1967

The relationship between certain environmental factors and the proficiency of Blackfoot Indian children with written English

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INTRODUCTION AND STATEMENT OF PROBLEM

It is the intended purpose of this study to determine the degree of relationship between certain factors in the home environment of Blackfoot Indian children and their proficiency with the written English language. The subjects chosen for this study were Blackfoot Indian students who were attending the public high school in Browning, Montana in the spring of 1965. These Indian children were chosen for two reasons. First, they lived on a reservation where many conservative elements of the native way of life, specifically the native Blackfoot language, are still present and thus information could be obtained regarding the acquisition of the English language, and second, the effect on the Indians of intermixing the native language with the English language could be studied.

In order to evaluate their English proficiency, the Indian children were given an objective test that was designed to cover most important aspects of the written English language (Buros 1965: 551-556). Then, at a later date, the parents of those children tested were interviewed in their homes, and a body of data was established concerning the home environment of the individual students. Included in this body of data was information which was used to evaluate three diverse factors present in the home environment. These factors had been isolated from the literature concerning environmental effects upon linguistic ability and were assumed, on the basis of relevant
literature, to be influential in the language learning situation of the home. The factors were: (1) socio-economic status of the family, (2) birth order of children, and (3) bilinguality of children.

A review of the relevant literature pertaining to environmental effects on linguistic ability is necessary in order to appreciate the relationships between the three factors and the hypotheses put forth in this study. This review is presented in Chapter II. On the basis of this literature I suggest three hypotheses regarding the effects of these three specific environmental factors on linguistic ability. These hypotheses are:

Hypothesis Number One

A significant correlation will be found to exist between the socio-economic status of the subjects and their scores on the English test.

Hypothesis Number Two

A significant correlation will be found to exist between the language situation in the home and the subjects' scores on the English test.

Hypothesis Number Three

A significant correlation will be found to exist between the birth-order of the subjects and their scores on the English test.

By establishing statistical correlations between the three environmental factors and the scores obtained on the English test,

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1 For purposes of this study a correlation coefficient will be considered significant if the level of confidence associated with it is .05 or smaller. As this was an exploratory study only it was felt that the .05 level was adequately rigorous.

2 By "language situation in the home" I mean whether or not both Blackfoot and English are spoken in the household.
this study should demonstrate the degree of relationship between the home environment and the written English ability of the Blackfoot children from these homes. It is hoped that the results of this study will be of value to educators of other children experiencing similar environmental influences.
CHAPTER I

HISTORICAL BACKGROUND OF THE STUDY -- THE PIEGAN TRIBE

The name "Blackfoot" encompasses three separate and distinct tribes: the Piegan, the Blood, and the Siksika or Blackfoot proper. The three tribes are believed to have numbered about 15,000 persons in 1780 (Ewers 1944:7). Today the members of these three tribes live on four reservations in the Canadian province of Alberta and in Montana. The Indians on the Montana reservation, who were the subjects of the present study, are of predominantly Piegan ancestry.

A. THE PAST

The original home of the Blackfoot is not definitely known, primarily due to their lack of clear-cut traditions of migration. However, their location as of 1730 has been quite accurately established by David Thompson in his Narrative. According to a story related to Thompson by an old Piegan chief, "... the Piegan, the frontier tribe of the Blackfoot Nation, were on the Plains of the Eagle Hills, near the North Saskatchewan River, in 1730, a distance of over 400 miles east of the Rockies." (Lewis 1942:10) At this time the Blackfoot were all Canadian Indians, residing largely if not entirely in the present province of Saskatchewan (Ewers 1944:9). They were nomadic hunters and all phases of their life were adjusted to the conditions of a hunting existence. Buffalo were their primary source of food, furnishing
them with food, clothing, and a variety of other materials which they used in the manufacture of weapons, tools, and household utensils. Their diet was supplemented by other animals living in the same area and by the roots and berries of a number of wild plants. These plants were eaten alone or mixed with meat. The homes of these Indians were conical skin-covered lodges which were designed to be erected and dismantled in minimum time. Their principal means of transportation were their own backs and the A-shaped travois drawn by dogs. Prior to the coming of horses, the Blackfoot lived primarily in separate hunting bands. "Each band probably comprised about twenty to thirty families, totaling some one hundred to two hundred men, women, and children." (Ewers 1944:9) In this early period life among the Blackfoot was not as hectic as it was to become later, in the nineteenth century. Warfare was limited and centered primarily around the defense and expansion of tribal hunting grounds or the capture of women from enemy tribes. "Pitched battles between large forces were rare, and more often resulted in a stalemate with few casualties." (Ewers 1944:12)

In about 1730, the Blackfoot obtained their first horses from the Shoshone to the south, and at the same time received firearms and iron from the Cree and Assiniboine on the east (Lewis 1942:11). The fur traders also made their first indirect contacts with the Blackfoot at about this same time. This first indirect influence of the Europeans in North America had a significant effect on the Blackfoot. The fur trade together with the horse and gun were primarily responsible for the change in Blackfoot culture which
occurred in the eighteenth century. With the aid of guns the Blackfoot were able to triumph over their enemies the Shoshone, in about 1733, and thus began their great expansion to the west and southwest. Thus also began a change in many of their basic ways of life. The horse, for example, wrought several significant changes.

The horse literally lifted the Indian off his feet and placed him astride a tractable animal that could move as fast or faster than the fleetest buffalo. The Indians found they could make larger travois, attach them to horses, and enable whole villages to move faster, farther, and with heavier loads than before. (Ewers 1944:13)

However, the supply of horses was limited and it became impossible for the Blackfoot to obtain horses in sufficient quantity through peaceful means. Horse raiding thus became a common mode of warfare. Killing enemy tribesmen and taking their scalps were not major objectives in these raids; the main objective was simply to capture horses. Horses were wealth and with enough of them a Blackfoot could purchase virtually anything. Warfare also served as a means by which young men of the tribe could demonstrate their courage and thereby obtain social prestige. "Honors in war were ranked according to the degree of courage required to win them." (Ewers 1944:33) During this period of early expansion the Blackfoot became more and more dependent upon the trade goods they obtained from the French and English. Metal bladed knives, guns, and metal kettles had become household items and the Blackfoot gradually lost their ability to manufacture those items they had formerly used, such as stone knives and clay pots.

Little is known of the social life of the Blackfoot in the eighteenth century as most of the descriptive reports concerning the
Blackfoot were written at a later time. From the ethnographic and other reports of the late 1800's and the 1900's, one gains the impression that during the "good" years, when there were few white men and many buffalo, the Blackfoot led a very pleasant life. There was plenty to eat and both the men's and the women's work had been made easier by the introduction of trade goods and horses. Despite the men's preoccupation with horse-raiding and the women's incessant toil, the Blackfoot still found time to be fond and indulgent parents (Ewers 1958:101). Wissler states, "The young children, at least, receive considerable attention and some discipline. They are sometimes punished by a dash of cold water or a forced plunge." (1912:29) However, "Striking a child is not regarded as proper." (Wissler 1912:29) The mothers were responsible for their daughters' education and the fathers instructed the boys. However, not all the time was taken up with lessons, for there is frequent reference in the literature to the many games played by both adults and children. Ewers says, "Children's play varied with their ages, with the sexes, and with the seasons. It had real educational value." (1958:146) Grinnell says that the Blackfoot were not at all the stereo-typed solemn silent Indians, but just the opposite. He says they were a talkative people (1903:181). This evidently held only for adult members of the tribe, for Wissler states that in the case of youngsters, "Talkativeness is almost a crime in the presence of elders. The ideal is he who sits quietly while the adults talk." (1912:30)

The role of the grandparents was emphasized in Blackfoot society
for various reasons, one of which was indirectly the result of the continuing warfare. Often a father would be killed in battle and part of the burden of educating his children would fall on a surviving grandparent. This was not the only circumstance, however, in which the elderly members of the tribe served as educators. The elderly members were respected for their knowledge and elderly women in particular were honored for their knowledge of tribal narratives and traditions. After having reached their early twenties the only further education the young Indians received, other than that gained from experience, was from listening to the discourses of the elderly. Even in families in which both parents were still living the grandparents often aided in educating the children, particularly if there were many children in the family.

Discipline within the camp, particularly during the buffalo hunt, was enforced by men's societies who served as police. This "police force" acted under orders from the head chief of the particular camp.

By 1800 the southwestward expansion of the Blackfoot had brought them to the headwaters of the Marias River. They then controlled by force a huge tract of land north of the Missouri and east of the Rockies. From 1800 to about 1830 there was little successful fur trapping by Americans in Blackfoot country as the Indians were far too unfriendly. However, in 1831 Kenneth McKenzie opened peaceful trade relations with the Blackfoot. This American fur trade was eventually to have a disastrous effect upon the Blackfoot. As early as 1830 some white fur traders could see that
the indiscriminate killing of buffalo to obtain their hides would eventually lead to their extermination. However, as it was not in their interest to discourage the slaughter of these animals, they did nothing.

During the period 1830-1850 the Blackfoot were at the peak of their power and they carried on ceaseless warfare with neighboring tribes. In 1855 Stevens concluded the first treaty in which the Blackfoot were a party. "In this, the first treaty made by the Blackfeet with the United States, perpetual peace between the Blackfeet and the United States was declared." (Ewers 1944:37) The Blackfoot agreed to let citizens of the United States live in and pass through their territory and to permit the building of roads, agencies, missions, and farms. In return they were to receive the value of $20,000 annually for ten years and, "a sum not exceeding $15,000 annually was to be spent by the United States in establishing and instructing the Blackfeet in agriculture and mechanical pursuits, and in educating their children." (Ewers 1944:38) Thus began the early reservation period of the Blackfoot. In 1856 the first Blackfoot Indian Agent made his initial report to the United States government.

