of confidence. The lower measure of mental ability characteristic of Indian pupils distinguishes them from the non-Indian pupils at the .01 level of confidence for this grade seven sample. The other factor which differentiates the two groups in grade seven, this time at the .05 level of confidence, is Factor I (tough-minded vs. sensitive), which shows Indian children to be more introspective and sensitive. Their dependency needs and general emotionality become more apparent at this age.

Indian children in grade eight, for both years of the study, differed significantly from the non-Indian children on both Factor A (reserved vs. outgoing)--at the .05 level of confidence, and Factor I (tough-minded vs. sensitive)--at the .01 level of confidence. These samples of grade eight Indian pupils are, therefore, more introspective, reserved, unresponsive and apathetic (Factor A-). Their sensitivity, deep need for dependence and their emotional immaturity (Factor I+) has become a continually greater cause of variance as they have progressed from grade to grade. On the other hand,

the non-Indian children have become increasingly more tough-minded and realistic. The growing disparity between the two groups as they grow older is, therefore, partly the result of the changing personality of the children from both cultures moving toward opposite extremes of the continuum for this dimension of personality.

The grade eight class during the first year of the study, 1966-67, was also characterized by significant differences between the two groups in Factors E ($p = .05$), F ($p = .05$) and J ($p = .01$). The Indian pupils in this class, then, were further distinguished from the non-Indian pupils by their submissive dependence, (Factor E), their brooding introspection (Factor F), and their extreme obstructive individualism (Factor J). In the latter dimension (Factor J) their mean sten score was more than two standard deviations above that of the norming population, while the mean for the non-Indian children approximated the average.

Changes in these significant factors as the Indian children move through the grades revealed relevant information.

The difference between the two groups in Factor A--reserved, detached vs. outgoing--increases as the children pass through the grades becoming statistically significant only in grade eight. The Indian children become increasingly more reserved as they grow older.

Factor B--general intelligence--shows a steady increase in the means for the two groups as they go from grade to grade. The difference between them was significant at the .01 level in grade seven and at the .05 level in grade eight (1967-68).

The mean for the Indian children in Factor F- (desurgency) continues to decrease slightly as they grow older indicating a growing tendency toward introspection and brooding.

Factor G--expedient vs. conscientious--does not show much variation in the means of either group as they grow older with the exception of the non-Indian pupils in grade eight (1966-67). The difference between the two groups in this dimension of personality was significant only in grade six at the .05 level.

Factor I+--tough-minded vs. dependent, sensitive--becomes increasingly more discriminating between the two groups, moving from a difference that is almost nil in grade six to one which is significant at the .05 level in grade seven and at the .01 level in the grade eight classes for both years of the study. The Indian children tend to become more sensitive with a deeper need for dependence and emotional acceptance as they grow older, while non-Indian children tend to become more tough-minded and realistic. As noted above this increasing difference is the result of a continuing change in this personality dimension among non-Indian children as well as Indian, but in opposite directions.

Factor J+--doubting, obstructive individualism--distinguishes the two groups at a statistically significant level of difference only in the grade eight (1966-67) class where the Indian group was 2.2 standard deviations above the normal mean. The Indian children do, however, measure more than the average degree of this dimension at each grade level, as do the non-Indian children to a lesser extent.

Factor Q_2+ ---self-sufficient---does increase with age for both groups. It distinguishes the Indian children from the non-Indian pupils at the .05 level of significance in both grades six and seven.

Summary

As the Indian children grow older and pass upward through the grades they seem to become more reserved, introverted and inhibited. At the same time they become more self-sufficient and obstinate, having developed a passive resistance to their psychological environment. There appears to be a marked growth in their emotional dependency and anxious behavior because this has been contrasted with a growth in self-reliance and realism for non-Indian children.

V. CORRELATION OF PERSONALITY DIMENSIONS WITH ABILITY

Measures of ability and personality were obtained for the majority of the students in grades six and seven in the 1967-68 academic year. Correlation coefficients indicating a relationship between measured ability and those dimensions of personality which indicated significant differences between the Indian and non-Indian pupils in each of these grade levels are given in Table XVII.

