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The National Study of American Indian Education

PREFACE TO VOLUME I

The papers in this volume all bear on the Mental Ability and the Mental Health of American Indian Youth. They deal with matters that are basic to an effective education for Indian children and youth. Most of the material in this volume was produced as part of the field research of the National Study of American Indian Education. However, the paper on Suicide Rates and the paper on School Achievement have been drawn from a study of the research reported by government agencies and by individual researchers over a period of years.

The titles and authors are:

1. The Extent and Significance of Suicide Among American Indians Today — Robert J. Havighurst
2. The Performance of American Indian Children on the Draw-A-Man Test — Kay Levensky, Research Assistant, University of Chicago
3. Mental Development and School Achievement of American Indian Children and Youth — Robert J. Havighurst

4-7 The Personal-Social Adjustment of Indian Children and Youth

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Assorted Research Papers

4. The Meaning and Validity of the "Phenomenal Self" for American Indian Students — Philip H. Dreyer, Research Assistant, University of Chicago
5. The Indian Self-Image as Evaluated with the Semantic Differential — Robert J. Havighurst
6. The Self-Esteem of American Indian Youth — Philip H. Dreyer, Robert J. Havighurst
7. The Relation of Self-Esteem to Personal-Social Adjustment among Indian Students — Philip H. Dreyer

THE NATIONAL STUDY OF AMERICAN INDIAN EDUCATION

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THE EXTENT AND SIGNIFICANCE OF SUICIDE AMONG AMERICAN INDIANS TODAY

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There has been a good deal of "loose" talk about suicide rates among Indians, and the possible relationships of schools--especially boarding schools--to suicides among Indian young people.

Professor Havighurst has gathered the available data from Public Health Service and Government Vital Statistics sources, and put the data together to give an accurate statement of what is known about suicide among Indians. The effect is to correct some of the extreme errors made by journalists writing about Indian education, and to provide a basis in fact for a sober consideration of suicide as a problem for a small group of young Indian males.

THE EXTENT AND SIGNIFICANCE OF SUICIDE AMONG AMERICAN INDIANS TODAY

Robert J. Havighurst

Widespread concern about the economic and social situation of American Indians has resulted in a good deal of soul-searching on the part of the white "establishment" in recent years. Serious efforts are being made to get at the basic causes of the problem, with the expectation that the federal government and the several state governments, as well as private agencies, will move to reduce the disadvantages of the Indian people.

Among other efforts to understand the problems of Indians, a United States Senate Special Subcommittee on Indian Education worked between 1967 and 1969, held several hearings in various parts of the country, and collected a number of studies and statements which were published in ten volumes. This set of materials, some previously unpublished, provides a good deal of information. It presents a variety of points of view, and the studies which purport to be scientific have various degrees of care and scientific sophistication behind them.

Among these materials are several which report suicides among Indians, and, directly or by implication, relate suicides to the kind of education the Indians have received, especially in federal government schools for Indians. Some free-lance writers have used these studies as a basis for charging the Government Bureau of Indian Affairs with mishandling Indian children and youth especially in Indian boarding schools.

In the judgment of this writer, most of the charges based on suicide data are without basis in fact or in what we know about mental health. There is much to criticize in the schooling of Indian children whether in schools operated by the Bureau of Indian Affairs or in ordinary public schools which now serve some 65 percent of Indian youth; but suicide rates give no useful basis for judging the quality of schooling for Indians.

Since there is so much interest in the matter of suicide among Indians, the writer has drawn together a good deal of the data and presented them in this article as a contribution to a better understanding of the problems of Indians in this society.

Extent of Suicide Among American Indians

The Public Health Service reports that the suicide rate for Indians of all ages is about 11 per 100,000 and for the total population of the United States the rate is almost the same, 10.8 per 100,000.[1] This figure is fairly stable from year to year for the total United States population, but it fluctuates somewhat for Indians, probably because the numbers are small. For the years from 1959 through 1966, the actual number of suicides reported for Indians ranged from 59 to 72, with an average of 63.5. It is this average over an eight-year period which is the basis for the figure given above--11 per 100,000.

Thus, an over-all comparison of Indian and non-Indian suicide rates indicates that there is no difference. But there are significant differences with respect to age and sex.

The Indian suicide rates are higher for adolescents and young adults than are the rates for non-Indians; but this is balanced by a lower Indian suicide rate for people aged 45 or over. This is seen in Table 1.

The male suicide rate is almost 5 times as high as the female rate for Indians, but about 2.7 times as high as the female rate for the total population. Table 2 shows the male and female suicide rates for Indians, averaged over the eight-year period from 1959-66 inclusive, compared with the 1965 rates for the United States population as a whole. The rate for Indian women was 3.8 per 100,000 population, compared with 6.1 for all women in the United States.

The relatively advantaged situation of older adult Indians and of Indian women with respect to suicide rates has been pretty much ignored by people

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[1] Rabeau, Irwin S., M.D. Chief of Indian Health, U.S. Public Health Service.) Testimony before the U.S. Senate Committee on Appropriations, March, 1968. Senate Hearings. 90th Congress, Second Session, Part 2, pp. 1685-1687.

Table 1

Suicide Rates for Indians and All Americans by Age Group

Age	Suicides per 100,000 persons per year		
	Indians* (1963-67)		Total U.S. (1965)
	Number	Rate	Rate
10-14	6	1.5	0.5
15-19	44	16.6	4.0
20-24	72	39.0	9.0
25-34	91	31.9	12.4
35-44	61	25.9	16.0
45-54	27	15.0	20.5
55-64	20	16.1	22.6
65 plus	13	10.5	22.9
All ages	341	11.6	11.2

*The Indian data come from only the 24 states which contain Indian reservations, with probably 90 percent of the total Indian population.

Source: U.S. Public Health Service. Vital Statistics, 1965. Indian data provided by Dr. Michael Ogden, Indian Health Service, U.S. Public Health Service.

Table 2

Suicide Rates for Indians and All Americans by Sex

	Indians (1959-66)			Total USA (1965)
	Average Number of Suicides per Year	Population (estimate)	Rate	
Male	52.5	290,000	18.1	16.3
Female	11.0	290,000	3.8	6.1

Source: U.S. Public Health Service. Vital Statistics of the United States.

writing about problems of Indian life and education, while they emphasize the relatively high suicide rates of Indian adolescent and young adult males.

Interpretation of Suicide Data

If we should attempt to use the suicide rate as an index of mental health, we should conclude that (1) Indian male adolescents and young adults have poorer mental health than the average for the American population, but Indian adults over 45 have better mental health than the average American, and (2) Indian females have better mental health than non-Indian females in the United States.

However, in the absence of an operational definition of mental health, and since suicide rate has not been proved to be a good index of mental health, the writer is inclined to doubt the usefulness of speculation about the mental health of Indians, based on the suicide rate.

Suicides and Type of Schooling

The suicide rate from age 15-19 is about 4 times as high for Indian as for non-Indian youth. Some writers about Indian education have sought to tie this fact to the type of schooling received by Indian youth. In particular, they have claimed that attendance at federal boarding schools has a bad influence on the mental health of children and youth, and they have implied that the suicide rate is related somehow to boarding-school attendance.

This claim appears to have no basis in fact. The incidence of suicide in boarding schools is very low. In fact, suicides at boarding schools are so infrequent that many experienced boarding-school directors have never known a case throughout their career in boarding school work.

Suicide Episodes

The history of suicide among young people in various countries points to some cases of a kind of contagious suicide. Small epidemics break out, consisting of two or three or even more cases close together in time and place. This seems to have happened several times among Indian youth, and each episode

has been publicized in a way that encourages the reader to believe that this was not an episode, but was a typical recurring phenomenon. For instance, there was such an epidemic at Fort Hall, Idaho, among the Shoshone-Bannock Indians, who numbered about 2,600. In the seven years from 1960 through 1966 there were 15 suicides in this community, 13 of them being under 35 years of age.[2] Dr. Dizmang, who analyzed this phenomenon, found that most of the suicides culminated an experience of family demoralization, death of persons near to the individual, and excessive alcohol consumption. The seven-year record gave a suicide rate of 83 per 100,000. But the Navaho data over a 10 year period give a suicide rate of 10.3 per 100,000, which is close to the national average for whites.

A quotation from the report of Dr. Dizmang gives some indication of the complexity of the problem of suicide of young men in an economically deprived community.

> No attempt will be made to draw statistical conclusions from the following data which was collected since in many instances it was not possible to confirm the accuracy of the information. However, when one compares the suicide group with an age comparable group of high school graduates from the same population there seem to be several observations that stand out sharply enough to be worth noting.
>
> The suicide group had over five times as many arrests as did the group of high school graduates and over half of the arrests in the suicide group were for alcohol intoxication. The other apparently significant observation is drawn from a comparison of the suicide and high school graduate groups with respect to the number of family deaths experienced in each group. In the high school graduate group there is a range of zero to 3 deaths per individual in what was considered to be the immediate family or significant others, with an average of one death per individual. In the suicide group there was a range of 1 to 8 deaths with an average of 3 deaths of significant others experienced by each individual before the suicide occurred.