Between the years 1873 and 1896, the United States enacted legislation and treaties which reduced the Blackfoot reservation to its present boundaries. This reduction of hunting area, combined with the extermination of the great buffalo herd and lack of foresight on the part of the United States government, led to the tragic starvation winter of 1883-84 when more than a quarter of the Piegan
died of starvation. This brought to an end the thirty year period, 1854–1884, which had seen the Blackfoot reduced from their position as the most powerful people of the northwestern plains to a dwindling remnant completely dependent upon the United States government for even the bare necessities of life. "In 1885 the Indians of the Blackfeet Reservation in Montana were troubled by the nightmare of their recent past; discouraged by their helplessness in the present; and without hope for the future." (Ewers 1944:51) The Blackfoot still owned land in great abundance, however, and by bargaining with the United States government they were able to exchange some of this land for government support. They gained time in which to become accustomed to their new life and the materials and services needed to get them started in farming and stock raising on the remainder of their land holdings. Despite poor management, drought, and severe winters, the Blackfoot made progress.

The work of Christian missionaries was begun in Blackfoot country as early as 1846 when Father Pierre Jean DeSmet visited the camp of Big Lake, a Piegan chief. The first permanent mission to the Piegan was St. Peter's, a Catholic mission on the Teton River south of present day Choteau. The effect of the missionaries upon the Blackfoot was minimal, however, and they were quite slow in accepting Christianity. It was not that they were unfriendly toward the missionaries, it was just that they preferred the primitive faith of their fathers and were reluctant to give it up. In 1889 the Holy Family Mission was established on the present Blackfoot Reservation.

Educational progress on the Blackfoot Reservation was painfully
slow during the early reserve years. In 1855 Governor Stevens had talked about schools for the Blackfoot but it was not until the fall of 1872 that the first government school was opened at the Teton River Agency (Ewers 1958:268). Attendance at the day school was very poor as the children would go on the hunt every time that their parents did. The Blackfoot Agent reported that the average daily attendance, during the quarter ending June 30, 1874, was twenty-six children (May 1874:260). In 1882, Agent Young (1882:99) reported daily attendance as high as eighty to ninety students but this sounds a trifle overzealous considering the much lower attendance figures both before and after this time. The first boarding school on the reservation was opened in 1885 and Agent R. A. Allen placed twenty students under the care of its teachers. Allen also reported that in 1885 a number of children were sent to the Catholic schools at St. Ignatius Mission and at St. Peter's Mission (Allen 1885:117-118). In 1888 Agent M. D. Baldwin reported that the boarding school had an average attendance of thirty pupils and the day school an average of forty pupils (Baldwin 1888:151).

During the next few years following 1888 the opportunities for schooling increased rapidly. In 1889 the first group of Blackfoot students was sent to the Carlisle Indian School in Pennsylvania (Ewers 1944:54). However, the Holy Family Mission school was completed in 1890 and this greatly aided the educational process on the reservation. Blackfoot Agent John Catlin reported that the mission school would accommodate 100 students—quite an improvement over the Agency Boarding School which was designed to handle only...
sixteen students (Catlin 1890:115). In 1892 the industrial school at Fort Shaw was opened and sixty Piegan children were enrolled (Ewers 1958:309). The new government boarding school on Willow Creek was also opened in 1892. It is significant that the Indian children attending these schools on the Blackfoot Reservation in the last decade of the nineteenth century were the grandparents of the Indian students now attending Browning High School. The importance of these grandparents in relation to the students will be further discussed in a later section of this paper.

Educational policy on the reservation from the early reserve days to the early 1900's was quite specific. The Indian culture was considered to be the primary source of Indian impoverishment and the primary goal of education was to stamp out the old Indian culture and remake it into a carbon copy of the whites'. Adams says, "A sincere effort was made to develop the type of school that would destroy tribal ways and train the individual Indian to earn his living like a white man." (1946:56) With this guiding philosophy the early schools emphasized farming, stock raising, and mechanical pursuits for the boys and sewing, cooking, and housekeeping for the girls, practically to the exclusion of purely academic class work and study. What little class work there was consisted of rote learning that was of little practical value to the Indian children. Success in teaching the children the English language was slight. Agent Young reported that their progress in mastering English was going slowly. Even those Indian students who understood English were unwilling to use it (Young 1882:100).
The government day school had little success in achieving the educational goals that had been set forth. The biggest of many problems facing the day school was attendance and the Agents' reports of this period contain frequent reference to the fact. About the only time that attendance was high at the day school was on the days that rations were given out (Greer 1958:33). The popularity of the day school was never great so in 1885 the Agency boarding school was opened, primarily as the result of a change in policy. The new emphasis was placed on separating the Indian children from their supposedly detrimental home environments. As Adams says, "It was thought that four or five years of boarding school experience with its rigid discipline would eradicate the young Indians' disorderly habits." (1946:51) The boarding schools were also intended to improve attendance by keeping the Indian children on the premises at all times. This advantage was never fully realized, however, for the Indian children frequently ran away from the school and returned to their homes. The Indian Agents were responsible for keeping the schools filled and they could withhold rations from the parents if the students were not returned to school (Adams 1946:55). Because the boarding schools were very popular with white educators at this time they became the primary educational facility and were emphasized by the Federal Indian school system as late as 1930 (Greer 1958:35-36).

A contract school at Holy Family Mission functioned as a boarding school. This school and the one at St. Peter's Mission were subsidized by the United States government to serve as
educational facilities during a time when the government was not prepared to take over the responsibility of education which it had assumed (Adams 1946:57). The contract schools were established by missionary societies and thus saved the government a considerable amount in terms of building the schools and furnishing them with equipment and instructors. In his report to the Commissioner of Indian Affairs in 1890 John Catlin reported that the cost of constructing the Holy Family mission school, a sum of $15,000, was donated to the Catholic Church (Catlin 1890:115). The contracts were awarded on a monthly per capita rate for a specified number of Indian children who were to be supported and educated on the subsidy. The contract subsidy, however, did not cover actual expenses. No allowance was made for building equipment and salaries of teachers (Palladino 1922:159). Both at St. Peter's and at Holy Family Mission, the schools were divided into two separate departments. The girls' department was under the supervision of the Ursuline nuns and the boys' department was under the direction of the Jesuits (Schmidt 1942:63). The Holy Family mission school was an important part of the early Blackfoot Reservation as it furnished the only schooling that many of the Blackfoot ever received. A grandmother of one of the students in the present study reported that she received her entire education of six years at the mission school. In 1892 there were 124 Blackfoot children in the Agency boarding school, 120 at Holy Family contract school, and forty at St. Peter's contract school (Steele 1893:174).

Boarding schools had their problems, nevertheless, and one
of the biggest was that of student labor. The students often spent more time engaged in manual labor than they did studying. Much of this work consisted of tending gardens and livestock which were intended to make the boarding school somewhat self-sufficient and thus reduce the operating cost. The government knew that the student labor would decrease the cost of the school and for this reason, among others, manual labor was included in the formal schedule of the schools (Adams 1946:35-36).

This undesirable aspect of the boarding schools and re-interest in day schools finally led to a decline in their popularity. In the early 1900's a movement was started to transfer the Indian children into public schools. The isolation and the work policy of the boarding schools had proved ineffective as a civilizing influence on the Indian children. It was found that the isolation did little more than cause the Indian children misery. Moreover, they quickly returned to their old tribal patterns of life when they were sent home to the reservations. Scudder Mekeel says, "The boarding school experience merely cut into, and interrupted for a time, the main stream of an Indian child's education." (Mekeel 1943:677) According to Adams, "Educators worked diligently but in vain to stamp out Indian culture which was denounced as the source of Indian poverty." (Adams 1946:3) Adams further states that the educational policy failed, "... because it attempted to superimpose outright and quickly a semi-technological work pattern without taking time to relate it to latent values within the older pattern." (1946:47) As a result of the general failure of the boarding schools it was
decided that the Indian children should be allowed to return to their homes where they could be active in the family and at the same time attend the public schools (Schmidt 1942:55). Adams says, "The new policy of educating the Indians near their homes ran counter to the old, but soon took root." (1946:70) The return of the Indian children to their homes led to a strengthening of traditional behavior as the children were back under the direct influence of their parents. It is difficult to evaluate the effect this development had upon the future of Indian education. Adams believes that the emotional security the Indian children experience in the home environment has been a positive factor in the educational process (1946:58).

In 1905 the first public school was erected in Browning. This school offered instruction in grades one through eight. In 1917 the demand for a high school led to the construction of an eighteen room brick building that could serve as a grade and high school (Schmidt 1942:66-67). By 1920 more Indian children in the United States were enrolled in public schools than in government schools (Adams 1946:63). The public high school in Browning assumed the responsibility of providing secondary education on the Blackfoot Reservation, a role it has maintained up to the present time.