The only correlation of personality with ability which seems to indicate a meaningful relationship would appear to be between mental ability and Factor I in its negative aspects, i.e. self-reliance and realism. This relationship is significant at the .05 level of confidence for Indian children in grade six. There would seem to be some indication, at least at the grade six level, that the doubting and individualistic

TABLE XVII
CORRELATION COEFFICIENTS OF ABILITY AND SIGNIFICANT FACTORS OF PERSONALITY
FOR INDIAN AND NON-INDIAN RESPONDENTS BY GRADE

Factor	Grade 6/68		Grade 7/68	
	Indian	Non-Indian	Indian	Non-Indian
A Reserved - Outgoing +	-.07	.21	-.00	-.05
B Mental Defect - Intelligence +	.24	.31	.13	.37*
F Desurgency - Surgency +	-.03	.22	.07	.12
G Expedient - Conscientious +	-.10	.16	.27	.28**
I Realistic - Sensitive +	-.51**	-.17	-.06	-.15
J Group Active - Individualistic +	.33	.01	-.16	-.09
Q ₂ Group Dependent - Self-Sufficient +	-.11	-.11	.31	-.16

* Significant at .01 level.

** Significant at .05 level.

(Factor J+) Indian children are those with higher mental ability. Similarly there is a slight correlation of mental ability with the personality trait of conscientiousness and perseverance (Factor G+) among grade seven pupils. This is significant at the .05 level of confidence for the non-Indian

respondents. The self-sufficient and resourceful (Factor Q₂⁺) Indian children in grade seven tend to be those with higher measures of mental ability. General Intelligence (Factor B) correlates with measures of ability obtained through the Lorge-Thorndike nonverbal battery only in the range of .13 to .37. Correlations are higher for the non-Indian pupils than for Indian children and are significant at the .01 level of confidence for the non-Indian children in grade seven.

VI. CORRELATION OF PERSONALITY DIMENSIONS WITH ACHIEVEMENT

Measures of achievement, in terms of raw scores, in each sub-test of the Stanford Achievement Test batteries administered in grades five, seven and eight in 1966-67 were correlated with sten scores of the fourteen dimensions of personality obtained through the H.S.P.Q. using the data of students for whom measures on both tests were available. Of the resulting 560 coefficients of correlation only 101 were greater than $\pm .30$. Of these, 24 were accounted for by the non-Indian pupils; 12 as statistically significant ($p = .01$ or $.05$) positive correlations greater than .30 of general intelligence (Factor B) with achievement in sub-tests, and 12 (10 of which were statistically significant at either the .01 or the .05 level of confidence) as positive correlations of personality with various sub-tests (seven with arithmetic) in the three grades. These correlations showed no discernible pattern. The remaining 77 correlations greater than $\pm .30$ are accounted for by the Indian population as shown in Table XVIII.

TABLE XVIII

CORRELATIONS OF ACHIEVEMENT WITH PERSONALITY¹ GREATER THAN $\pm .30$
FOR INDIAN RESPONDENTS BY GRADE

	Grade 5 (N=16)	Grade 7 (N=13)	Grade 8 (N=13)
A Reserved - Outgoing +	Spelling Arith. Conc. .56** .39	Word Mean. Arith. Applic. .34 .30	Paragraph Meaning Language .33 -.47
B Less Intelligent - Intelligent +	Word Meaning .53** Para. Meaning .53** Language .46 Arith. Conc. .36	Word Meaning .38 Arith. Applic. .34	
C Emotionality - Ego Strength +	Arith. Comp. -.37 Arith. Applic. -.37		Arith. Conc. .39
D Phlegmatic - Excitable +		Paragraph Mean. -.37 Language -.47 Arith. Conc. -.37 Arith. Applic. -.42	Spelling -.31 Arith. Comp. -.31 Arith. Applic. .36
E Submissive - Dominant +	Arith. Comp. -.30	Language .46 Arith. Comp. .61** Arith. Conc. .35 Arith. Applic. .49	Arith. Comp. .35
F Sober - Enthusiastic +	Word Meaning .35 Spelling .31 Arith. Conc. .36 Arith. Applic. .41	Arith. Comp. .41 Arith. Applic. .42	Language -.35 Arith. Comp. -.36 Arith. Conc. -.39 Arith. Applic. -.34
I Self Reliant - Dependent +	Word Mean. -.54** Arith. Comp. .40 Arith. Conc. -.35	Language -.52 Arith. Conc. -.61** Arith. Applic. -.36	
J Goes with Group - Individualism +	Word Mean. -.42 Language -.53** Arith. Conc. -.84* Arith. Appl. -.58**	Word Mean. -.60** Para. Mean. -.41 Language -.46 Arith. Conc. -.49 Arith. Appl. -.44	
O Self-Assured - Apprehensive +	Word Mean. .49** Arith. Appl. .30	Para. Mean. .53 Arith. Conc. .49	Arith. Applic. .50
Q2 Group Dependent - Self-Sufficient +	Arith. Comp. .41 Arith. Conc. -.46	Arith. Applic. .34	Paragraph Mean. .41 Arith. Comp. -.47
Q3 Uncontrolled - Controlled +	Arith. Conc. .37	Word Mean. .45 Spelling .47 Arith. Appl. .34	Paragraph Meaning .41 Arith. Comp. -.47
Q4 Relaxed - Tense +	Spelling -.36	Arith. Comp. -.46 Arith. Applic. -.69**	Paragraph Meaning .37 Arith. Comp. -.49 Arith. Conc. -.38