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[2]See Dizmang, Larry H., M.D. "Observations on Suicidal Behavior among the Shoshone-Bannock Indians," U.S. Senate Special Subcommittee on Indian Education. Part 5, 1968, pp. 2351-2355; and Watson, Jane. "The Etiology of Suicide at Fort Hall," U.S. Senate Special Subcommittee on Indian Education, Part 5, 1968. pp. 2367-2371.

> It is also striking that when one compares the suicide group to an age-matched group of individuals with 20 or more arrests for alcohol intoxication there seems to be a similar family death experience. This observation is in agreement with studies which show that in the general population 25% of all suicidal deaths occur in alcoholics. It has been demonstrated that a high percentage of these alcoholics who do suicide have experienced a significant loss within six weeks prior to the suicide. The data collected for the Fort Hall group seems clearly to associate excessive alcohol consumption, significant loss and suicide.
>
> . . .There is no simple solution to these problems. It does seem possible to identify a high risk group in which a large percentage of the suicides and other self-destructive behaviors, including alcoholism, will occur. These individuals usually show grossly deviant school or social behavior from an early age. Their family life experiences often show patterns of instability, significant object loss, parental alcoholism and depression. These early life experiences severely handicap or arrest the normal psychological developmental processes in the child; if these developmental failures are severe enough the individual is likely to experience an extreme sense of alienation and depression by the time he reaches adolescence.[3]

In a follow-up of the Fort Hall experience, the author inquired of Joyce Hernandez (Chairman of the Education Committee, Shoshone-Bannock Tribes) concerning suicides at Fort Hall since 1967, who replied, "In the fall of 1967 we had a young youth who hung himself while serving time in jail. It became nationally known, due to the fact that Senator Kennedy made his visit here shortly after it happened. Suicide was determined on another young man who was supposed to have placed himself on the railroad tracks. There has been doubt on this case. This last case was a young man in his thirties who shot himself. Family problems were very evident."[4]

Thus the annual suicide rate in this community for the 10-year period from 1960-69 inclusive is 18/26,000 or 69 per 100,000 population. This illustrates the fluctuation of the suicide rate when a small population is studied.

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[3] Dizmang, Larry H. M.D. op.cit., pp. 2351, 2355.

[4] Personal communication to the writer, December 10, 1969.

Another example of the epidemic quality of suicide data is given in the case of the Quinault Indians,who live partly in a small community on the Olympic peninsula of Washington. In 1964, Mr. Harold Patterson, Superintendent of the school district at Taholah, Washington, the Quinault community, presented to the U.S. Senate Subcommittee on Indian Education a memorandum entitled "Suicide Among Youth on the Quinault Reservation."[5] He commenced with this statement: "My interest in this subject is occasioned by the fact that I have been in close contact with three youths who have killed themselves within the past two years (1962-64), and with about 12 others who have either attempted or threatened to do the same." This statement was picked up and used by several writers and speakers as evidence of a high suicide rate in the Quinault area. But Mr. Patterson wrote as follows in 1969: "Contrary to what might be expected, occurrences of suicide have dropped to zero at Taholah. There have been recurrences of attempted suicide, some of which have been very close, but I cannot recall one successful suicide attempt since August, 1965."[6]

He attributed the reduction of suicides to the Quinault Tribal Community Action Program operating under the federal Office of Economic Opportunity. This program provided local recreation facilities; and other programs also came to raise the morale of Quinault youth, such as the Neighborhood Youth Corps, the Educational Counseling Program, and the Health Services Program.

Comparison of Indian and White Suicide Rates for Youth and Young Adults

The comparative data of Table 1 indicate without question that the suicide rates for young male Indians aged 15-34 are three to four times as high as the rates for whites. However, the Indians are different in socioeconomic status from the average SES of the whites, and this fact should be taken into account in the interpretation of these comparisons.

In the United States there is a relation between suicide and occupation or income, with men of lowest occupational status or income having the highest

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[5]Patterson, Harold L. "Suicide Among Youth on the Quinault Indian Reservation," U.S. Senate Special Subcommittee on Appropriations, March, 1968. Senate Hearings. 90th Congress, Second Session, Part 2, 1685-1687.

[6]Personal communication to the writer, August 21, 1969.

suicide rates. Since the average occupational status and income of Indian males is about the same as that of unskilled white males, we should expect the Indian suicide rate for all Indians to be higher than the white rate for all whites. The U.S. National Office of Vital Statistics computed "standardized mortality ratios" for various causes of death, for white males in the labor force, aged 20-64, in 1950. The rate for laborers was 1.5 times as high as the rate for all occupations.[7] More recent data have been published by the Cook County (Chicago) Health Department,[8] which give the suicide rate for the years 1959-63 for white males of "lower" SES as being 1.6 times as high as the rate for "middle" status white males; and the rates for non-white males (almost all Negroes) to be 1.5 as high for the "lower" as for the "middle" status group.

Thus some of the differences between Indian suicide rates and white rates can be attributed to the socioeconomic differences between the two groups.

Conclusions

The facts are fairly clear, but the conclusions much less so. When suicide rates of Indian males are compared with rates for white males in the United States, the rate for men under 45 shows a higher incidence of suicide among Indians, but for men over 45, the whites have a much higher incidence of suicide. There is much less difference between the suicide rates for Indian and white women, with the Indian rate definitely lower.

The difference between Indian and white male suicide rates is partly, but only partly, explained by the difference in average socioeconomic status of the two groups, since lower status men have higher suicide rates in the USA than middle status men. There still remains a difference, with young Indian males having suicide rates approximately twice those of young white males, when socioeconomic differences are controlled.

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[7] U.S. National Office of Vital Statistics. Mortality by Occupation and Cause of Death. Males in Labor Force, age 20-64, 1950. Vol. 53, No. 3, 1963.

[8] Maris, Ronald. "Suicide, Status, and Mobility in Chicago," Social Forces. 46:246-256 (1967).

There is no evidence relating suicide rate to the kind of schooling an Indian youth has had. In general, the Indian suicide rates are closely correlated with disorganized family life, alcoholism, and loss of friends and relatives by death.

The relatively high suicide rate of young Indian men should be taken as a symptom of something seriously wrong with the society in which they live. Probably an improvement in the socio-educational situation of Indians will reduce this symptom. It will require a complex of changes, which include changes in the schools as a necessary part.

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THE PERFORMANCE OF AMERICAN INDIAN CHILDREN ON THE DRAW-A-MAN TEST

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Indian children are fully as alert, mentally, as the children of any other society or tribal or national group. Yet they do poorly on the typical verbal test of intelligence, presumably because they have not had a language experience in their homes and communities which prepares them for school achievement even at an average level.

In order to test the hypothesis that Indian children are mentally alert at about the same level as white American children, Miss Levensky and the Study staff collected and scored approximately 1,500 Draw-A-Man tests from children in 30 Indian communities. The results of this research are reported herein.

THE PERFORMANCE OF AMERICAN INDIAN CHILDREN ON THE DRAW-A-MAN TEST

Kay Levensky

As part of the National Study of American Indian Education,[1] over 1700 American Indian primary school children, representing 14 tribal groups and 12 states, were administered the Goodenough Draw-A-Man Test (DAM).[2] The project offered an excellent opportunity to add to the DAM literature on cross-cultural comparison, as it involved: (1) groups never before tested and/or living in previously unrepresented areas, e.g., Chippewa living in Minneapolis and St. Paul; and (2) groups previously tested which could be compared with earlier data.

Since it was first described in 1926,[3] the DAM has been used widely as a test of intelligence in comparative studies of children from various cultural subgroups. It is easily administered, requiring only a piece of paper and a pencil, and instructions to "draw a man, the best man you can." The test is scored by counting the number and accuracy of details in the figure drawn, without reference to esthetic merits except that representation of correct proportions and evidence of good motor coordination earn more points. The test might be described operationally as one of accuracy of perception, since the child is scored for the accuracy with which he represents a man; or as a measure of "mental alertness," of attention given to one's social environment.

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[1]This study was sponsored by the U.S. Office of Education Bureau of Research, Contract #OEC-0-8-080147-2805.

[2]Goodenough, F.L. Measurement of Intelligence by Drawings. New York: World Book, 1926.

[3]Ibid.

Goodenough originally introduced the DAM as a "culture-free" measure of general intelligence because no language skills were required as is the case for traditional intelligence tests. However, as early as 1946, Havighurst[4] concluded that "the evidence points strongly to the conclusion that environment affects the performance of children on the Draw-A-Man Test." This evidence, together with that provided by Dennis in an earlier study,[5] indicated that the remarkably high scores obtained by Hopi boys could be related to the emphasis Hopi culture traditionally places on male art skills.

Evidence of cultural influences on children's DAM scores, both positive and negative, has been so overwhelming that Goodenough has since withdrawn her claim:[6]

> Considering all the evidence thus far described, it is clear that cultural differences do appear to a greater or less extent in the drawings of children. The present writers would like to express the opinion that the search for a culture-free test . . .is illusory and that the naive assumption that mere freedom from verbal requirements renders a test equally suitable for all groups is no longer tenable.