In 1934, Congress passed the Indian Reorganization Act which gave the Indians the power to guide their own progress. In 1935, the Blackfoot tribe drew up a constitution and became entitled to the powers defined by the Reorganization Act. In recent years progress has been made in the development of irrigated farms, in the
growth of winter feed for livestock, and in restocking the range lands of the reservation with Indian-owned cattle and sheep (Ewers 1944:58). Since the tribe reorganized in 1935, the reservation has been governed by a Tribal Business Council which is composed of thirteen elected officers representing the various districts or communities on the reservation.

B. THE PRESENT

At the present time the Blackfoot Indians of Montana are located on their reservation in the northwestern part of the state. The reservation is located on the eastern side of the Rocky Mountains, partially in the foothills, and its northern boundary is the U.S.-Canadian border. The town of Browning, in the south-western part of the reservation, is the home of the Blackfoot Indian Agency and is the largest population center on the reservation. More than one-half of Browning's 2,200 population (in 1965) are Indians. The total enrollment of the reservation is approximately 12,000 members and of this figure, 6,700 live within the reservation boundaries.

"All Indian children are required to attend school. The majority of them attend one of the score of rural public grade schools on the reservation or the public combined grade and high school in Browning."

(Ewers 1944:62) The last government school was closed in 1965. Only those children attending out-of-state government schools are not enrolled in the public schools. During the 1963-64 school year there were 281 Indian children attending the public high school in Browning. The educational level of the Blackfoot Indians has
risen rapidly in recent years. "By 1950 some 125 of them possessed college degrees. One-quarter of the Blackfeet over eighteen years of age had graduated from high school." (Ewers 1958:325)
CHAPTER II
ENVIRONMENTAL FACTORS AND THEIR RELATIONSHIP
TO THE HYPOTHESES

My purpose in interviewing parents of those students who were given the written English test was to gather information on some aspects of their home environment. The interview was structured so as to provide information about certain factors in the home environment. Two of these factors (socio-economic status and bilinguality) are established in the literature as having a definite influence in the process of language acquisition. The specific references which substantiate the influence of these factors are cited in sections A, B, and C of this chapter. The remaining factor (first child) has not been established as conclusively having influence in the process of language acquisition. The evidence regarding its influence in this culture is weak, but it was included to determine whether or not there was any apparent relationship between a first child and his language proficiency. ¹

Initially all three factors were isolated by reviewing some of the literature dealing with language development in children and through my discussions with various faculty members in the

¹For purposes of this study, "language proficiency" will be interpreted to mean performance on the English test.
Speech and English departments on the University of Montana campus. As these factors represent the first step in the formulation of the hypotheses put forward in this study, it would seem prudent at this point to discuss them in detail and to explain more thoroughly their function in shaping the hypotheses.

A. SOCIO-ECONOMIC STATUS

The first factor to be satisfactorily established was socio-economic status. It has been demonstrated that the socio-economic status of a particular child's family is directly related to the degree of competency displayed by the child in language acquisition situations (Cuff 1935:226; Bossard 1945:231-232; McCarthy 1946:557; Bernstein 1960:271; John 1963:822). More specifically, the literature indicates that children from higher socio-economic home environments display greater linguistic ability than those children from lower socio-economic home environments (Stern 1924:176; Day 1932:198; Cuff 1935:227; Young 1941:127; McCarthy 1946:558; Irwin 1948:320-323; Deutsch 1965:78).

One reason for this superior ability appears to be simply a matter of wider variety in experience and association (Tireman 1955:33). The children from higher status environments become familiar with a greater number of objects, experiences of social importance, and ideas which are integral parts of the middle and upper class way of life and which are, consequently, objects and ideas which will be more heavily emphasized in the public schoolroom. This familiarity has a direct effect, for example, on the
size and quality of their vocabulary (Bean 1932:195; McCarthy 1946:559; Tireman 1955:34). As stated in Cuff's article above, "... a marked relationship exists between the social status of the family and the child's vocabulary development." (1935:226) As measures of vocabulary are included in most tests of verbal ability (as in the test used in the present study) it logically follows that children from the high status homes will do better in this respect than the children from the low status homes.

Another quite obvious reason for the linguistic superiority of high status children is that the parents in the higher status homes are generally better educated than those parents at the opposite end of the scale (John 1963:818). What is important here is that the better educated parents in higher status homes are in a better position to provide additional instruction to their child as he develops his language skills. V. P. John says that the amount of tutoring and help available in the home is important in determining how well the child will learn the more abstract and precise use of language (1963:821-822).

Another sub-factor of importance is the higher incidence of broken homes among lower status groups, most often a missing father (John 1963:818). Such broken homes, according to Deutsch, have a significantly smaller number of organized family activities (car trips, picnics, etc.) compared to non-broken homes, and these activities are important because they result in more conversation and wider learning experience (Deutsch 1965:80). While it is true that conversation with age-mates is an important factor in
the child's linguistic development, some authors consider conversation with the parents to be more crucial. According to Deutsch, "Strong evidence can be adduced to support the assumption that it is the active verbal engagement of people who surround him which is the operative influence in the child's language development." (1965:79) McCarthy says, "It appears . . . that association with adults is likely to be associated with linguistic acceleration." (1946:560) McCarthy also states that children in orphanage and institution environments, who have no home life at all in the true sense, are the most seriously retarded group in language development (1946:560).

The reasons discussed above are surely not the only contributors, for the relationship between socio-economic status and language development is quite complex. These, however, are the reasons mentioned most often in the current literature. Other more subtle aspects of the relationship remain to be isolated, studied, and discussed. In combination these factors are capable of producing results which clearly separate the upper classes from the lower. The distinction is so clear, in fact, that certain authors maintain that there are separate languages used by the lower, middle, and upper classes. Allison Davis says that there are separate "language-cultures" for the different classes (1950:82). Bernstein refers to them as different "modes" of speech (1960:271), Riessman feels that the lower classes have a different form of communication which is less "word-bound" (1962:78), and Deutsch says there is a " . . . class-based language system that effectively denies the lower-class
person the necessary verbal strategies to obtain vertical social mobility." (1965:86) James Bossard feels that this distinctive language is a logical extension of the lower class way of life. He says, "Language is behavior, much like manners or dress, whose standards and requirements vary on the basis of class, origin, occupation, activities, and the like." (1945:236)

Thus it seems clear that language development in children is undeniably and intimately related to the socio-economic status or social class of the child's family. It remains now to show that this relationship produces marked differences in the linguistic ability of the Blackfoot children. According to Orvis Irwin these differences can be detected very early in the child's life. He says that by the age of two years, statistically significant differences in phoneme frequency can be observed when children from higher classes are compared to children from lower classes (1948:320-323). Lower class children consistently exhibit a linguistic ability inferior to that of higher class children. This information is not difficult to accept, says B. Bernstein, "... especially when one considers that the normal linguistic environment of the working-class is one of relative deprivation." (1960:276), and as Deutsch remarks, "Language is a dimension through which unfavorable environment can inhibit development." (1965:78)

From this it is hypothesized:

A significant correlation will be found to exist between the socio-economic status of the subjects and their scores on the English test.

On the basis of relevant literature I anticipated that higher
socio-economic status would be associated with higher test scores.

B. BILINGUALISM

Bilingualism was the second factor to be adequately established. The literature dealing with bilingualism is quite extensive and indicates conclusively that this factor has a direct influence on the linguistic ability of the individuals involved (Yoshioka 1929:479; Bossard 1945:701-702; McCarthy 1946:565). However, opinion varies greatly regarding the influence of bilingualism. In the investigations reported by Arsenian (1937:24-52), some authors stated that bilingualism had a negative effect on linguistic ability. Others stated that bilingualism enhanced the subjects' linguistic facility and a few reported neither disadvantage nor advantage in bilingualism. Undeniably the problem of bilinguality is very complex. The effect of bilinguality is not only related to the learning of two different languages, but also to such specific factors as: (1) the age of the child when learning the second language, (2) the method of learning the second language, (3) the child's attitude toward the second language, and (4) the structural differences between the two languages being learned (Arsenian 1937:20-21). Foreign studies of bilingualism reported in Arsenian (1937:26-34) give evidence that in European countries bilingualism tends to be of a different nature than it is in the United States. In Europe the children are quite often members of a language minority which is still situated in its native land and surrounded by numerous connections to the
native language of the area. As the dominant language of the state is, in many areas of Europe, different from the native language, the children in these language minorities are required to learn a second language in order to be successful in school and in business. Due to the strong supportive ties with the mother tongue, however, this native language is maintained quite adequately from generation to generation and does not fall into disuse (Arsenian 1937:17).

The situation in the United States is quite different. The bilingual child may not be a member of a large language minority and the strong influences favoring continued usage of the mother tongue are not present. On Indian Reservations in the United States the maintenance of a particular second language is often impractical because two, three, or even four different native languages may be spoken on the same reservation, and may not be spoken anywhere else. Also, in the United States there is no organized opposition to the learning of the dominant language such as exists in certain European countries (Arsenian 1937:18). In the United States there are strong environmental influences favoring acquisition of the English language (e.g., success in school and social acceptance) and few factors favoring maintenance of a second language. Consequently, most investigations carried out in the United States report that bilingualism is a linguistic handicap (Arsenian 1937:52). Once again, however, it depends upon the four factors described above. If the child has already successfully learned a first language and then goes on to learn a second language from a qualified instructor, there is apparently little adverse effect upon linguistic
ability. However, if the child hears two different languages in the home from infancy and if the speakers of these two languages are deficient in their knowledge of the languages, linguistic retardation will probably result (Arsenian 1937:17-19). Another example of the effect of the age-factor on learning of a second language is the fact that bilingual children in high school apparently suffer less linguistic retardation than do bilingual children in elementary school (Arsenian 1945:76).