* Significant at .01 level.

** Significant at .05 level.

¹Achievement sub-tests correlated with dimensions of personality.

Unlike the non-Indian population for whom, with the exception of general intelligence, dimensions of personality seem unrelated to achievement regardless of grade or subject area (with the exception for arithmetic), the Indian children seem to show definite patterns in the relationships which exist between their achievement and their personality measures.

There is evidently very little correlation between the measures of general intelligence of Indian pupils and their academic achievement. There is none whatever greater than .30 in the grade eight class. There are negative correlations of intelligence with achievement in language and in arithmetic computation for the grade seven class.

The personality characteristics, other than general intelligence which show a marked positive correlation with achievement are 'sociability' (Factor A), 'dominance' (Factor E), 'surgency' i.e. impulsive enthusiasm (Factor F), 'apprehension' and 'worrying' (Factor O), 'self-sufficiency' or resourcefulness (Factor Q₂), and 'control' or self-discipline (Factor Q₃).

Factor D correlates negatively with achievement in both the grade eight and grade seven classes. This would indicate that the Indian pupils at the negative end of this personality dimension, i.e. those who are more 'deliberate' and 'phlegmatic' achieve better than those who scored at the positive end of the continuum or who are 'excitable' and 'demanding'. Similarly Factors I and J correlate negatively with the achievement of Indian pupils often at a statistically significant level. The Indian children who rate low in these dimensions, i.e. who are 'self-reliant'

and 'realistic' (Factor I-), 'vigorous' and 'go readily with the group' (Factor J-) achieve better than do those who are 'dependent' (Factor I+) and 'doubting' and 'unwilling to act' (Factor J+). High ergic tension (Factor Q₄) also correlates negatively with the achievement of Indian children--particularly with arithmetic at the grade eight level.

Achievement in Word Meaning at the grade five level is related to intelligence (B) (p=.05), surgency or enthusiasm (F), and apprehension (O) (p=.05) as well as to independence (I-) (p=.05) and vigorous group action (J-) the negative aspects of dependence (I) and doubting (J). The same pattern is found in the achievement in Word Meaning of Indian pupils in grade seven where it is related to an 'outgoing' (A) personality, to 'intelligence' (B), 'vigor' (J-) (p=.05) and 'controlled' or self-disciplined (Q₃) traits.

Achievement in Paragraph Reading is related to intelligence (B) (p=.05) in grade five. In grade seven it is related to deliberateness (D-), being venturesome and socially bold (H+) as well as to vigorous going with the group (J-) and apprehension (O+). Achievement in this sub-test for grade eight Indian pupils is related to a reserved (A-), self-sufficient (Q₂+) and tense (Q₄+) personality.

Spelling achievement for Indian children, particularly for those in the grade eight class who achieved more than two years above the norm in this sub-test, seems to be related to deliberateness (D-), conscientiousness (G+) (p=.05), and shyness (H-). In the grade seven class it is correlated with controlled self-discipline (Q₃+) . At the grade five level, however, it is related to outgoing participation (A+) (p=.05),

impulsive enthusiasm (F+), and a relaxed (Q₄-) personality.

Language achievement in grade five is positively related to intelligence. It also correlates with vigorous going with the group (J-) (p=.05) for these pupils. In grade seven it correlates with deliberateness (D-), the assertive independence of E+ as well as the self-reliant independence of I-. As in grade five, language achievement for grade seven Indian pupils is also correlated with being given to vigorous group action (J-). For grade eight Indian students, though, achievement in language is related to a reserved (A-), and sober or serious (F-) personality.