More recently, Dennis[7] has attempted to determine the specific cultural factors which influence children's DAM performance. On the basis of a valuable compilation of cross-cultural data,[8] Dennis concludes that a group's mean DAM score is an excellent indicator of (1) degree of modernization, i.e. acculturation to Western Civilization, and/or (2) the amount of experience it has had with representational art, and of encouragement to engage in it.

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[4]Havighurst, R.J., et.al. "Environment and the Draw-A-Man Test: The Performance of Indian Children," J. of Abn. and Soc. Psych. (1946) 41 (1), pp. 50-63.

[5]Dennis, W. "The Performance of Hopi Children on the Goodenough Draw-A-Man Test," J. Comp. Psych. (1942) 34, 341-348.

[6]Goodenough, F.L., and Harris, D.B. "Studies in the Psychology of Children's Drawings," Psych. Bull. (1950) 47 (5), p. 399.

[7]See Dennis, W. "Goodenough Scores, Art Experience, and Modernization," J. Soc. Psych. (1966) 68, 211-228; and Dennis, W. "Performance of Near Eastern Children on the Draw-A-Man Test," Child Dev. (1957) 28 (4), 427-430.

[8]Dennis, W. "Goodenough Scores, Art Experience, and Modernization," J. Soc. Psych. (1966) 68, 211-228.

In the present study, the DAM was administered as a general measure of mental alertness. In view of the generally low average scores of Indian children on school achievement tests, it was desirable to use a test which did not require the ability to read. As a by-product of the study, some consideration is given to the effects of culture on performance. Differences in average scores are taken as indicators of cultural differences, though the cultural characteristics to which they are related are not clearly known.

PROCEDURE

Field Center	Geographical Area Covered
North Carolina State University	North Carolina, Baltimore
Oklahoma State University	Oklahoma
San Francisco State University	California, Washington, Alaska
University of Arizona	Arizona, New Mexico
University of Chicago	Chicago
University of Colorado	Montana, South Dakota, Arizona
University of Minnesota	Minnesota, Wisconsin

Each center selected the particular groups in its area to be studied. Care was taken to include a variety of Indian cultures, urban, rural and reservation locations, and economic bases in the total population of the study.

Sampling and Test Administration

The DAM was administered to Indian school children in grades 1 and 5 from B.I.A., public, and private (parochial) day and boarding schools. Where the total number of Indian children enrolled in a school was small, grades 2 through 4 and 6 were included in the sample. A child was considered to be Indian if he met one of the following criteria: a) he had one-fourth or more Indian ancestry; b) one or both of his parents were on the Indian tribal rolls; c) he identified himself as Indian; and/or d) his teacher or friends identified him as Indian. Since each child's drawing was accompanied by a background information sheet, questionable cases could be dropped from the sample.

The tests were administered according to Goodenough's original instructions.[9] In largely Indian schools, whole classrooms were tested at once.

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[9] Goodenough, F.L. Measurement of Intelligence by Drawings. New York: World Book, 1926.

Where the numbers per class were small, children were taken from class and tested as a group. In most cases, the test administrators were the classroom teachers or research assistants from the project. Occasionally, the school principal gave the test.

Scoring the Tests

All of the DAM protocols were sent to the Chicago field center for scoring. When submitted, each picture was identified by the child's name or code number, test date, sex, grade, and birthdate. In many cases, the birthdate was difficult to obtain. When it was not available in school records, the teacher's or child's estimate was used. Where only month and year of birth were known, the date was set at the 15th. If the accuracy of the birthdate was questionable, the picture was dropped from the sample.

The pictures were strictly scored according to the original Goodenough criteria.[10] Although the entire set of pictures was scored by one or another of two persons, inter-rater reliability was established among three scorers. A set of 20 pictures covering several ages and groups was selected and scored independently. Ratings were compared point by point and a consensus reached through discussion. A second set of 20 pictures was then selected and the raters scored them, again, independently. The final raw score correlations among the three raters were: 0.96, 0.97, and 0.98.[11]

Each center conducted its testing independently, but according to the instructions given in the field manuals. Massive retesting was necessary in only two instances. First grade Blackfeet children from one school earned such high scores that coaching by their teachers was suspected. (Unfortunately there was no sample of older children from this group for comparisons.) In the retesting done 7 months later, the extreme scores while still high, had

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[10] Ibid.

[11] The three raters were: Robert J. Havighurst, Camille Numrich, and the author. The main job of scoring was done by the author and Camille Numrich.

dropped into a more normal range, although the group means were not affected.[12]

Comparison of Average IQ Scores Earned on the DAM
in the First and Third Testing of Blackfeet Children

		First (Coached) Testing		Third Testing	
Sub.	N	IQ	Range	IQ	Range
BOYS	30	107	74-168	105	78-146
GIRLS	30	116	86-177	119	88-155
GROUP	60	112	74-177	112	78-155

A second massive retesting was administered to the older Quinault children, Taholah, Washington. The group mean was low, 89.0, and many of the pictures submitted were cartoon-like, seeming to indicate that the children did not take the test very seriously. The school principal retested the same group using Harris-Goodenough test booklets, but as with the Blackfeet children, the group mean remained nearly the same.

Individual retests were occasionally administered when the total sample representing a tribal group was so small that it was not desirable to drop pictures which did not conform, even minimally to test instructions. For

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[12]Upon investigation it was learned that several first grade teachers had, at the very least, suggested articles of clothing to the children during testing. In the retest, some scores dropped as much as 20 points, while others were raised a few points. The validity of the retest is confounded by the fact that the retest used for this study constituted the second testing of the day. Since teachers had again coached the children, another retest was called, this time to be administered by research assistants. The Table on page 6 presents the mean IQ scores earned by the same group of children on the first and third testing (7 months later).

example, of a total of 15 girls from one group, three drew snowmen and so were retested. In only one group were there pictures of women (Pawnee).[13] Because of the small size of the sample, adjustments were made in scoring to accommodate them.

Copying was frequent--undoubtedly encouraged by testing an entire classroom at one time. This usually did not interfere with test validity as it generally consisted of repeated themes or clothing decorations. Genitals, male and female, occurred in pictures from three areas (Menominee, Lumbee, Blackfeet). In these cases the authors are inclined to believe that a disturbed child (genitals occurred only in boys' drawings) began it and others picked it up. That is, there was no evidence of cultural influence. Where one child actually drew a picture for another[14] (approximately ten instances) the picture was dropped.

RESULTS

Draw-A-Man tests for 1,678 Indian children--842 girls and 836 boys--were scored, and the associated IQ scores were computed. The children in each Indian group were divided up by sex and age. With regard to age, the subjects were divided as follows:

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[13]These three subjects were good friends. Only two were available for retesting, and both were described as having unsatisfactory home lives, with especially poor relationships with their fathers. When taken from class together for retesting, both refused at first to draw men, stating that they hated them. Only when allowed to draw women first would they comply. This event lends support to Harris' thesis [Harris, Dale B. Children's Drawings as Measures of Intellectual Maturity. New York: Harcourt, 1963.] that an "intelligence"score should be taken from three drawings: a man, a woman, and oneself.

Another "psychological" factor was revealed through retesting children who drew deviant pictures. Stick figures turned up in nearly every group and were scored as if they truly represented a child's ability. At best, a child will receive 9 or 10 points for such a figure. If, for example, he is 6 years-0 months at testing, this score gives him an IQ of 88. One subject whom it was convenient to retest drew a true man the second time which earned him an IQ score of 130.

[14]This could be detected when nearly identical pictures appeared under different names, or where false starts were considerably less sophisticated than the finished picture. It occurred both with children in the same class and with an older child doing it for his younger sibling.

Age Level I - 6 years, 0 months (72 months) to 8 years, 6 months (102 months)

Age Level II - 8 years, 7 months (103 months) and up.

In computing IQ's for children in Level II, a chronological age of 12 years, 6 months was taken as the upper limit. Thus, children whose chronological age was greater than 12-6 (57 cases out of 811) received an IQ based on an age of 12-6. It was assumed here that performance on this test would not change after this point - that is, it was assumed that there is a ceiling effect inherent in the test which places older children at a disadvantage.[15] The Goodenough scoring directions take 13-6 as the maximum chronological age for computing IQ. Thus the IQs for pupils over 12-6 in this study are larger than they would be if the standard Goodenough procedure had been used.

The data obtained in this study are presented in the following tables. Average chronological age is reported in months; true, uncorrected chronological ages were used when computing the average age of children in Level II. The one-tailed t-test of statistical significance ($t_{.05}$) was utilized in the analysis. According to this test, two groups, each totalling 30 members, are significantly different at the .05 level if they differ by 13 or more IQ points. Groups totaling 50 must differ by 8.2 IQ points or more, and groups of 70, by 7.0 points, for this difference to be significant.