The review of literature presented below consists mainly of investigations that were carried out in areas where English is the dominant language and where there were no environmental factors favoring persistence of a second language. Most of these studies were carried out in the United States and report bilingualism to be a linguistic handicap in some way. More specifically, those children from monolingual home environments demonstrate greater linguistic ability than those children from bilingual home environments (Smith 1931:187, 1939:253,271, 1949:309; Fritz and Rankin 1934:412; Johnson 1938:143; Anderson 1939:220; Arsenian 1945:76; Tireman 1955:34; Holland 1960:47-50).

One important reason for this superiority is again related to vocabulary. Children who hear and speak two different languages in the home have a double task when it comes to vocabulary. They must learn two words for the same thing. The net result of the added burden is that the bilingual child does not learn the names of as many things as does the monolingual child. The bilingual child may know a greater number of words, but when "... words
known in both languages are not counted twice, his combined vocabularies do not often equal that of the average monolingual child."

(Smith 1949:309) The monolingual child knows a single name for a large number of concepts as opposed to two names for many of a smaller number of concepts (Smith 1949:309). When the vocabularies in either language are compared to the vocabularies of average monolingual children, the bilingual children are consistently inferior (Smith 1931:187; Johnson 1938:143; Tireman 1955:34).

Some investigators feel that the disadvantage of bilinguality can be summed up briefly: the children are not truly bilingual. That is, most of the children studied are not competent in both languages they speak. In the study by Holland, the Spanish-American students could speak some Spanish and some English but could speak neither correctly (1960:47). As Holland says, "These children . . . cannot in reality be thought of as fully bilingual, but rather as sub-standard or partial speakers of two languages." (1960:48) This is a more serious handicap than limited vocabulary alone would be. This deficiency is in all aspects of the language and is already present when the children start school. Smith says, " . . . a bilingual child is seldom sufficiently advanced by six years of age in either of the two languages he speaks to be as ready for school instruction as is the average monolingual child . . . ." (1949:309) She feels that this hindrance is so effective that the bilingual children are about three years behind their monolingual age-mates in language development at the time of school entrance (1939:271). Johnson did not feel that the retardation was
quite as great in his study of Spanish-American students. He felt that retardation was from seven to twelve months (1938:143).

The handicap, regardless of degree, carries over into school and the children's academic progress suffers accordingly (Fritz and Rankin 1934:412; Johnson 1938:136; McCarthy 1946:565; Malan 1948:157-158; Holland 1960:42). Their language deficiency, says Arsenian, "is most apparent in verbal subjects, such as reading . . ." (1945:76) They apparently have difficulty distinguishing between shades of meaning as expressed by words (Tireman 1955:34).

In the present study the acquisition of English was further hindered by the fact that many of the Blackfoot parents themselves used poor English and thus set a poor example for the children. In such cases Smith feels that the handicap is increased. In her study of bilingualism in Hawaii, she says, " ... not only is the child's mastery of standard English hindered by the prevalence of incorrect pidgin English, but also by his attempt to learn two languages." (1939:271)

As the above discussion indicates, bilingualism is a powerful influence in forming the child's linguistic ability. Anderson sums it up by saying, "In general, the evidence supports the principal that bilingualism during the early years is a handicap so far as advancement in either language is concerned." (1939:220) Accordingly, it is hypothesized:

A significant correlation will be found to exist between the language situation in the home and the subjects' scores on the English test.

On the basis of data in relevant literature I expected to find
that the children from monolingual home environments, taken as a group, would score higher on the test than the children from bilingual home environments.

C. FIRST CHILD

There is little material in the literature concerning the influence of the factor of the first child in the process of language acquisition, therefore it is impossible to discuss it in detail. The actual relationship of this factor to the language acquisition situation in the home is uncertain, but certain articles contain data which might bear on the problem.

First, there are reports in the literature which show that only children are linguistically superior to non-only children (Davis 1937:139-140; McCarthy 1946:560). The chief reason for this superiority seems to be greater association with adults. Davis says, "... only children are more accustomed to the society of adults than are children with siblings..." (1937:141) McCarthy has this to say about only children, "... their environments differ from that of other children chiefly in affording greater association with adults and greater opportunity for practice in the use of language under optimum conditions." (1946:560) It seems logical to assume that an only child benefits from the undivided attention of his parents in the language learning process. If there are other children in the household, the parent's time must be divided between them. From this one might suggest that first-born children should be somewhat superior in linguistic
ability as a result of having been the only child of the family until the birth of a sibling. The later-born children will seldom have the undivided attention of the parents that the first-born child had. Smith says, "In general, it would seem that the elder children have a similar advantage in mastering language to that which has been found in studies of monoglots, due to greater adult attention, in those groups where little but English is used . . ." (1939:232)

Second, in an investigation by Bossard, various age levels of language in family conversation were recorded (1945:229). He found that families adjust their age level of language to the children. However, the families tend to emphasize that age level in which the older children are conversing. Bossard says, "The family seems to adjust its age level to the level of the older children, and to ignore the younger ones, especially if the age differential is not large." (1945:230) If the family adjusts its age level of language to the older children it would seem that the older children, particularly the eldest child (first-born), should have a certain advantage over the younger children in language development.

Despite the lack of concrete verification regarding this factor, I suggest as a working hypothesis:

A significant correlation will be found to exist between the birth-order of the subjects and their scores on the English test.

From my perusal of a limited amount of relevant literature, I expected to find that the first-born children, taken as a
group, would score higher on the test than the later-born children.

D. THE RELATIONSHIP BETWEEN ORAL LINGUISTIC ABILITY 
AND WRITTEN LINGUISTIC ABILITY

It will be noted, in the evidence presented above in sections 
A, B, and C, that most of the studies cited examine the relationship 
between a certain variable and oral linguistic ability. However, 
despite the fact that most of these studies deal primarily with 
oral linguistic ability, it is possible that the variables mentioned 
also affect written linguistic ability. While it is true that the 
language skills acquired in the home (at an early age) are of a 
predominantly oral nature, written ability apparently grows out 
of oral ability in the educational process. A. F. Watts contends 
that success in written language is dependent upon success already 
having been achieved in oral language (1944:354). In a study 
reported by Paul Bushnell, he states that at the tenth-grade 
level writing and speaking are not separate types, but that, "there 
is merely a continuous gradation from a precise, logical, integrated 
manner of expression to one of the opposite extreme . . ." (1930: 
65-66) While we cannot assume that there is a perfect one-to-one 
relationship between written and oral ability, the evidence indicates 
that there is a positive correlation between the two types of ability. 
On the basis of this fact it is assumed in this study that factors 
influencing oral linguistic ability will also influence written 
linguistic ability in a similar manner. The extent of the influence 
will be in accordance with the degree of relationship between the 
two types of ability.
CHAPTER III

TECHNIQUES OF INVESTIGATION

This chapter contains a brief discussion of the various techniques of investigation used in the study. To be discussed are the English test the Indian children were given, the rationales for selection of the sample, the interview schedule used with the parents, and the quantitative index used to define the socio-economic status of each child's family.

A. COOPERATIVE ENGLISH TEST

The test used in this study was the Cooperative English Tests, Single-Booklet Revised 1960 Edition, Form 2B, published by the Educational Testing Service, Berkeley, California. This test consists of two basic divisions: Reading Comprehension and English Expression. Each of these basic divisions consists of two sub-divisions: Reading Comprehension is divided into Vocabulary and Reading; English Expression is divided into Effectiveness and Mechanics. The manual for interpreting scores of the test describes the sub-divisions or parts of the test thusly:

Reading Comprehension

1. Vocabulary has been shown to be the best single index of verbal skill. In Part 1 of Reading Comprehension, the student is asked to look at a word and then choose, from a list of four words or phrases below it, the one which has most nearly the same meaning.
2. Reading passages in Part II of Reading Comprehension are varied in style and content, so that they represent the many kinds of materials which students are called upon to read in school. Each passage is followed by a group of items (usually about five), which range from those requiring the student only to recall a 'fact' of the passage to increasingly complex items requiring him to interpret what he has read. For each item, the student chooses the best of the four answers or completions presented.

English Expression

1. 'Effectiveness' is the title of Part I of the English Expression tests and refers to the choice of the written expression which precisely conveys the meaning intended. About two-thirds of the items in this part require the student to complete a sentence by choosing the best single word from among four presented. The remaining items require completion of sentences with the most effective phrases or clauses.

2. 'Mechanics' is the title of Part II of this test and refers to usage, spelling, punctuation, and capitalization. A new item type is introduced here: the student is given a three-line sentence and asked to identify the line in which any mechanics error occurs or, alternatively, to indicate that the sentence contains no error. (ETS Manual 1960:6)

Each sub-division is given a score based on the number of correct answers and these scores are combined to obtain a single concise estimate of the student's ability to handle written English. The test is constructed in such a fashion that scores from grades nine through twelve can be compared on the same basis. That is, the scores of all students tested, regardless of their grade in school, can be directly compared with each other.