Achievement in arithmetic seems to a particular degree to be a factor of personality for Indian children. Arithmetic computation achievement in grade five correlates with emotionality (C-), conformity (E-), dependency (I+) and self-sufficiency (Q₂+). In the grade seven (p=.05) and eight classes it is positively related to dominance (E+) and to lack of tension (Q₄-). For grade seven students it is further related to enthusiasm (F+), while for Indian pupils in grade eight it is further related to deliberateness (D-), sober seriousness (F-) and group dependency (Q₂) as well as to the trait of undisciplined following of one's own urges (Q₃-).

Achievement in the arithmetic concepts sub-test in grade five correlates with an outgoing (A+), intelligent (B+), enthusiastic (F+), venturesome (H+), self-reliant (I+) personality. These achieving Indian children also show traits of controlled self-discipline (Q₃+) and of

vigorously going with group action (J-) ($p=.01$). For Indian pupils at the grade seven level achievement in this aspect of arithmetic correlates with deliberateness (D-) and assertive independence (E+) as well as with the self-reliant independence of I- ($p=.05$). It also correlates with vigorous group action (J-) and with apprehension (O+). At the grade eight level there is a relationship between achievement in Arithmetic Concepts and the personality traits of emotional stability (C+) and sober seriousness (F-) as well as with a relaxed unfrustrated personality (Q₄-).

Arithmetic applications correlate at the grade five level with emotionality (C-), impulsive enthusiasm (F+) and going readily with the group (J-) ($p=.05$) as well as with apprehension (O+). Achievement in this sub-test at the grade seven level correlates more than $+.30$ with ten of the fourteen personality factors measured. There is evidence that the Indian children who achieve well in this sub-test in grade seven are outgoing (A+), intelligent (B+), assertively independent (E+), enthusiastic (F+), self-sufficient (Q₂+), controlled and self-disciplined (Q₃+) children. They are also apprehensive (O+), go readily with the group (J-), are self-reliant (I-), deliberate (D-) and relaxed (Q₄-) ($p=.01$). Achievement in this sub-test for grade eight Indian students correlates with apprehension (O+) as well as with sober seriousness (F-), and excitable impatience (D+).

Summary

The achieving Indian child in grade five appears to be a child who

is intelligent and outgoing. He is self-reliant and enthusiastic; given to action and works vigorously with the group. Affected by his feelings, he is somewhat apprehensive.

The grade seven Indian child who is achieving academically likewise appears to be intelligent and outgoing as well as vigorous and given to action, working readily with the group. He is also self-reliant and enthusiastic, but shows greater apprehension and controlled self-discipline. He acts with a new deliberateness and displays an assertive stubborn independence.

The grade eight Indian student who achieves well academically, on the other hand, is less intelligent and is reserved rather than outgoing. He is very sober and serious, taciturn and deliberate. At this age the achieving Indian student is conscientious and shy. He shows less apprehension than younger achieving Indian children, but lacks their enthusiasm, vigor and self-reliance.

The relationship between the general intelligence of Indian children and their achievement becomes less significant as the children progress through the grades.

Sociability or an outgoing personality, which is a significant factor in the achievement of Indian children in grade five, is replaced at a significant level of confidence by the opposite characteristic of being reserved and detached for Indian pupils in grade eight.

Self-reliance and the characteristic of going readily with the group are significantly related to the achievement of Indian pupils in

grades five and seven, while there is no real correlation apparent between these dimensions of personality and the academic achievement among grade eight Indian pupils.

Factor A+ (outgoing), Factor B+ (intelligent) and Factor F+ (enthusiastic) are all positively correlated to the achievement of Indian children in grades five and seven, yet the Indian population as a whole scored significantly lower than the non-Indian pupils in these personality dimensions.

Factor I- (self-reliant) and Factor J- (going readily with the group) correlate significantly with the achievement of Indian children in grades five and seven; yet they are dimensions of personality on which the Indian children differed significantly in the positive direction from the non-Indian pupils.

Though the outgoing, intelligent and enthusiastic Indian child who is also self-reliant and works readily with a group achieves well academically, still the Indian children in this study differed significantly from the non-Indian pupils in the opposite direction. Rather than possessing the personality characteristics of the achieving Indian child they are as a group reserved, less intelligent, sober and serious, as well as emotionally dependent and obstructively individualistic. Not generally possessing those characteristics shown to be related to academic achievement of Indian pupils they do not succeed in school.

The growing dependency need and general emotionality of Indian children develops as they grow older to the extent that they become less

and less self-reliant and more unresponsive and apathetic. As grade eight pupils become more introspective and brooding, their obstructive individualism and resistance to authority impedes their academic progress.