Table I

Average Ages and IQs Earned by Indian Children
On the Draw-A-Man Test

	BOYS			GIRLS			GROUP		
	Average Age*	N	IQ	Average Age*	N	IQ	Average Age*	N	IQ
I#	87	441	103.0	86	426	107.5	87	867	105.2
II#	135	395	97.5	132	416	97.6	134	811	97.5
		836	100.4		842	102.6		1678	101.5

*Ages computed in months

# I,II - Age group designations:
I=6 yrs. 0 mos. to 8 yrs 6 mos.
II=8 yrs. 7 mos. up.

[15] One study showed that mentally retarded children showed a mental age growth until age 16 on the DAM. This means that mentally retarded children in our sample who were over 12-6 would have been advantaged by our limit.

Table 1 presents the basic findings for Indian children as a whole:

1. Indian children as a group perform well within the normal range in the DAM. Mean IQ is 101.5.
2. Younger children (Level I) earned a significantly higher average IQ than older children (Level II), 105.2 and 97.5, respectively.
3. Younger girls generally do better than younger boys, but this difference is lost among the older children.
4. Younger girls do significantly better than older girls - 107.5 and 97.6, respectively.

Table 2 presents a breakdown of the data by sex, age, and tribal group. Samples having a total N of less than 22 for one age level were not included.

DISCUSSION

Table 3 (parts A,B,C,D) presents the Indian groups which earned the highest average IQ scores, by sex and age. Some groups earned high scores in nearly all categories:

Hopi - Boys I, Boys II, Girls I, and Younger children
Eskimo - Boys I, Boys II, Girls II
Apache - Girls I, Girls II, Boys II
Chicago - Girls I, Girls II, Boys II

Unfortunately, there were no older children in the Blackfeet and Sioux samples so that comparison with the groups named above is not possible.

According to Dennis[16] the high scores achieved by these four groups (and the others in this Table) could be a function of (a) cultural emphasis on representational art, or (b) high degree of acculturation. The Hopi and Eskimo are the most culturally isolated of the groups studied in this project, but they both have long been noted for their artistic traditions. Hopi boys have obtained superior scores on the DAM test in earlier studies, e.g. 125

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[16] See Dennis, W. "Goodenough Scores, Art Experience, and Modernization," J. Soc. Psych. (1966) 68. 211-228; and Dennis, W. "Performance of Near Eastern Children on the Draw-A-Man Test," Child Dev. (1957) 28 (4), 427-430.

Table 2

Average IQ Scores Earned by Indian Children
On the Draw-A-Man Test

Indian Group	Age Level	Avg. Age	BOYS N	BOYS IQ	GIRLS N	GIRLS IQ	GROUP N	GROUP IQ	S.D.
Apache (Arizona)									
Fort Thomas	I	78	19	97.3	18	111.9	37	104.4	13.6
	II	149	23	98.7	24	93.8	47	96.2	10.3
Cibecue	I	91	16	101.8	21	103.6	37	102.9	20.2
	II	126	34	97.4	35	98.5	69	97.9	13.9
Blackfeet (Browning, Mont.)	I	86	46	107.8	48	115.6	86	111.8	16.2
Chippewa , et. al., (Minneapolis & St. Paul)	I	90	19	104.1	21	115.1	40	109.9	20.4
	II	119	39	89.4	33	100.0	72	94.3	18.5
Menominee (Menominee Co., Wisc.)	I	91	59	99.5	55	108.0	114	103.6	17.7
	II	125	80	95.6	75	99.8	155	97.6	15.1
Eskimo (Bethel, Alaska)	I	90	30	108.5	29	103.9	59	106.2	12.4
	II	134	31	97.6	31	101.5	62	99.6	12.1
Hoopa (California)	I	77	15	97.5	13	99.5	28	98.4	13.7
Lumbee (N. Carolina)									
Magnolia	I	84	25	92.4	25	101.5	50	97.0	12.9
	II	132	25	91.9	25	95.0	50	93.5	15.2
Pembroke	I	85	13	101.6	14	95.4	27	98.4	20.1
	II	132	25	87.9	25	90.7	50	89.3	12.6
Makah (Neah Bay, Washington)	I	85	9	93.2	13	93.4	22	93.3	12.3
Navaho (Shonto)	I	90	30	110.2	30	107.8	60	109.0	14.7
Papago (Indian Oasis)	I	84	15	104.4	13	105.4	28	104.8	13.6
	II	138	11	99.2	21	91.3	32	94.0	14.3
Pima	II	135	29	94.9	30	90.1	59	92.5	13.1

(continued)

Table 2
(continued)

Indian Groups	Age Level	Avg. Age	N	IQ	N	IQ	N	IQ	S.D.
Pueblo (Hopi)	I	87	25	114.0	30	110.4	55	112.0	13.8
	II	142	14	107.1	17	93.0	31	99.4	14.0
Quinault (Tahola, Washington)	II	130	13	91.8	15	88.4	28	90.0	23.9
Sioux-Cheyenne (South Dakota)									
Cheyenne-Eagle Butte	I	82	15	116.4	15	110.5	30	113.4	15.6
St. Francis Mission	I	80	13	91.0	9	101.4	22	95.3	17.7
Todd County	I	84	15	109.6	14	102.5	29	106.2	17.8
Tlingit (Angoon, Alaska)	II	133	9	84.1	14	93.5	23	89.8	14.9
Mixed Groups									
Chicago, Ill. (Uptown)	I	88	42	101.5	26	115.8	68	107.0	17.8
	II	124	18	99.1	22	102.1	40	100.7	19.2
T. Roosevelt, Arizona (Apache & others)	II	136	17	90.8	25	93.3	42	92.3	15.4

Table 3

Indian Groups Which Earned Highest Mean IQ Scores on the Draw-A-Man Test; By Sex and Age Group

A
Boys I

Indian Group	Av.Age	N	IQ
Sioux-Cheyenne (Eagle Butte)	82	15	116.4
Hopi	87	25	114.0
Navaho	89	30	110.7
Sioux-Cheyenne (Todd Cty.)	82	15	109.6
Eskimo	90	30	108.5
Blackfeet	87	46	107.8

B
Girls I

Indian Group	Av.Age	N	IQ
Chicago (Uptown)	90	26	115.8
Blackfeet	86	48	115.6
Chippewa	88	21	115.1
Apache (Ft. Thomas)	77	18	111.9
Sioux-Cheyenne (E. Butte)	81	15	110.5
Hopi	87	25	110.4

C
Boys II

Indian Group	Av.Age	N	IQ
Hopi	145	14	107.1
Papago	134	11	99.2
Chicago	117	18	99.1
Apache (Ft. Thomas)	151	23	98.7
Eskimo	136	31	97.6
Apache (Cibecue)	128	34	97.4

D
Girls II

Indian Group	Av.Age	N	IQ
Chicago	118	22	102.1
Eskimo	133	31	101.5
Chippewa	118	33	100.0
Menominee	125	75	99.8
Apache (Cibecue)	124	35	98.5
Lumbee (Magnolia)	131	25	95.0

E
Five Highest and Five Lowest Scoring Indian Groups

Indian Group	Age Level	N	IQ
Sioux-Cheyenne (Eagle Butte)	I	30	113.4
Pueblo	I	55	112.0
Blackfeet	I	86	111.6
Chippewa	I	40	109.9
Navaho	I	60	109.0
Pima	II	59	92.5
Mixed-T. Roosevelt (Apache)	II	42	92.3
Quinault	II	28	90.0
Thlingit	II	23	89.8
Lumbee	II	50	89.3

in the study by Havighurst.[17] Dale Harris devotes quite a long section in his book Children's Drawings as Measures of Intellectual Maturity[18] on the unusually high quality of pictures drawn by older Eskimo children. The present study confirms these findings. In both Hopi and Eskimo groups, the pictures submitted showed greater awareness of a cultural distinctiveness and greater attention to detail than did any other group (a possible exception might be some of the groups making up the Menominee sample).

Age Difference

In addition to the problem of differential performance, Table 3 part E raises another issue. Younger children consistently scored higher than the older children of their group. The general ranges of mean IQ for each age level are as follows:

Age Level I - 95-116
Age Level II - 88-107

Tables 4 and 5 provide further data concerning the drop in IQ with age. Table 4 indicates that (a) the greatest drops with age occur among girls, and (b) of the six groups (Apache, Hopi, Chippewa, Papago, Chicago, Menominee) which show statistically significant differences between the average IQ scores of younger and older girls, only one (Chippewa) also shows a significant difference between the average IQ scores of younger and older boys.

Several studies have reported that the IQ scores earned on the DAM drop with age. Since an IQ is based on a set of norms for a "standard or normal group," (in this case, the group of American children on which the test was originally standardized by Goodenough) the statement that IQ decreases with age means that the group under study shows lower scores than the standard American group as they grow older (from age 8 or 9 to age 12 or 13).

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[17] Havighurst, Robert J., et.al., op.cit.

[18] Harris, Dale B. Children's Drawings as Measures of Intellectual Maturity. New York: Harcourt, 1963.