This test was chosen primarily because it represented an up-to-date comprehensive measure of written English ability in an easily administered form. Even though the test was standardized on a sample of non-Indian children in high schools throughout the United States, I did not consider this to be a drawback. The test
was designed to evaluate written English ability and this was precisely what the study called for. A comparison of the test scores of Indian and non-Indian children was not the objective of this study and consequently the question of cross-cultural applicability did not arise. To be sure, this test would not be appropriate if the objective was to compare Indian and non-Indian children. The test is designed to be taken by the average American high school student and the cultural background of this average American student would give him a considerable advantage over the average Blackfoot Indian student of the same age. However, as only Blackfoot children were being tested and as the objective was to measure their written English ability, I considered this test to be appropriate.

The testing was accomplished in two consecutive days and concluded the 7th of May, 1965. The testing was done in classrooms and in the school auditorium at the Browning High School. Regular high school teachers served as proctors. We attempted to standardize the testing situation to the greatest extent possible, and the instructions to all the groups tested were read directly from the instruction manual to avoid changes in wording. The answer sheets were collected from all groups immediately after testing, and were later scored. The composite score, mentioned above, was computed for each student tested and the totaling of these scores constituted the final step in the testing operation.

It should be stressed that this test measured only written English ability; no measurement whatsoever of oral ability was made.
B. THE SAMPLE

The test was administered during the spring of 1965 to 110 Blackfoot Indian children\(^1\) in the public high school at Browning, Montana. However, only eighty-seven of the original 110 subjects were used in the study. The parents of the remaining twenty-three subjects were not available when the interviewing was done. Table 1 contains a breakdown of the final sample of eighty-seven Indian children by class and by sex.

<table>
<thead>
<tr>
<th>Class</th>
<th>Sex</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>Males</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>11</td>
</tr>
<tr>
<td>Sophomores</td>
<td>Males</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>6</td>
</tr>
<tr>
<td>Juniors</td>
<td>Males</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>11</td>
</tr>
<tr>
<td>Seniors</td>
<td>Males</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>87</strong></td>
</tr>
</tbody>
</table>

\(^1\)For purposes of this study, students were classified as being Indian if they possessed 1/16 or more Indian blood as designated in either the Agency Census Book or the high school's records. Appendix C contains a breakdown of the blood fractions, by fourths, of the final sample.
The only requirements for the selection of Indian children were that they had to be regularly enrolled in the high school and have at least 1/16 Indian blood. Originally it was intended that the subjects should be selected at random from the entire Indian population of the school. However, this later proved to be impossible as the resulting disruption of school activities would have been too great. Consequently, the sample was drawn from students who happened to have free periods at the time the test was being administered. Thirty Indian students from each of the four grades were tested, and an attempt was made to obtain representative numbers of both sexes. When the freshman class, for example, was to be tested, the principal brought into the auditorium thirty freshman students who had free periods at that time. While this sampling technique leaves much to be desired in the way of random selection, it was the only one available at the time the study was being made.

C. THE INTERVIEW

The interview used in this study was constructed primarily to yield information about those factors in the home environment which I assumed were influential in language acquisition. The factors are: (1) socio-economic status of family, (2) bilinguality of children, and (3) birth-order of children. (These factors were discussed in detail in Chapter II). However, it was also designed to provide information on the effects of intermixing the native language with the English language. As the study was done on the
Blackfoot Indian reservation it seemed probable that some of the parents and, for that matter, some of the children would speak both the native Blackfoot language and English. I decided that, in light of this particular language situation, it might prove informative to inquire into the parent's personal feelings regarding acquisition of the English language. Accordingly, six questions regarding the parent's personal opinion of the English language and its acquisition by them and their children were formulated and included at the end of the interview schedule. These six questions were divided into two groups: the first two questions were asked of everyone who was interviewed; the last four were asked only when it had been ascertained that English was not the only language acquired by the person being interviewed. (A copy of the interview schedule is included in the appendix).

In the actual organization of the interview schedule, the questions regarding socio-economic status were arbitrarily put first. This was because a question about the respondent's job did not seem particularly objectionable to begin with and might get the interview started smoothly. As Arthur Kornhauser says in his article on questionnaire construction, "... it is usually best to start with simple objective questions. Once the respondent has been drawn into the interview, he may be more willing to answer questions about his feelings, motives, etc." (Kornhauser 1964:573) Next in order came the question on bilinguality followed by the question concerning first child occurrence. The question on bilinguality simply inquired as to what language was used in the household, and further, if that
particular language was the only one used. The question relating to first child asked whether or not a particular subject was the first-born child of the family. After these questions, which covered the three language factors, I asked the six questions which dealt with parental attitudes regarding the English language.

The interviewing procedure was simply to visit the parents of a particular student, explain the purpose of the call, and obtain if possible the information necessary to fill in the interview answer sheet. The questions formulated in the interview schedule, however, were not all asked directly. The information necessary to answer some of the questions was obtained in the course of guided conversation and indirect questioning. I felt that this particular interviewing technique would be less likely to cause embarrassment or hostility when dealing with the more personal questions on the schedule. An interview answer sheet was compiled for each family interviewed. (A copy of the interview answer sheet is included in the appendix). The total number of sheets obtained was seventy-one, sixteen less than the number of subjects in the final sample. This difference is explained by the fact that in sixteen cases, two subjects were members of the same family.

D. INDEX OF STATUS CHARACTERISTICS

The questions relating to socio-economic status were set up specifically to coincide with a particular index for establishing status. This index was used because, for purposes of this study,
a technique was needed whereby I could place the family's socio-economic status on a quantitative basis. This objective was achieved by using the Index of Status Characteristics developed by Warner, Meeker, and Eells (1949:121-185). This index provides a numerical quantity indicating the relative social standing of the individual or family being evaluated. There are three separate steps in obtaining an Index of Status Characteristics. They are: "(1) making the primary ratings on the status characteristics which are to comprise the Index—usually occupation, source of income, house type, and dwelling area, (2) securing a weighted total of these ratings, and (3) conversion of this weighted total into a form indicating social-class equivalence." (Warner, et al., 1949:121)

In the present study I substituted the alternative, "education of father," for "dwelling area," the fourth characteristic mentioned above under step one. This substitution was made because a large percentage of the subjects lived in residential areas which would have received identical ratings. The characteristic would thus have been of little value in establishing status differences. This substitution is approved by Warner, et al., when it proves, "... easier to get information on education than on dwelling area." (1949:154) Also, the third step above was omitted because the weighted total was desired as opposed to the social-class equivalence form. Each of the four characteristics is rated on a seven-point scale established by Warner and his co-workers (1949:131-158). This scale runs from low to high and the particular characteristic is rated in accordance with its resemblance to a particular point.
on the scale. This process is made easier by the fact that examples are given with which a particular characteristic can be compared and scaled. When each of the four characteristics has been scaled, a weighted figure is obtained by multiplying the particular scale number by a weight factor. These weight factors are based upon the relative importance of the particular characteristic in determining social status. The greater the importance of the characteristic, the larger is its weighting factor. The weighting factors for the four characteristics are: occupation - four, source of income - three, house type - three, and education of father - two (Warner, et al., 1949:123).

When all four characteristics have been scaled and the scale number multiplied by the weighting factor, four weighted figures are obtained. The total of these four weighted figures is the Status Index of that particular family. With a seven-point scale and these weighting factors, it is possible for the Status Index to be any number from twelve to eighty-four inclusive. In accordance with the construction of the seven-point scale, twelve represents the highest rating in the upper class and eighty-four represents the lowest in the lower class (Warner, et al., 1949:124).

It should also be mentioned at this point that information on all four of the above mentioned characteristics is not necessary for computation of the Status Index. In those cases where the information on all four is simply not available, information on any three can suffice. However, in such a case there are different weighting factors to be used for the remaining three (Warner, et al.,

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The Index of Status Characteristics was chosen for this study for several reasons. Chief among these were: (1) the fact that the Index provides a numerical rating of relative socio-economic standing, (2) the data required to compute the Index are easily acquired, and (3) the Index is relatively free from the influence of ethnic background. Warner et al. state, "... the Index does have definite value for predicting social class for ethnic individuals within certain margins of error ..." (1949:203) As I only wanted relative social standing and had no desire to place the individuals concerned in distinct classes (upper-middle, lower-lower, etc.) I felt that the Index was quite adequate for my purposes. This index evaluates socio-economic standing in terms of what middle and upper class Americans consider to be determinants of status, such as size of house, type of occupation, primary source of income, and education of father. It is socio-economic status based on these determinants which is assumed to be influential in the language learning situation of the home. This index was therefore considered to be appropriate for this particular phase of the study.
CHAPTER IV

STATISTICAL TESTS AND RESULTS

This chapter deals primarily with the statistical operations used to establish the correlations between the factors discussed in Chapter II and the scores on the English test. The results of these statistical operations either verify or reject the hypotheses put forth in Chapter II.

A. STATISTICAL TESTS

Due to the particular nature of the research data, I decided that two different tests of correlation would be needed. One test was used in establishing correlations between those variables which were of a continuous nature. Those variables were: (1) test scores and (2) status index. The other test was used in establishing correlations between one continuous variable and one truly dichotomous variable. The truly dichotomous variables were: (1) first child occurrence and (2) language situation. The test selected for the first purpose mentioned above (i.e., both variables continuous) was the Spearman Rank Correlation (Siegel 1956:202). The test selected for the second purpose (one variable continuous, one dichotomous) was the Point-Biserial Correlation (Guilford 1956:301).

The formulae used to determine the correlation coefficients and the significance of the obtained coefficients are presented in
Appendix E.