The developing personality of the Indian child, who becomes as he grows older and progresses through the grades more reserved, introspective and uncommunicative, causes him to fall behind in academic achievement. Growing more individualistic and taciturn, his resistance to adult direction and his obstructive but passive resistance is partially responsible for the noticeable deceleration in his school progress.

CHAPTER VIII

SUMMARY, INTERPRETATION AND RECOMMENDATIONS

Indian children do not develop along the acceptable behavior patterns expected of children at school in our Canadian society. In a school system where Indian children from reservations are being integrated with those of the dominant culture the thoughtful observer is concerned by their very real problems which become increasingly apparent as they progress through the grades. From happy, industrious, delightful little children in the primary grades who achieve well in school and are readily accepted by their classmates, they begin, about the age of puberty, in grades five and six to withdraw and become sullen, resistant and indolent pupils. Their social acceptance is replaced by the formation of exclusive cliques within their own racial group and their achievement gives way to failure until Indian children in the senior grades of elementary school usually quit as soon as they reach the legal age. The number who go on to high school and then graduate is disproportionately small.

This study looked for an explanation of this changing social pattern and phenomenal deceleration in academic achievement of Indian children in their basic personality structure. It was posited that the developing personality of Indian children was for the most part culturally determined and that it was responsible for these changes in their social acceptance and academic progress.

A summary of the design and findings of the study is made in this

final chapter. The interpretation of these findings points to the recommendations made for the education of Indian children and for further research.

I. SUMMARY OF THE DESIGN OF THE STUDY

Data concerning the mental ability, educational achievement, social acceptance and personality structure of the children enrolled in the Fort Frances Separate School system in grades one through eight were collected during the two academic years 1966-67 and 1967-68. Approximately twenty-five percent of the population of the school system was "treaty" Indian at that time.

The mental ability and achievement tests were administered as part of the regular testing program in the school system. The Lorge-Thorndike Intelligence tests (nonverbal batteries) were given to all children present in grades one, three, five and seven during each year of the study. The Stanford Achievement tests were given in grades two, three, five, seven and eight of the first year, 1966-67.

Measures of social acceptance were in the form of a sociometric test included in an open-end sentence questionnaire. The Jr.-Sr. High School Personality Questionnaire in both Form A and B was used as a measure of basic personality structure. Both of these instruments were administered to the grade eight classes in the 1966-67 school year as a pilot study. The following year the sociometric test was given to all the children in the school system in grades one through eight. The open-end sentences were completed by all pupils in grades four through eight. The

personality test was administered in both forms to the pupils in grades six, seven and eight.

The results of these measures were used to compare the Indian and non-Indian children. Differences between the mean IQ's for the two groups were calculated at each grade level, as were differences between the means of all sub-tests in achievement and the fourteen measures of personality dimensions. Sociometric matrices were constructed for the twelve classes in which the Indian enrolment approximated or was greater than twenty-five percent. Correlations of measures of ability with those of achievement in sub-tests and with sten scores for factors of personality were calculated, as were correlations of achievement in sub-tests with sten score measures for personality traits for all pupils at each grade level for whom these data had been collected during the two years of the study.

II. SUMMARY OF THE FINDINGS

The findings concerning the mental ability of Indian and non-Indian children substantiated those of other studies that Indian children fall below non-Indian children at all age levels when measures of their mental ability are compared. The mean IQ attained by the non-Indian children was lowest at the grade one level. A gain of approximately ten IQ points was noticeable at the grade three level and then the IQ remained fairly constant. On the other hand, the mean IQ attained by the Indian children was highest in grade one and then appeared to fall as the children grew older. The differences between the means for the two groups, with the exception of the grade one class in 1966-67, were statistically

significant with the non-Indian children scoring from 7.75 to 17.80 IQ points above the Indian pupils.

The comparison of the two groups in academic achievement showed that non-Indian children achieved higher scores than Indian children in all subject areas at each grade level with the exception of language in grade three and of spelling in all grades except grade two. Indian pupils fell progressively further behind in reading skill subjects as well as in those which involved computational skills. Only in spelling did they show a better than average rate of achievement.

Indian children's achievement did not correlate significantly with their measures of mental ability at any grade level or in any subject area. On the other hand, the correlation of achievement for non-Indian children with their measures of mental ability were highly significant in all subject areas in grade two. They showed a dropping off in grade three, however, and were significant only in the arithmetic sub-tests in grade five.

In their completions of the open-end sentences Indian children revealed their fears concerning school and participation in class. The noise and talkativeness of their classmates was particularly disturbing to them. Aspirations for their future were somewhat indefinite.