Table 4

Statistically Significant Differences ($p < .05$) in IQ Earned by Indian Children on the Draw-A-Man Test

A. Younger vs. Older Boys

Indian Group	N	IQ_I	N	IQ_{II}	N	D_{I-II}
Chippewa	19	104.1	39	89.4	58	14.7
Lumbee-Pembroke	13	101.6	25	87.9	38	13.7
Eskimo	30	108.5	31	97.6	61	10.9

Younger vs. Older Girls

Indian Group	N	IQ_L	N	IQ_{II}	N	D_{I-II}
Apache-Ft. Thomas	18	111.9	24	96.2	42	18.1
Hopi	30	110.4	17	93.0	47	17.4
Chippewa	21	115.1	33	94.3	54	15.1
Papago	13	105.4	21	91.3	34	14.1
Mixed-Chi.	26	115.8	22	100.7	48	13.7
Menominee	55	108.0	75	97.6	130	8.2

B. Younger Girls vs. Younger Boys

Indian Group	Girls N	Girls IQ_I	Boys N	Boys IQ_I	N	D_{G-B}
Apache-Ft. Thomas	18	111.9	19	97.3	37	4.6
Mixed-Chic.	26	115.8	42	101.5	68	4.3
Chippewa	21	115.1	19	104.1	40	1.0
Lumbee-Magnolia	25	101.5	25	92.4	50	9.1
Menominee	55	108.0	59	99.5	114	8.5
Blackfeet	48	115.6	46	107.8	94	7.8

Older Girls vs. Older Boys

Indian Group	Girls N	Girls IQ_{II}	Boys N	Boys IQ_{II}	N	D_{B-G}
Hopi	17	93.0	14	107.1	31	14.1
Chippewa	33	100.0	39	89.4	72	10.6

C. Younger Children vs. Older Children

Indian Group	N	IQ_I	N	IQ_{II}	N	D_{I-II}
Chippewa	40	109.9	72	94.3	112	15.6
Hopi	55	112.0	31	99.4	86	12.6
Papago	28	104.8	32	94.0	60	10.8
Lumbee-Pembroke	29	98.4	50	89.0	77	9.1
Apache-Ft. Thomas	37	104.4	47	96.2	80	8.2

Table 5

Average IQs by Geographical Area

Geographical Area	N	IQ_I	N	IQ_{II}	I-II
Midwest: Blackfeet, Chippewa, Sioux (Redwing and Cheyenne), and Menominee	401	107.3	277	97.4	9.9
Southwest: Apache, Hopi, Navaho, Papago, Pawnee, Pima, and Ponca	237	106.4	262	95.8	10.6
Northwest: Eskimo, Hoopa, Makah, Quinault, Thlingit	152	101.7	190	94.4	7.3
Southeast: Lumbee	77	97.5	100	91.4	6.1

The reader will note that this study has used the norms originally published by Goodenough, rather than the more recent norms on the revised scale of Dale B. Harris.[19] Harris refined the scoring, adding a number of points to the scale, and he also published one scale for boys and one for girls which reflected the fact that girls score higher than boys at all ages. This study used the original Goodenough scoring scale and norms, because this would facilitate comparison with earlier DAM studies. It may be that some of the age differences in our data would disappear if the revised norms and scoring procedure were used.

However, even if this proposition is granted, there appear to be greater drops with age among some groups than among others, and this difference would persist even with new norms. Therefore we will discuss this phenomenon.

Dennis[20] noted great decreases in age with Near Eastern children and attributed these to cultural factors which operate more strongly after age six

[19] Ibid.

[20] Dennis, W. "Performance of Near Eastern Children on the Draw-A-Man Test," Child.Dev. (1957) 28 (4), 427-430.

than before this age. Pringle[21] attributed the decrease among British children to "unmistakable signs of dislike" which children aged 9 and 10 showed toward the task. Presumably they would not work as carefully on the task as would children who enjoyed the task. Bowman[22] attributed the decline among children aged 11 and 12 to a "ceiling effect" inherent in the test due to the fact that the highest possible scores can be obtained more easily by older than by younger children, thus setting an arbitrary limit on the IQ at the high end of the distribution for older children.

Khatena[23] claims that schooling smooths out cultural differences which are shown by younger children with little or no school experience. This might explain why some Indian groups such as the Hopi boys decline in average score with age. The cultural advantage of the younger Hopi boys tends to be lost in comparison with other Indian groups who do not have a cultural encouragement toward drawing, but who get experience in drawing as they move up through the school.

The possibility of a "ceiling effect" was tested in our Indian data. If a raw score of 40 points is taken as a relatively high score for anybody (45 points was the highest raw score we actually recorded) the comparable IQs for children of the average ages of our two age levels are:

	Average Age	Raw Score	IQ
Level I	7-3	40	179
Level II	11-2	40	116

Thus, the distribution of IQ scores for an older group is likely to be limited at the upper end by the raw score ceiling on the test, while low scores are not

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[21]Pringle, M.L., Kellmer, and Pickup, K.T. "The Reliability and Validity of the Goodenough Draw-A-Man Test: A Pilot Longitudinal Study," Brit. J. of Ed. Psych. (1963) 33 (3), pp. 297-306.

[22]Bowman, P.H., et.al. "Studying Children and Training Counselors in a Community Program," Supplementary Educational Monographs, Univ. of Chicago Press, (1953) No. 78, p. 17.

[23]Khatena, Joe and Gowan, J.C. "Cross-Cultural Measurement of Intelligence with the DAM and CPM," Gifted Child. Quart. (1967) 11 (4), 227-30.

so limited. Harris[24] says that a ceiling effect becomes evident for students by age 13.

A frequency distribution was made for the IQ scores of our older group, with scores extending from 50 to 146. The median was 97, almost identical with the mean of 97.5. But a marked ceiling effect should push the median well above the mean.

A second test for ceiling effect was undertaken by determining the average IQ actually earned by children aged 12 years and above in our study. There were 156 such cases, with an average age of 12.5, and an average IQ of 92.1. This is to be compared with the average of 97.5 for the 811 children aged 8.6 and above. This is compatible with the hypothesis of a ceiling effect or with a more general hypothesis of some form of school or cultural disadvantage affecting Indian children as they grow older than 9 or 10.

There is also the fact that the scores of American Indian girls decrease more with age than the scores of Indian boys. Two studies, from India[25] and Guatemala[26] explain a relatively poor showing of girls in terms of cultural-educational influences. The sex differences seen in this study are worth further study.

School Achievement and the DAM

Information concerning the school performance of the older children (grades 4 and up) was obtained from their classroom teachers. The teachers were asked to rank those children in the top, middle, or bottom thirds of their class in terms of school performance. Thus the children were to be compared with their own school-mates, rather than with some wider group. In a few cases,

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[24] Harris, Dale B. op.cit., p. 103.

[25] Phatak, P. "Sex Differences of Phatak's DAM Scale," Educ. Psych. Rev. Baroda, (1962) 2 (1), 24-29.

[26] Johnson, Dale L, Johnson, Carmen A., and Price-Williams, D. "The DAM and Raven Progressive Matrices Performance of Guatemalian Boys and Ladino Children," Revista Interamericana de Psicologia (1967) 1 (2), 143-157.

standard achievement test data were recorded for the children, and this may have influenced the ranking. However, most children were simply compared by their teachers with other children in the same school grade.

A chi-square comparison was made between the DAM IQ and the class rank of the student in the case of six of the school groups, all at age level II. Three of these groups showed no statistically reliable relationship between DAM and class rank. They were: Eskimo, Hopi, and Chicago. Two groups did show a relationship significant at the .05 level. They were: Quinault-Makah (combined) and Menominee. Thus there is at the most only a small positive correlation between DAM IQ and the school performance of the students as judged by classroom teachers.

Qualitative Differences in Pictures

The present author agrees with Harris[27] that a search for "ideopathic" signs is a fruitless one. At best, various groups were notable for the following reasons:

Eskimo. As noted elsewhere, the Eskimo drawings were well developed and showed an awareness of cultural distinctiveness. The figures were dressed in parkas and boots which made them appear to have shortened legs and large feet. The pictures were also distinguished by a consistency of nose representation.

Hopi. This was the only group occasionally to depict a distinctively Indian hair style, and to consistently represent nose, nostrils and ears. It was the only group consistently to use ⌣ as a nose representation.

Lumbee (Magnolia). Unusual for the large number of very small figures drawn in the younger group (3 inches high or less). There were also a number of pictures drawn for one child by another.

Lumbee (Pembroke). Well-developed cowboy, or spaceman theme.

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[27]Harris, Dale B., op.cit.

Menominee. Indian costumes occurred more frequently in this group than in any other.

As a whole, the pictures were in accord with recent surveys of children's human figure drawings.[28] That is, figures were static without much attempt at scenery or background detail, and clothing was simple. Ties and hats appeared frequently in pictures of younger children as the only clothing details; pants and buttonless, collarless shirts were more common with older children. Cowboy themes were in low proportion, but where one picture occurred in a sample, there were usually several more. Often, however, cowboys were distinguishable by their hats and guns only.