B. RESULTS

Socio-economic status. When socio-economic status was correlated with test scores the resulting correlation coefficient was .23\(^1\), which is significant at the stated level. This means that Hypothesis #1 can be accepted. There is a significant correlation between socio-economic status and English test scores within the context of this study. Children from higher socio-economic home environments did score significantly higher on the English test.

Bilingualism. Bilingualism, when compared with test scores, also exhibited a correlation coefficient of .23 and was also significant at the stated level. Thus Hypothesis #2 can be accepted. The bilingual children did score significantly lower on the English test.

First child. The correlation between birth-order and test scores was .19. This correlation, although smaller than those above, is significant at the stated level and thus Hypothesis #3 can be accepted. It appears that the first-born children did have a small but significant advantage over the later-born children in the English test.

Subsequent to the computation of the correlation between birth-order and test scores, a comparison was made of the scores obtained by siblings. Sixteen sets of siblings were compared and

\(^1\)A correlation coefficient of .00 indicates no relationship whatsoever between the two variables involved. A coefficient of + or - 1.00 indicates a one-to-one relationship between the variables.
of these sixteen there were eleven sets in which the older child scored higher, three sets in which the younger child scored higher, and two with tied scores. Thus it appears from observation that older children do better in both inter- and intra-family comparisons. It should be remembered that the English test used in this study compensated for differences in age. Consequently the older children did not have an advantage over the younger children because of their age.

To facilitate comparison of the three factors, their correlation coefficients are presented in Table 2.

**TABLE 2**

**CORRELATION COEFFICIENTS OF FACTORS 1 - 3**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-economic status</td>
<td>0.23</td>
</tr>
<tr>
<td>Bilingualism</td>
<td>0.23</td>
</tr>
<tr>
<td>First child</td>
<td>0.19</td>
</tr>
</tbody>
</table>
CHAPTER V

INTERPRETATION OF RESULTS AND
PARENTAL ATTITUDES TOWARD THE ENGLISH LANGUAGE

A. INTERPRETATION OF RESULTS

The statistical results of the preceding chapter are not particularly graphic or illustrative by themselves. However, when translated into everyday happenings and developments, they take on greater meaning. In essence they indicate that the home environment is significantly related to the performance of the students from these homes on a test of written English. This would be the expected result in light of the evidence presented in Chapter III. Moreover, this evidence is not divorced from actual living conditions on the Blackfoot Reservation, but the two types of information are consistent. It would perhaps be informative to analyze the evidence pertaining to each of three social factors individually in order to note the applicability to the particular study. The three factors usually presented by researchers are: (1) socio-economic status, (2) bilingualism, and (3) first child occurrence. I intend to add to these by describing other pertinent factors which I observed in the Blackfoot home environments.

Socio-economic status. Socio-economic level is an important factor in this study among the Blackfoot. The children from higher socio-economic home environments did score higher on the English
Coleman (1940:63) reports that the influence of socio-economic status carries over into school and affects scholastic achievement in general. In his study of the Wind River Shoshone, Rist sent questionnaires to teachers on the reservation. Fifty-five per cent of the teachers who responded stated that they felt that low socio-economic status retarded school achievement of the Shoshone Indian children (Rist 1961:89). To add weight to the above statements, I shall briefly describe examples from the two diverse home situations which I observed.

The first family to be described had a Status Index of seventy-six, which is very near the lowest end of the scale in terms of status (the numerical scale range in this study was from thirty to seventy-nine). This family lived in a four-room cardboard, tarpaper, and scrap lumber shack near the Indian Agency. There was no yard at all surrounding the house; the area around the house was similar to the countryside near Browning, consisting mainly of hard packed dirt and a few scattered weeds. The inside of the house was sparsely furnished and there were virtually no luxury items, except for a television set. The father was employed in a bar in town and his job consisted of, as his young son explained, "swamping" the place out. The education of the father extended through the sixth grade and there were ten children in the family. This family met every criterion for being placed in the lower class. However, it would be inaccurate to say that this family was living such a life because they were Indians. Their living conditions were very similar
to the conditions that would be observed in any family, regardless of ethnic origin, living an equally poverty ridden life. Wax states, "Many of the practices of the country Indian are not so much essential patterns of his Indian culture as they are conditional upon his poverty." (Wax 1964:39) Lower-class living conditions serve to inhibit linguistic ability and, concurrently, academic ability in other groups besides those on the Indian reservations.

Project Head Start experiences show that these same factors are influential in language development on or off reservations. J. B. Richmond, Program Director for Project Head Start, says, "Current studies show that irreparable damage of pre-school retardation is especially acute among the economically and socially deprived." (Richmond 1965) The Blackfoot family just described above would definitely be classified as economically and socially deprived.

On the other end of the list was a family with a Status Index of thirty-two. This family lived in a large brick apartment house which they owned and there was a small grass yard around the house. The part of the house they lived in had six rooms and was well furnished. The father held a high position in the city government, the mother ran an insurance agency, and their son (an only child) drove a Corvette. The father and mother had both received some education past high school, the father having attended two years of college. The son was planning to (and subsequently did) enter the University of Montana with aspirations toward majoring in Business Administration. This family, clearly, was far removed
from the lower class family discussed above in their mode of living which apparently did have a positive influence on the linguistic ability of their child.

The bulk of the families, of course, fell somewhere between the two examples described above. When plotted on a frequency graph the distribution of Status Indices formed a bimodal curve with clusterings around forty-one and sixty-nine. Table 3 below illustrates the distribution of indices. This distribution would tend to indicate that the same development is taking place here that Wax (1964:37) has described on the Pine Ridge Reservation. That is, some of the Indians seem to have been adapting to a middle class way of life while others have been adapting to a lower class one. Kupferer, in her study of the Eastern Cherokee (1962:163), found what she referred to as, "... incipient social class structure with accompanying definitive behavior."

This phenomenon illustrates quite effectively that acculturation does not follow the same path for all people even on the same reservation. That an element of conservatism\(^1\) is present is indicated by the fact that twelve of the seventeen bilingual families interviewed in this study had Status Indices of fifty or greater. In summary it can be said that the social class differences observed on the Blackfoot Reservation were sufficient to produce the results in Chapter 1 in accordance with the evidence presented

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\(^1\)The term "conservatism" is used in this study to indicate a tendency to cling to the ways of the past and a reluctance to accept recent innovations.
regarding the influence of socio-economic status in the child's language learning process.

**TABLE 3**

**FREQUENCY DISTRIBUTION OF STATUS INDICES**

<table>
<thead>
<tr>
<th>Range and Scores</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
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**Bilingualism.** The biggest problem of the Blackfoot children from bilingual homes, as far as language acquisition is concerned, appears to be their involvement in two highly dissimilar languages. Bilingual children tend to have smaller vocabularies in either language when compared to monolingual children (Smith 1949:309). This same problem affects the bilingual Blackfoot children who
have insufficient vocabularies in either English or in the Blackfoot version of Algonkian which they speak. Grammar differences pose even more problems. It should be noted here that I found no instance, during the interviewing, in which neither parent could speak English. However, in some of the bilingual homes there were cases where only one parent could speak English, and often this person spoke it with considerable difficulty. Thus it was readily observable that certain Indian children were faced with two impediments to the learning of English. First, neither of their parents could speak formal English and second, the children had to be at least partially familiar with two separate languages in order to converse both in the home and in the school. Under these circumstances it is not difficult to understand the significantly higher English test scores obtained by the Blackfoot children from homes where only English was spoken. To have predicted otherwise would have been to disregard both observable and reported evidence.

As stated in a progress report of the Special Indian Project at Northern Montana College, Havre, Montana, "As long as the older folks continue to talk in the native [Indian] tongue in the home and community, we cannot expect too much accomplishment in the understanding of the basic English fundamentals." (SIP 1963:3)

In Chapter II it was mentioned that other investigators, particularly Fritz and Rankin (1934:412), Johnson (1938:136), McCarthy (1946:565), Malan (1948:157-158), and Holland (1960:42) have reported that the language handicap of bilingual children adversely affected their academic progress. In his study Rist also found that ninety-six
per cent of the Wind River teachers felt that the fact that the Shoshone language was spoken in the home retarded the academic progress of the children (Rist 1961:89).

As I have suggested earlier, the problem of bilingualism is very complex. There are numerous factors involved which have not yet been thoroughly studied. Another indication of the pervasive influence of conservatism is the fact that fourteen of the nineteen bilingual children in this study had three-fourths or more Indian blood. Indeed, the relationship between bilingualism and conservatism is so evident that John Artichocker and Neil Palmer used bilingualism as a measure of acculturation (Artichocker and Palmer 1959:23). They state, "... according to the division of the students in terms of knowledge of an Indian language, the 'bilingual' students represent the more Indian-like group; the 'English only' students represent the more non-Indian-like group." (Artichocker and Palmer 1959:25)

First child. It would be difficult indeed to report that I had observed behavior in the homes of the Blackfoot children which would lead me to believe that the evidence in Chapter II regarding first child superiority among the Blackfoot was fully verified. Such was not the case. However, I do believe the evidence was sufficient to indicate that the factor was worthy of investigation. In most of the homes in which the interviewing was done there were a number of young children still in the house. It was quite obvious that the mothers, in particular, would have had considerably more time to devote to the baby of the family had it been the only child, or the first-born child. The extent to which the undivided attention
of the parent (or parents) is conducive to increased linguistic ability is difficult to evaluate, but it appears that it would be so. At any rate, the fact that the first-born children, taken as a group, scored significantly higher on the test is sufficient evidence to warrant further investigation. However, the test results indicate that first-born children raised in bilingual homes do not have a linguistic advantage over non first-born children. The non first-born children from monolingual home environments had a higher mean test score than did the first-born children from bilingual home environments. Also, in the single instance where both a first-born and a later-born child from the same bilingual family were tested, the first-born child scored lower than her younger brother. The numbers here are inadequate for me to make any general statements, but it is possible that the younger brother had benefited from having an older sister who could speak English better than either of his parents could.