The sociometric form incorporated with the open-end sentence questionnaire for the twelve classes studied showed differences between Indian and non-Indian children in their choices of classmates. Indian children chose across race lines more than twice as often as non-Indian

children even though there were only half as many of them. The number of choices made by non-Indians of Indian classmates dropped noticeably in the senior grades. Indian children did not choose classmates of the opposite sex from among their own racial group as frequently as the non-Indian children did. The choice of classmates of the opposite sex from among the other racial group was almost negligible for non-Indian children, whereas there was some tendency to make such choices among the Indian children. The drop off in social acceptance of Indian children by those of the non-Indian group was the most remarkable finding from the sociometric test. Some disinclination for Indian children to choose non-Indian classmates as they grew older was also discernible.

On seven of the fourteen personality dimensions measured by the Jr.-Sr. High School Personality Questionnaire the Indian children differed significantly from the non-Indian children. These differences indicated that the Indian children were more reserved and introspective. They were more individualistic and independent on the one hand, yet they revealed deeper dependency needs on the other. They appeared to be more emotionally dependent, immature and irresponsible than non-Indian children, and were characterized as being seclusive and self-sufficient, as well as becoming increasingly more passively obstructive, unresponsive and apathetic as they grew older. The non-Indian children, however, were shown to become increasingly more practical, realistic and self-reliant as they progressed through the grades.

Cultural pressures and an environment of deprivation were seen to

be the basic causes of this modal personality of the Indian children. Genetic studies have shown these personality traits to be primarily the result of sociological patterns of behavior. The findings of the personality measure used in this study were surprisingly consistent with those reported by authorities in the field of Ojibwa culture and personality. These authors claim that the Ojibwa Indian child grows up in an environment of extreme deprivation--social and psychological as well as economic. Ojibwa parents maintain an environment where there are no interpersonal relationships on an emotional basis and where overt emotionality is repressed. They do not give their children the security, protection and affection required. Their child-rearing habits inculcate in the children suspicion of others, spiritual isolation and repressed fear. Children are trained to be independent at a very early age and are frightened into obedience by being presented with a world-view which is dangerous and terrifying. The Ojibwa child, as a result, develops a culturally-determined personality characterized by anxiety, insecurity and a strong dependency need. As he grows older he becomes highly introverted and individualistic. He learns, in his emotional isolation, to suppress all overt emotionality including the expression of his need for affection and support. The results of the personality test used in this study confirmed this description of the Ojibwa Indian child.

Correlations of these measures of personality dimensions with those of ability and achievement indicated that the able and achieving Indian child possessed a temperament which was the direct opposite of that which

was found to characterize these Indian children as a group.

III. INTERPRETATION OF FINDINGS

The Indian child is torn between two cultures. His home on the reservation, where he spends the first and psychologically most important years of his life, develops in him a basic personality which makes integration a traumatic experience. When he goes to school he begins to learn that those values and attitudes he has been taught in his own culture are frowned upon by the culture which he is now forced to assimilate. The implicit criticism by the school of the Indian way of life becomes more obvious to the child as he grows older. Unable to do anything to better his environment or his position as an Indian he withdraws in shame. Urged by the dominant culture, through the school, to change and improve himself he finds no sympathetic understanding and support at home. An Indian child reaching the age of ten or eleven begins to realize he is unaccepted by and isolated from both cultures in which he must live. Unable to cope with the opposing demands of home and school he quits trying and withdraws into a sullen resistance and apathy.

During his formative years the Indian culture determines the lines along which the Indian child's mental abilities will develop. It does not stress those abilities of abstract thinking, rapid answering and taking an educated guess which ensure high ratings on standardized intelligence tests designed for children of the dominant culture. Indian children's low scores on these tests are not so much an indication of low mental abilities as of

different mental abilities.

The basic personality of the Ojibwa child results primarily from the child-rearing practices of his society. Principal among these are (1) withdrawing of all external forms of affection, (2) training the child never to show his emotions, (3) developing in the child a need to be self-sufficient by depriving him of parental support, and (4) imputing to all things a super-human control power and thus enforcing obedience through fear. These practices result in the formation of a personality characterized by isolation, anxiety, introversion and seeming self-sufficiency which belies a deep, hidden dependency need.

Growing ever more aware of their sociological differences Indian children become increasingly more ashamed of all that being an Indian entails for them. Unable to believe in the sincerity of friendships offered them by non-Indians they do not permit themselves to be socially accepted. Discrimination on the part of the non-Indian society exists, and gives a further basis for the Indian child's growing sense of shame.