The simplified clothing for all groups could have had a general depressing effect on IQ scores. Another source of lowered scores lies in the very frequent absence, at all ages, of hands and/or hand details, ears, and accurate representation of body proportions.

Comparisons with Scores of Non-Indian Children

Unfortunately there is very little data on non-Indian children with which to compare the above results. In the course of this study the drawings of 100 younger and 28 older non-Indian children were scored. Since this group is so small a summary of the comparisons made between it and the Indian children will be brief.

1. There were no significant differences between boys and girls at either age level. (GI - BI = 5.5; GII - BII = 2.6)

2. There were no significant differences between younger and older children for either sex.

3. Older non-Indian children scored significantly higher than older Indian children. Only Hopi BII scored comparably to the non-Indian sample;

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[28] Ibid.

107.1 and 105.3, respectively. The Chicago group of GII came closest to the non-Indian GII sample; 102 and 108, respectively.

4. The older non-Indian girls did better than the younger girls by an insignificant 1.6 points.

It is unfortunate that the non-Indian sample is so small. It provides contrasts with the Indian sample. For example, non-Indian girls do not change in IQ score with age.

Another problem a comparable older white sample might have solved is the age factor. Non-Indian children in the younger sample averaged 6 months younger than Indian children, but the average IQs earned by both were the same:

Indian I (87 mos.) - 105	Indian II (134 mos.) - 98
Non-Indian I (81 mos.) - 106	Non-Indian II (133 mos.) - 107

On the other hand, older children in the two samples were of the same age but non-Indian children earned an average IQ of 9.2 points higher. However, given the great imbalance in sample size, this difference is not significant.

Comparison with Earlier Alaskan Studies[29]

An extensive testing program carried out by W.C. Eells in Alaska in 1930-31 produced a quantity of DAM data which can be compared with the 1969 tests, more than a generation later, on the same populations.[30] Eells secured drawings from primary school children in Bethel and Angoon, among other Alaskan communities. Eells' results are compared with the contemporary results in Table 6.

The striking thing about these data is the higher DAM IQ earned by the Eskimo children in 1969 than a generation earlier - 103 vs. 94 for the age group under 13 years of age. Eells claimed that his Eskimo sample was more representative than the Indian sample, since the latter children were mainly in boarding

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[29]This section was written by Robert J. Havighurst.

[30]Anderson, H.d. and Eells, Walter Crosby. Alaskan Natives: A Survey of Their Sociological and Educational Status. Stanford, Calif.: Stanford University Press, 1935.

schools. The Eskimo sub-group from Bethel tested by Eells had a mean DAM IQ of 95.1 for 60 pupils.

Table 6

Testing of Alaskan Pupils at Two Points in Time

	1930-31 Testing					1969 Testing			
		Mean IQ DAM			Mean Binet		Mean IQ DAM		
	No.	M.	F.	Total	IQ	No.	M.	F.	Total
Eskimo	364	88.7	90.2	89.6	73.7	121	103.0	102.7	102.9
Aleut	90	92.1	94.0	93.3	80.3	---	-----	-----	
Indian	73	91.9	91.2	91.6	79.0	23	84.1	93.5	89.8

Eskimo Pupils

Age and IQ

Age	No.	DAM IQ	S.B.	Age	No.	DAM IQ
8-9	39	98.7	96.0	6-8.5	59	106.2
10	41	91.0	84.3	8.5-12.5	62	99.6
11	30	97.5	79.2			
12	45	89.3	76.0			
13	55	86.3	71.4			
14	43	86.3	69.4			
15	43	84.7	65.1			

It should be noted here that the downward trend with age of the Eells' data on Eskimos is probably partly caused by the inclusion of children over 13 years of age in the testing. There is a "ceiling effect" of the tests for such children. The Goodenough directions provided that all children over 13.5 in age should be arbitrarily given a chronological age of 13.5 in computing IQ, but since the maximum raw score possible on the DAM is only slightly more than the average score for children aged 13.5, such children cannot possibly earn a high IQ. However, the downward age trend extending from age 8 to 12 is not much affected by a "ceiling effect."

Conclusion

It appears that, among a large and varied group of American Indian children, the Draw-A-Man IQ is definitely above the average for white children in the United States for children aged 6 to 8.5. For children aged 8.5 to 13, the Indian children average slightly below the average for white children.

There is a considerable range of average IQ among the 21 different Indian groups who were studied. The mean IQs ranged from 93 to 113 for the group under 8.5 years of age, and 89 to 101 for the group over 8.5 years of age.

If the DAM IQ is taken as a measure of mental alertness, the American Indian children are as good as or better than white American children.

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MENTAL DEVELOPMENT AND SCHOOL ACHIEVEMENT OF AMERICAN INDIAN CHILDREN AND YOUTH

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It is well known that Indian youth do not do well, as a group, in academic school achievement. Yet they have as good mental equipment as do the white Americans.

In this paper Professor Havighurst analyzes the family and the school factors that lie behind the low academic achievement of Indian students. He first summarizes the facts of school achievement of Indian pupils. He then points out that low school achievement is to be expected from pupils whose parents have generally low education.

Since it has been claimed that some Indian children achieve above the national average until about the fifth grade, and then fall substantially below the national average, Professor Havighurst discusses this "cross-over" hypothesis, and marshals data to show that a cross-over probably does not occur. He expects the academic achievement of Indian youth to rise as the economic status of Indian families improves.

MENTAL DEVELOPMENT AND SCHOOL ACHIEVEMENT OF AMERICAN INDIAN CHILDREN AND YOUTH

Robert J. Havighurst

It is generally known that Indian children do not achieve as well on tests of school achievement as do the children of the white majority. There are many publications which have reported this fact, from as long as 40 years ago until today.

There is no reason to suppose that Indian children are basically or genetically less or more intelligent than other children in America. There is much general evidence that all large groups of human children (grouped by nationality, or by skin color, or by socioeconomic status) have the same intelligence and ability to learn, on the average.

Several studies of mental alertness and of basic mental development have been made with Indian children, and these studies show the Indian children to be about the same as white children of the surrounding society. For example, on the Goodenough Draw-A-Man Intelligence Test, which is a test of mental alertness and does not require language, Indian children show about the same level of achievement as white children. Actually, the 1700 Indian children who took this test recently under the auspices of the National Study of American Indian Education made an average IQ of 101.5, which is slightly but definitely superior to the average of white children.[1]

On the Grace Arthur Performance Test of Intelligence (a battery of non-verbal tests), in a study made in 1942, a representative sample of Indian pupils from six tribes made an average IQ score of 100.2, slightly above the national average for whites.[2] As part of this study, a group of 30 Sioux pupils on the

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[1] Levensky, Kay. "The Performance of American Indian Children on the Draw-A-Man Test," Paper III-2. Final Report, National Study of American Indian Education, 1970.

[2] Havighurst, Robert J. and Rhea R. Hilkevitch. "The Intelligence of Indian Children as Measured by a Performance Scale." Journal of Abnormal and Social Psychology, 41:50-63, 1946.

Pine Ridge Reservation made an average IQ score of 102.8, while exactly the same group, tested a year later with the Kuhlmann-Anderson, a verbal test requiring reading ability, made an average IQ score of 82.5.

Recently a study was made of 75 Oglala Sioux children aged 4-10 on the Pine Ridge Reservation. These children were given a standard set of test exercises developed by the Swiss psychologist, Piaget. The same tests had been given to a typical group of Swiss children in Geneva, Switzerland. These tests are used to measure the level of mental development, which Piaget believes is a universal process among human children. The Sioux and the Swiss children were practically identical in their performance. Voyat, the researcher, concluded: "The inferiorities shown by IQ tests among Indian children are dependent upon the nature of the tests themselves, in particular their cultural content, since these inferiorities are not found when one analyzes the development of more fundamental concepts."[3]

It follows from these considerations that the lower average school achievement of Indian children must be due to some combination of their experience in their homes and in their schools. School achievement is well known to be related to a child's experience in his family, to his school experience, and to his inherited intellectual ability. Since the Indian children do not differ from other groups of children in their inherited intellectual ability as far as we know, group differences in school achievement must be due to the family or the school factors.

The Family and Local Community Factor

There is abundant evidence that the school achievement of children depends to a large extent on their experience in their family and their local community or neighborhood. If their parents read widely, read to them, use large vocabularies while conversing at home, take them to museums, provide children's encyclopedias in the home, and set examples of educated behavior, the children will generally follow in their footsteps. On the other hand, if the parents do not

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[3]Voyat, Gilbert. "Sioux Children: A Study of Their Cognitive Development." Unpublished paper. Department of Psychology. Yeshiva University, New York City, 1970.

speak English, read or read very little, do not use complex sentences or express themselves in complicated ways, their children are likely to be slow in learning to read, and consequently retarded in the other school subjects. They are even more likely to achieve poorly in school if they live in a community or neighborhood characterized by poverty.