Other factors which I observed in the homes are obviously not as important as the three described above in terms of influence upon language development. However, they do exert a certain amount of influence and should be noted.

**Siblings and age-mates.** The Blackfoot Indian children learn much from their older brothers and sisters today, just as they did in pre-reservation times. In cases where the young children are not able to obtain adequate linguistic instruction from their parents, the assistance of older siblings is quite beneficial. The disadvantage of being born into a bilingual home may be partially
offset if the child has an older sibling who has developed a certain degree of competence in English language usage. Also, children from linguistically inadequate home environments receive a certain amount of training on the schoolgrounds from their linguistically superior age-mates. Malan mentions this same practice in his study of the Flathead. He states, "Those few children who know no English are forced to learn it from the lessons given to all the children or from the other children on the playground." (Malan 1948:157-158)

Undoubtedly, there are certain aspects of playground language training which are not socially desirable, such as the use of vulgar slang and obscenities. However, in the long run the children benefit from practice in the language they will be required to use in the higher grades.

Television. Television is another factor which, like siblings and age-mates, is becoming increasingly important to the Indian child from a linguistically unfavorable home environment. Even though television programs may occasionally keep the children up past their normal bed-time, it more than compensates for this by serving as a reasonably accurate version of spoken English. Even the lower-class families have television sets. As a matter of fact, almost every family in and around Browning has a television set, regardless of their socio-economic status. The young children watch a considerable amount of television and, for better or for worse, are exposed to a constant barrage of English.

Grandparents. As I mentioned in the first chapter of this paper, the Blackfoot grandparents in pre-reservation times often
provided part of their grandchildren's education. This practice, although considerably modified by time and social change, is still present on the reservation and results in a certain amount of verbal exchange between grandparents and grandchildren. As will be mentioned later in this chapter, the most frequently stated reason for teaching the children the Indian language is in order that they may converse with their grandparents who either cannot or will not speak English. Thus, in order to converse with his grandparents the child must become partially bilingual and as has been shown by this study, bilingualism is a negative factor in regards to linguistic ability. This is not to say that conversation with the grandparents, per se, is detrimental to the child's linguistic ability. The point is that some of the children in the present study became bilingual in order to converse with their grandparents and bilingualism has been shown to be negatively correlated with linguistic ability.

B. PARENTAL ATTITUDES TOWARD THE ENGLISH LANGUAGE

This section of the paper deals with the answers obtained from the parents when they were asked the six questions regarding the acquisition of English by them and their children. It was hoped that these answers would give some indication of the parents' views regarding the advantages in their children being able to use English competently. It was further hoped that the answers obtained from the bilingual families would give some insight into their personal reaction to the intermixing of their native language with English. As stated in Chapter II, the first two questions were
asked of everyone interviewed. These questions were: (1) What do the parents think is the greatest advantage in their child (children) learning to read, write, and speak English well? and (2) Did the child know how to speak English when he started school? The first question was apparently badly formulated as a great many respondents had difficulty understanding what was being asked. However, the respondents who had the most difficulty understanding the question were those whose English was the poorest and it should be noted that those respondents who spoke English very well and who were, as a rule, in a higher social class, had no trouble understanding the question. In those cases where the respondent did not understand the question, he was prompted by being asked in which of three areas he thought good English helped most: (1) for further schooling, (2) for getting a good job, and (3) for getting along with people. From those respondents who understood the question without prompting, the following answers were obtained: 21 answered "getting a good job," 12 answered "for further schooling," 4 answered "to express themselves better," and 11 answered only in general terms. The following answers were obtained from the prompted group: 9 answered "for further schooling," 3 answered "getting a good job," 4 answered "getting along with people," 4 answered with a combination, and 3 did not answer. When the answers from both the prompted and the non-prompted groups in the two categories "getting a good job" and "for further schooling" were totaled the results were: 24 answered "getting a good job" and 21 answered "for further schooling." As the respondents in these two categories represent about 63 per cent
of all the people interviewed, it is evident that these parents have a fairly realistic view as to the advantages of good English. Wax reports a similar attitude on the Pine Ridge Reservation in regards to the advantages of an education. He says, "Most conservative adults are convinced that completing a higher education (usually defined as graduation from high school) opens the road to acquiring a good job . . ." (Wax 1964:42) Whether or not the Blackfoot parents maintain these realistic views when they are faced with the practical problem of helping their children learn better English is a moot question. In his study of the Wind River Shoshone, Rist reports, "The Shoshone parents express sincere attitudes toward education when they are asked, but their attitudes are not expressed with outward signs of encouragement to their children." (Rist 1961:132) Also, there was a certain amount of confusion regarding the educational process and the learning of English. For example, many of the people interviewed thought that further education consisted of improving one's English ability. They apparently equate learning English with getting educated. Wax noted a similar confusion on the Pine Ridge Reservation regarding the educational process. He says, "Most [adults] know that education is important in gaining jobs that pay well, but they have not yet learned what an education consists of or what the individual must do to obtain it." (Wax 1964:102)

Question number two above was not an opinion question. It had been hoped that the answers to this question would relate to the language proficiency of the students, namely that students who didn't know English when they started school would be linguistically
inferior to those who did. However, as it was discovered, all the children tested had known English when they started school. Malan found a similar development in his study of the Flathead Indians. He states, "At the present time it is most common for the children to know some English prior to entering school, and it is not uncommon for them to know little or no Salish." (Malan 1948:158) The final part of his statement regarding knowledge of the native language is also pertinent. It was not uncommon for the Blackfoot children to know little or none of their native language. As all the subjects in this study knew English when they started school, it must be assumed that those children from unfavorable home environments had an inadequate knowledge of English when they started and that this inadequacy continued into high school.

Questions three, four, five, and six were asked only when it had been ascertained that English was not the only language used by the person being interviewed. Not all of the respondents in this group answered all four of the questions, but all the answers were nevertheless tabulated.

Question three: "Do the parents think English is a pleasant sounding language compared to the Indian language?" Answers: 4 felt that English was more pleasant, 2 felt that English was less pleasant, and 2 felt that English and the Indian language were equally pleasant.

Question four: "Do the parents think English is an adequately expressive language compared to the Indian language?" Answers: 4 felt that the Indian language was more expressive and 5 felt that
English was more expressive.

Question five: "If the child was purposely taught the Indian language, for what purpose?" Answers: 5 cases in which the children were taught the Indian language so they could talk to their grandparents and 1 case in which the children were taught the Indian language so that it would not die out.

Question six: "Do the parents think English is a difficult language to learn?" Answers: 11 felt that English was not hard to learn and 3 felt that it was.

As there were only 17 bilingual families interviewed, the above data give a representative picture of their feelings in regard to the English language. It is apparent that there is wide variation in their attitudes as few if any trends emerge.
CHAPTER VI

SUMMARY AND CONCLUSIONS

This chapter contains a brief summary of the methodology employed in the study. In addition, certain conclusions drawn from the results of the study are presented in an attempt to sum up the implications, and finally, a section containing my impressions of life on the Blackfoot Reservation is presented.

A. SUMMARY

1. A test was made of the written language ability of high school age Indian children in Browning, Montana.

2. Eighty-seven Indian children attending high school in Browning were given a written English test and approximately two months later the parents of these students were interviewed in their homes.

3. The interview was designed to obtain information regarding the language acquisition situation in each student's home.

4. The interview information was used to evaluate three diverse factors in the home environment (socio-economic status, bilingualism, and first child occurrence) which were considered to be potentially influential in the child's language learning process.

5. These language factors were correlated statistically with the subjects' scores on the English test to determine if they were,
in fact, related to language proficiency.

6. The obtained statistical correlations indicated that the language factors were significantly related to the subjects' performance on the English test.

B. CONCLUSIONS

As the results of this study show, the three language factors (socio-economic status, bilingualism, and birth order) are significantly related to the child's performance on a test of written English. However, as the correlations between the factors and the scores on the test are all less than .25, it is also clear that the relationships are slight. At least they are at the high school level. Perhaps the correlations would have been higher had this sample been tested when they were in elementary school. The language deficiency resulting from bilingualism, for example, appears to be greater in elementary school than in high school (Arsenian 1945:76). The results show that bilingualism and socio-economic status have the highest degree of relationship of those factors studied. Bilingualism, being more directly associated with linguistic ability, is not difficult to accept as an important factor. Socio-economic status does not on the surface appear to be as closely associated but, as the evidence in Chapters II and V indicated, it is intimately associated with language development. Birth order, though its correlation is smaller than those of the first two factors, nevertheless is significantly related to language proficiency.