Poor school achievement correlates with a personality that is lacking in self confidence. For the Indian child it becomes the fulfillment of his poor self image. As he becomes more aware of his differences his incentive to achieve disappears. Failure, becoming a familiar pattern, robs him of his initiative and forces him into withdrawal, apathy and a passive resistance to the educational process.

IV. RECOMMENDATIONS FOR THE EDUCATION OF INDIAN CHILDREN

Since most of the problems which interfere with the academic

achievement of Indian children are part of their basic personality structure which originates in their homes it is important that those concerned with their education understand the Indian culture. Teachers often unwittingly augment the difficulties Indian children have in school because they neither understand nor appreciate their way of life. Courses in colleges of education must prepare teachers to accept Indian children. By giving them a thorough knowledge of the Indian cultures and of the basic personality structure of Indian children teachers must be prepared to assist these children to overcome their problems. Insistence that Indian children conform to preconceived notions of what children ought to be, based on what the Euroamerican culture demands for children, is damaging to their personality. Indian children, with their problems of achievement and adjustment, are taking their places in the public school systems of the country. All teachers must be prepared to understand and help them for they are found in most schools of the nation.

Indian children have a right to feel proud of their ethnic origin. School curricula should emphasize the positive role Indian people have played in Canadian history. Textbooks which portray some of the customs and life style common to Indian cultures should be written. They would not only assist Indian children with problems of integration but would also help break down misunderstanding and racial discrimination on the part of the non-Indian society.

Musical, artistic and athletic abilities which Indian children often possess to an outstanding degree need to be recognized. The school

can benefit from these talents, and Indian children can be given a sense of achievement and belonging. The only answer to any real improvement in the level of achievement for Indian children lies in changes in their home life and in the child-rearing practices of their culture. Family life courses, including domestic science and child care, at the grade seven and eight level will give Indian youth an opportunity to alter the situation for their children. Any changes which will be effective must necessarily be slow and evolve through several generations.

Adult education in family living and home management is the surest hope of presently assisting young parents to prepare their children for a more Canadian way of life. Their socio-economic future depends on their successful integration. It is important to Canadian society as a whole that Indian people assume an active and contributing role in the life of the nation.

Radio, television and other mass media can play an effective role in developing the Indian's esteem of his culture and of his person. The principal roles in television dramas and the personnel used in advertising could well be Indian. Public education is necessary to break through the discrimination shown by the dominant society toward Indian people.

V. RECOMMENDATIONS FOR FURTHER RESEARCH

The limitations of this study require that further research should substantiate the findings concerning the basic personality structure of Indian children. The use of other instruments in the study of Indian personality--the Rorschach by Hallowell (1955) and Spindler (1963), and

the Thematic Apperception tests by Caudill (1949)--should be repeated with Indian children of today.

Serious consideration must first be given to the desirability of social changes in the Indian culture. The Indian people themselves must become involved in this evaluation of their way of life. Then, studies of their social practices which determine the modal Indian personality will be necessary to give direction to education for desirable sociological change.

Studies done with tribes of Indians other than the Ojibwa are necessary. The life styles of the various Indian groups differ and generalizations from this study, and the studies cited, to Indian people as a whole are not valid. Larger samples of Indian children, who live in numerous locations, must be included in future research before acceptance of these findings is justified.

A longitudinal study with a sufficiently large sample of Indian children as they progress through elementary school is necessary to substantiate the observed psychological, social and academic changes which were seen to characterize the development of specific Indian children.