In general, as the work of Bloom,[4] Deutsch,[5] and many other students of child development shows, there is a close relation between the socioeconomic status of a family and the school achievement of its children. Coleman,[6] in the national study of educational achievement, found the socioeconomic status of the home to be the most helpful factor in predicting the child's school achievement.

The results of a number of studies of disadvantaged children are summarized by Hess and Shipman[7] as follows:

> Children from deprived backgrounds score well below middle-class children on standard individual and group measures of intelligence (a gap that increases with age), they come to school without the skills necessary for coping with first grade curricula; their language development, both written and spoken, is relatively poor; auditory and visual discrimination skills are not well developed; in scholastic achievement they are retarded an average of two years by grade six and almost three years by grade eight; they are more likely to drop out of school before completing a secondary education; and even when they have adequate ability, are less likely to go to college.

Since most Indian children are raised in poor families, by parents who read little or not at all, and since most Indian children live in communities of poor people, we should expect them, like the children of poor whites, or

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[4]Bloom, Benjamin S. Stability and Change in Human Characteristics. New York: John Wiley and Sons, 1964.

[5]Deutsch, Martin. "The Role of Social Class in Language Development and Cognition." American Journal of Orthopsychiatry 35, 78-88, 1965.

[6]Coleman, James S. et.al. Equality of Educational Opportunity. Washington, D.C.: U.S. Government Printing Office, 1966.

[7]Hess, Robert D. and Virginia C. Shipman. "Early Experience and the Socialization of Cognitive Modes in Children." Child Development 36, 869-886, 1965.

blacks, or Spanish-Americans, to do poorly in school, on the average. However, we should expect a good performance from a minority of Indian children, as we do from the children of other disadvantaged families.

The School Achievement Graph

In order to examine and to understand the actual data on school achievement it is necessary to consider the way the test results of Indian children are represented in relation to the test results of American children in general. One method is to compare the average scores of a sample of Indian children with the average of a national sample of American children on the same test given to both groups of children. In this case the data may be placed on a school achievement graph, which is presented in Figure 1. From the test scores of the national sample, we obtain the average scores of pupils at various ages and grade levels. Thus we determine, for example, the average scores of pupils at age 9, 9.5, 10, 10.5, 11, 11.5, etc., and for grades 4, 5, 6, etc., as well as for a school grade in the middle of the school year, which would be grade 4.5, 5.5, etc. With these data, we can place a sample of Indian pupils of a given age or grade upon a graph to show how they stand with reference to a national sample of American pupils. The national sample is represented in Figure 1 by the line labeled 1.0, which means that the ratio of achievement in age or grade-equivalent scores to actual age or grade is 1. A group to be compared with the national norms will be located above or below this line, dependent on its achievement relative to the national average.

The actual location of several samples of Indian pupils on such a graph is shown in Figure 2. Generally, the Indian pupils score below the line representing the national norm. If a group of Indian pupils aged about 10 are one year behind the national average, their test score will be 9.0, or the same as the national average for 9-year-olds. If this group continues to learn at this slower rate, they would average 13.5 year-equivalents when they were 15 years old. That is, their test scores would stay on a straight line below the line representing the national average. To put it another way, we might say that they have an achievement quotient of 0.90.

This is an important concept, which is not always understood by people

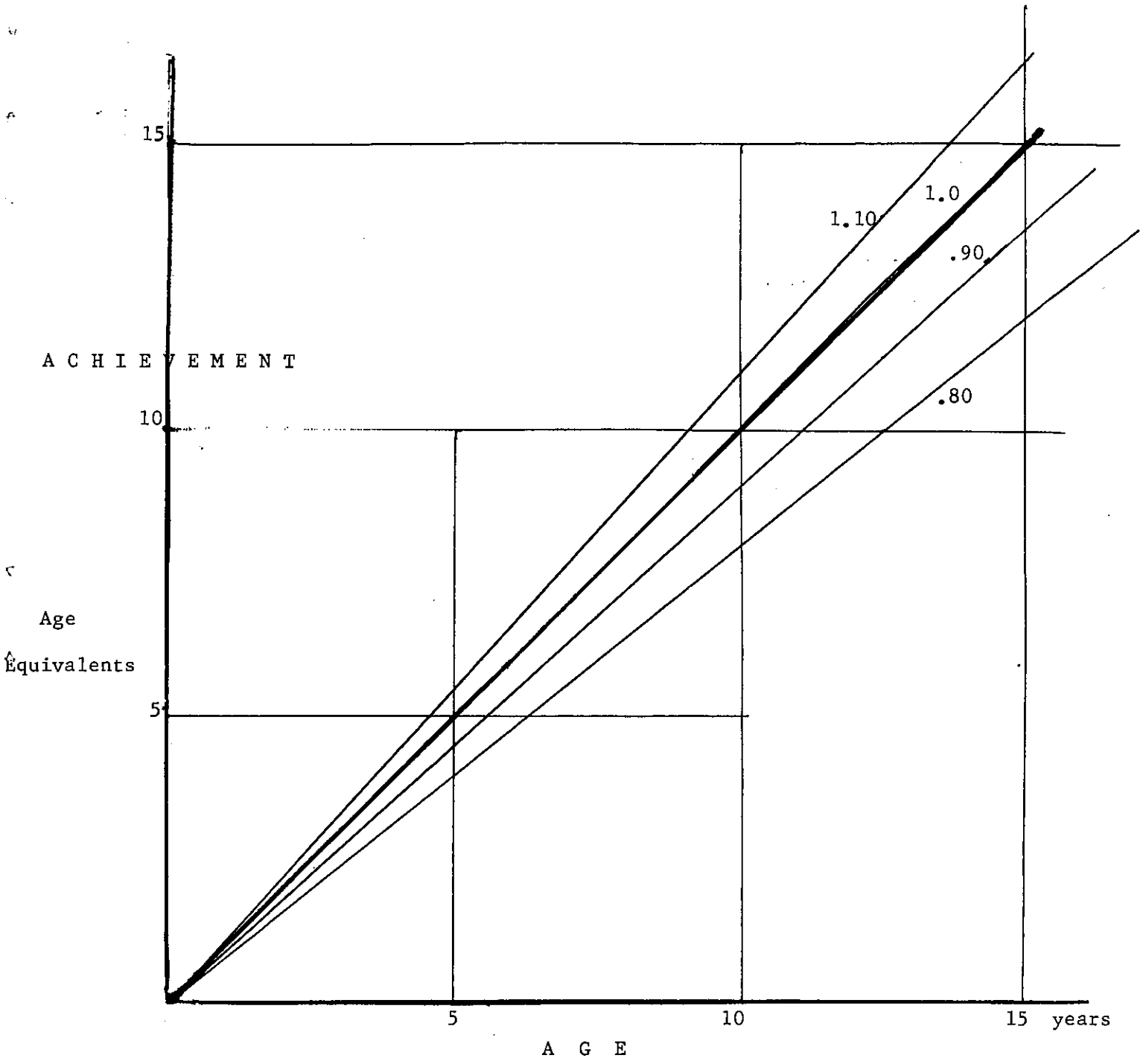
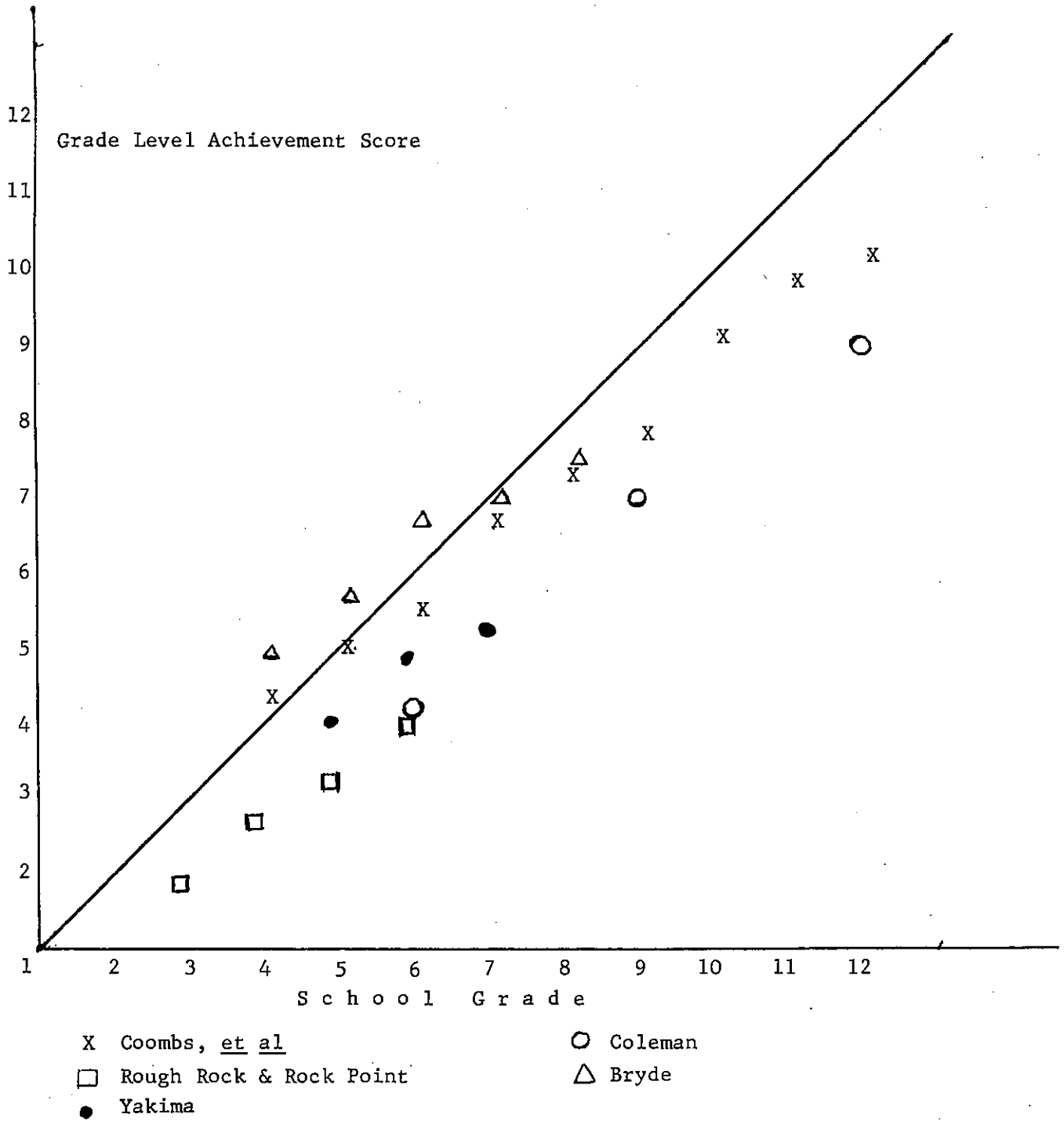