The above information should be of interest both to elementary
and high school administrators and to future investigators into the problem of environmental influence on linguistic ability. In order not to present an overly narrow view of this problem, it should be stated that the results of the present study do not in any way preclude the possibility of another factor (or factors) being more basic to the problem than those studied. For example, there is the factor of intelligence. Had the intelligence of the students been tested and the results correlated with the three language factors, a considerably different set of conclusions might have been reached. However, the present study has shown that the three social factors are significantly related to language proficiency. Only future study will demonstrate the nature of the relationship.

It would seem that these "handicapped" children should be singled out, in the early years of elementary school or before, and given special attention in order to bring them up to the language level of their non-handicapped classmates. Otherwise they will remain linguistically inferior through high school as shown by this study. As Deutsch says, "In our society, if school is to be effective and these youngsters are not to be discharged into that very large group of unskilled unemployables, then mediating, expressive, and receptive language training should be a conscious part of curriculum organization." (1965:86)

C. GENERAL IMPRESSIONS

In this final section of the paper I would like to briefly present my impressions of modern-day life on the Blackfoot Reservation.
It must be emphasized that these are impressions only and should be interpreted as such.

If a single word could be used to characterize life on the Blackfoot Reservation, "lethargy" would be the most appropriate. It is difficult indeed to visualize the ancestors of these people as proud " raiders of the northwestern plains." A brief review of the history of the tribe, however, is sufficient to show that the treatment of the Blackfoot by the whites was adequate to take the spirit out of the most stubbornly resistant group. The destruction of the old way of life was hastened by whiskey and disease.

Most of the Blackfoot Indians that I talked to, whether adults or children, seemed unconcerned about the future, and showed neither worry nor eagerness. The high school students I talked to were quite friendly and alert but, for the most part, without ambition. If my conversations with them can be considered as predictions of things to come, it appears that most of them are going to complete high school and then loiter around or drive around town. I was amazed by the number of high school age children who drive aimlessly and continually about town. None of them have any money and many of their parents are on relief, but from some mysterious source they obtain decent cars and gasoline to burn.

Only a small number of the high school students were planning to attend college and of this number it is safe to say that many will not graduate. I talked to several students whose older brothers and sisters had gone off to college only to return to the reservation a short time later. Without the moral support of the reservation
environment, college becomes an overwhelming ordeal. This desire to return to the security of the reservation is understandable but unfortunate. Worse yet, those students who do make it through and graduate from college seldom return to the reservation. Without college educated personnel to administer the affairs of the reservation, the future will be bleak indeed.

From the point of view of livelihood, these people are limited both by their environment and by their lack of initiative. As an example, there is a sawmill east of Browning which was constructed some years ago for purposes of providing employment for the Indians and at the same time adding to the tribe's income by processing tribal-owned timber. The sawmill was never operated. It is now rusting into a pile of workless scrap because its promoters could not get any of the Indians to operate it.

Social life on the reservation is for the most part an accurate reflection of the general attitude of the people. During my stay in Browning I became quite aware of the practical necessity of having a television set. There is nothing else to do. This is probably the reason why virtually every family on the reservation has a set. The television sets prevent the boredom from becoming fatal. Watching television and hanging around the drugstores in town takes up practically all the waking time that the high school students are not in class. Dances at the high school are infrequent and poorly attended. Apparently most of the students would rather drink than dance. Alcohol is a serious problem among both young and old Indians. This is not the only Indian reservation with an alcohol problem, of
course, but it is particularly bad in Browning.

It is very easy to criticize these people for their lack of ambitious drive. However, in all fairness it must be said that they do operate under certain disadvantages. First and foremost among these is their relative isolation from the main stream of American life. They have a severely limited knowledge of what actually goes on in the "outside world." Most of them are really not prepared to enter into the competitive world of business. Few are prepared to compete for a job outside of the reservation. A big problem is instilling in the high school students the desire to prepare themselves for a better job, either on or off the reservation. Also, in the interest of accuracy, it should be stated that not all the inhabitants of the reservation are equally listless. A few have a dynamic interest in the affairs of the reservation and the future of the tribe. These people, however, constitute a definite minority.

A remedy for the problems on the Blackfoot Reservation will take time and an over-night cure is not to be expected. The difficulties on this reservation have their basis in patterns of behavior that have become firmly imbedded in the life of the Blackfoot. Project Head Start is working in the right direction by attempting to eliminate certain of the behavior patterns before they are permanently established in the minds of the young children. However, this is only one project and the problems are numerous.

Birth control is a problem on this reservation just as it is in other areas experiencing a similar state of cultural and social deprivation. I interviewed twenty-one families, in my sample of
seventy-one, in which there were seven or more children. Only more effective adult education regarding the use of practical birth control methods can curb this undesirable over-production. Many of the Indians are Roman Catholics and this presents further problems in view of the church's present stand on contraception.

There is also a language problem on the reservation. Projects such as Head Start are very beneficial but they are not sufficient to cope with the entire problem. The native Indian language must be reconciled with reservation life at the present time. As I stated in Chapter Five, the Indian language is a negative environmental factor in the present study inasmuch as it frequently results in partially bilingual children who are linguistically inferior to their non-bilingual peers. This situation could be changed if the circumstances under which the native language is learned were modified. If it were possible for the Indian children to learn both English and the native language from qualified instructors under appropriate conditions it is reasonable to assume that they would not experience linguistic retardation. In his article on bilinguality, Arsenian makes it quite clear that it is not the simple fact of two different languages to learn that is all important. There are certain specific factors (see page 24) which are also important in determining the effect of bilinguality (Arsenian 1937:20-21).

At present I believe that the Indian language is dying out on this reservation and this was substantiated by my conversation with Dr. Claude Schaeffer, Curator of the Museum of the Plains Indians in Browning. If this trend continues, the problem will be eliminated
in time without intervention. However, if these people wish to retain their native language in any semblance of its original form as an active part of modern tribal life, and at the same time eliminate its negative effect on linguistic ability, they will have to take steps to improve and supplement the conditions under which the language is learned.

Adequate knowledge of the English language is absolutely essential if the Indian children are to participate actively and effectively in modern American life. Whether or not the Indians will be able to maintain the native language depends on their desire and ability to integrate it into modern tribal activities. At any rate, the decision is theirs.

In summing up I would say that the biggest problem on the Blackfoot Reservation is the condition of listlessness that pervades all aspects of life. This condition is the combined result of many diverse factors present on the reservation. Steps are being taken to modify or eliminate these negative factors but progress at present is not rapid. More time will be required before conditions on the reservation can be adequately improved.
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APPENDICES
APPENDIX A

THE INTERVIEW SCHEDULE

1. Name of person (persons) interviewed?

2. Relationship to subject?

3. a) Occupation of breadwinner?
    b) Source of income?
    c) House type?
    d) Education of breadwinner?

4. What language (languages) spoken in home?

5. Is the subject the first-born child of the family?

Attitude Questions--All Homes

1. What do the parents think is the greatest advantage in their child (children) learning to read, write, and speak English well?

2. Did the child know how to speak English when he started school?

Attitude Questions--Bilingual Homes Only

3. Do the parents think English is a pleasant sounding language compared to the Indian language?

4. Do the parents think English is an adequately expressive language compared to the Indian language?

5. If the child was purposely taught the Indian language, for what purpose?

6. Do the parents think English is a difficult language to learn?
APPENDIX B

SAMPLE INTERVIEW ANSWER SHEET

1. Mr. John Running Bear
2. Father of Joe Running Bear
3. a) Garage mechanic
   b) Hourly wages
   c) Medium-fair
   d) 11th grade
4. English and Indian
5. Not first-born

-----------------------------
1. They can get a better job.
2. Yes.

-----------------------------
3. Yes. Sounds better than the Indian language.
4. You can't say as many things in English as you can in the Indian language. Indian language is more expressive.
5. So he could talk to his grandmother.
6. Yes, very hard to learn.

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APPENDIX C

INDIAN BLOOD FRACTIONS OF THE FINAL SAMPLE BY FOURTHS AND THEIR PERCENTAGE OF THE TOTAL

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<tr>
<td>1/2 up to 3/4</td>
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APPENDIX D

TEST SCORES AND INTERVIEW INFORMATION ON THE INDIAN SUBJECTS

Column #1 of the chart contains the Status Index for the particular subject's family. The larger the Index number the lower the socio-economic status.

Column #2 contains the information on the language situation in the particular subject's home. The symbol # indicates English only, the symbol - indicates English and Blackfoot.

Column #3 contains information on first child occurrence. The symbol # indicates that the particular subject is the first child, the symbol - indicates that the subject is not a first child.

Column #4 contains the test score of the particular subject.

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APPENDIX E

FORMULAE USED TO DETERMINE THE CORRELATION COEFFICIENTS AND THE SIGNIFICANCE OF THE OBTAINED COEFFICIENTS

**Spearman Rank Correlation** formula used to obtain correlation coefficient between the two continuous variables (i.e., test scores and status index):

\[ r_s = \frac{\sum x^2 + \sum y^2 - \sum d^2}{2 \sqrt{\sum x^2 \sum y^2}} \]  
(Siegel 1956:207)

**Point-biserial Correlation** formula used to obtain correlation coefficients between the truly dichotomous variables (i.e., first child occurrence and language situation) and the continuous variable (i.e., test scores):

\[ r_{pbi} = \frac{M_p - M_q}{\sigma t} \sqrt{pq} \]  
(Guilford 1956:302)

**Fisher t** formula used to determine significance of the obtained correlation coefficients:

\[ t = r \sqrt{\frac{N-2}{1-r^2}} \]  
(Guilford 1956:219)