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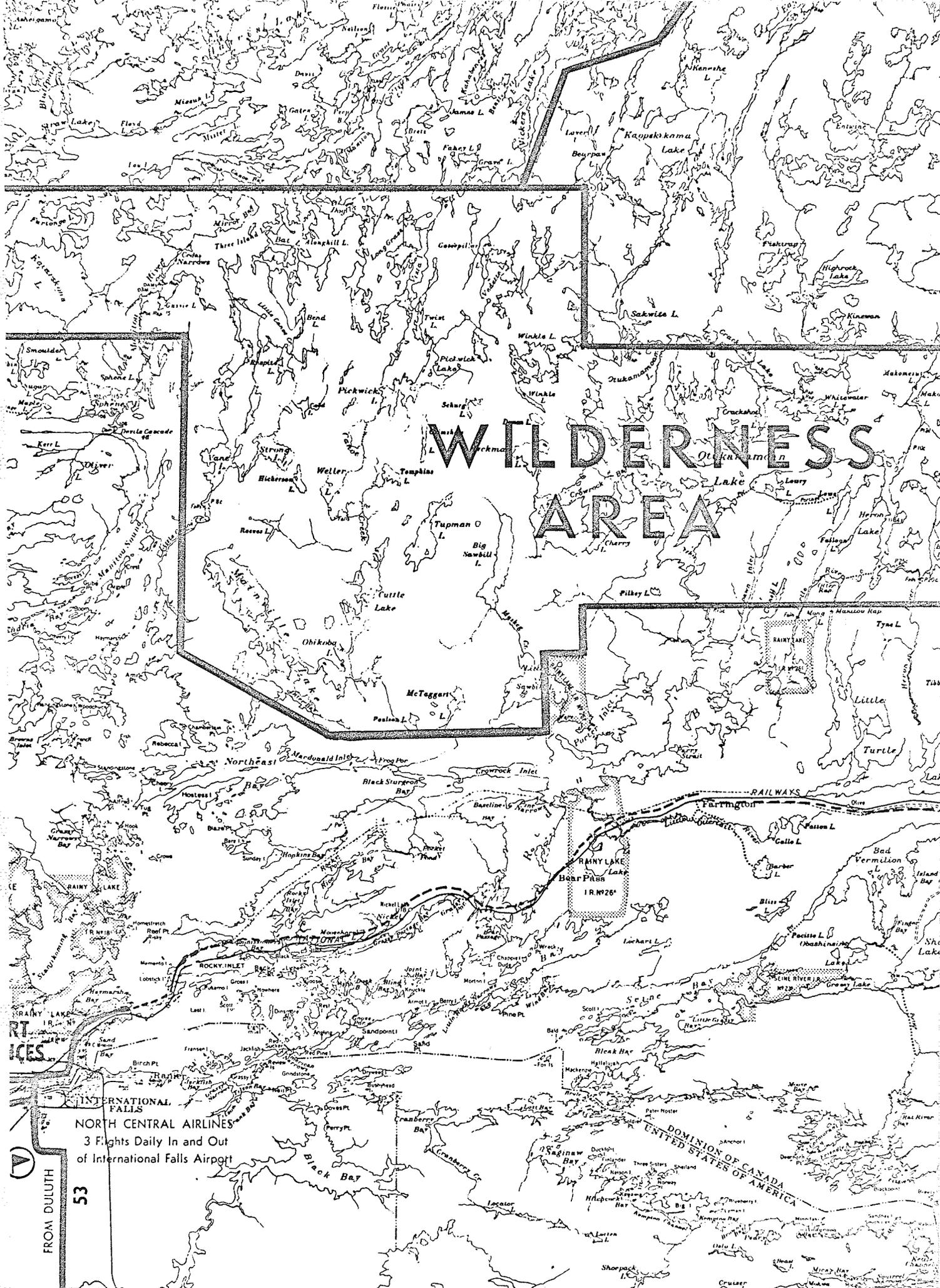
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APPENDIX A

MAPS OF THE AREA SURROUNDING FORT FRANCES



WILDERNESS AREA

NORTH CENTRAL AIRLINES
 3 Flights Daily In and Out
 of International Falls Airport

FROM DULUTH
 53

DOMINION OF CANADA
 UNITED STATES OF AMERICA

RAINY LAKE
 IR. 9226

RAINY LAKES

INTERNATIONAL FALLS

DULUTH

53

FROM DULUTH

53

APPENDIX B

OPEN-END SENTENCE QUESTIONNAIRE AND SOCIOMETRIC TEST

Please finish the following sentences the way you feel is right for you. What you write will make it easier for us to help children do well in school. Your answers will be kept secret, so write what you would really like to say.

1. The best thing about school
2. The worst thing about school
3. My teachers
4. My marks on exams
5. My report card
6. If I get good marks
7. When I answer a question in class
8. It is hard to learn
9. If I read out loud in class
10. The other children in my class
11. When the teacher asks me a question
12. I go to school
13. When I finish school
14. The boys and girls in my class whom I would like to play with at recess are:

First Choice

Second Choice

Third Choice

15. If we were doing a project in class and there were four pupils in each group, I would want to work with these three pupils in my class:

First Choice

Second Choice

Third Choice

16. The boy or girl in my class whom I would choose to sit beside during a film in the auditorium would be:

First Choice

Second Choice

Third Choice