Fig. 1 GROWTH OF SCHOOL ACHIEVEMENT IN RELATION TO AGE

Growth rates are indicated by Quotients, each Quotient represented by a straight line, as shown.

Figure 2

SCHOOL ACHIEVEMENT OF INDIAN PUPILS



who write and speak about the school achievement of disadvantaged pupils. They tend to misinterpret the data when they say: "The Indian children are one year (or one grade) behind the national average at the age of ten, and they fall further behind, so that they are 1.5 years below the national average at age 15." This seems to mean, to them, that the pupils or the schools have done even worse after age 10 than before age 10. But an age-equivalent score of 9.0 for a 10-year-old predicts an age-equivalent score of 13.5 for him as a 15-year-old, unless he changes his rate of learning. If he was one year behind the national norm at age 10 and also at age 15, he would be learning at the same rate as the average American pupil between ages 10 and 15.

Thus, we should expect that a group of Indian children making an average grade-equivalent score of 4.0 at the beginning of the 5th grade would average 6.4 at the beginning of the 8th grade, and 8.0 at the beginning of the 10th grade level. This may be understood more easily if we speak of average height. A boy may be one inch below the average for his age at 5, two inches below average at 10, and three inches below average at 15. He is simply growing more slowly than the average all the time.

School achievement is not measured as accurately as height, and one cannot be sure that the units of measurement (age or grade equivalents) are as constant as the units of measurement on a yardstick. Therefore the actual school achievement scores measured for a particular group of pupils over a span of years seldom fall exactly on a straight line. Irregularities may be due to any of the following factors: the tests used to measure school achievement may be measuring somewhat different aspects of achievement at different ages; the group of pupils used to standardize the test may be more representative of the national group at one age than at another; the particular group being tested may have an unusually good or an unusually poor teacher or school experience during a given year or two, in which case their growth-rate will be greater or less than it had been previously; the particular group being tested may have become more or less motivated to study, in which case their growth-rate will be greater or less than it had been previously.

Are Indian Children Disadvantaged?

It seems clear that many American Indian children are seriously handicapped for success in school due to the family and local community factors that have been mentioned. Therefore, from the point of view of school achievement, it is necessary to say that Indian children, on the average, are disadvantaged. They are disadvantaged because their parents are poor, often illiterate, and inexperienced in the ways of the modern urban-industrial culture. It should go without saying that many Indian children are also advantaged in other ways; their tribal cultures are rich, in some ways, and are in harmony with the natural universe. Many Indian tribes have a satisfying religious and ceremonial life. Family loyalty and family solidarity often give Indian children a sense of security.

But, when speaking of school achievement, socioeconomic facts could lead us to expect that Indian children, on the average, will do poorly in school right from the start, and right on through their childhood and adolescence.

The Facts of School Achievement of Indian Pupils

The evidence on school achievement from several research studies is presented in Tables 1 and 2 and Figure 2. These particular studies are selected from many, for reasons which will be discussed below. Except for the two sets of data from Sioux children, all studies place Indian children just below the national norms during the first few grades, and then drop substantially below national norms. The data from the two national surveys (Coombs, 1951-54 and Coleman, 1965) are remarkably similar, when allowance is made for the fact that Coombs' study included about 40 percent white children in schools in the same areas as those attended by Indian children. The Coombs study gives a Table (C-2) which separates the Indian from the white children and shows in almost every area and grade that the white children exceeded the Indian children in the test. Therefore, the grade-level data reported in Table 1 and Figure 2 from the Coombs study would all be reduced (and made more nearly equivalent to those of Coleman) if scores of non-Indians had been excluded.

Effect of Over-age Indian Children on the Data

Interpretation of the test data should take into account the fact that

Table 1

Comparison of Indian School Children with National Norms on School Achievement Tests

Indian Community	Grade Level Achievement		Number of Students
	National Norm	Indian Group	
Yakima (1966)	4.9	4.0	14
Smartlowit	5.9	4.9	18
	6.9	5.3	17
National Sample (includes 40% white children) Coombs, et.al.	4.1	4.3	3206
	5.1	5.0	3077
	6.1	5.5	3006
	7.1	6.6	3056
	8.1	7.2	2863
	9.1	7.9	2864
	10.1	9.2	2314
	11.1	9.9	1723
	12.1	10.2	1527
Navaho (Rough Rock and Rock Point) Erickson (Norms based on years of schooling) (1968)	2.9	1.8	61
	3.9	2.7	61
	4.9	3.3	62
	5.9	4.0	45
Pine Ridge (Sioux) (Bryde)	4.2	4.9	65
	5.2	5.7	107
	6.2	6.7	93
	7.2	7.0	119
	8.2	7.5	147
Sioux Elementary Schools (38) in Aberdeen Area of BIA. (1965)	4.1	4.3	636
	5.1	5.2	627
	6.1	5.8	667
	7.1	6.9	618
	8.1	7.7	624

Table 2

Test Scores of American Indian Children

Grade	Grade Levels behind average white students of non-metropolitan areas		
	Verbal Ability	Reading Comprehension	Math Achievement
6	1.3	1.8	1.8
9	1.3	1.9	2.2
12	2.5	2.8	3.0

Source: Coleman: Equality of Educational Opportunity.
Adopted from Tables 3.121.1,2,3

a relatively high proportion of Indian pupils are a year or more above the "normal" age for the school grade in which they are placed. This phenomenon is widely reported, and was confirmed in nearly every one of the Indian school systems studied by us. It results from two facts. First, in BIA reservation schools and many public schools attended by children of non-English speaking families, the child, on entering school at age 6, is placed in a "Beginner" class for the first year where he concentrates on learning English to begin the task of learning to read English. He is promoted to Grade 1 after a year, and therefore is one year over-age if he progresses normally after that time. The other fact is that in most school systems many Indian pupils are "held back" one or more times and thus drop further behind the normal age level for a given grade. They are not promoted generally because of much school absence combined with low school achievement.

Thus, in almost every study of school achievement by Indian pupils, about half are a year or more over-age. But the national norms on the standardized tests they take are based upon a population that is normal for age. For example, the widely used California Achievement Tests report norms for a given grade for children who range over an 18-month birth period - nine months on either side of the "normal" birth date. That is, the group for whom the norms for a given grade are computed contains a few children who are 9 months younger than the "normal" age and a few who are 9 months older, but no one is a year older than the expected age.

The effect of this on the Indian data is not altogether clear, but it certainly tends to push the Indian scores up slightly, when compared with the national norms. This can be explained in either of two ways. If Indian 5th grade pupils were divided into two groups, those who are within the "normal" age range for which the national norms are computed and those who are older than this age, the over-age group probably exceeds the at-age group somewhat, due to its greater maturity (in spite of being "slow" in school). Therefore the Indian average score is artificially pushed up. Looked at in another way, if the over-age pupils' scores from the 5th grade were added to the scores of the at-age group for the 6th grade (the grade level that would be normal for them), this score would depress the 6th grade average.

This effect is seen clearly in the case of the Rough-Rock - Rock Point Navaho data of Table 1. In this case the pupils were grouped by number of years of schooling, and not by their nominal grade level. Since all of them had had a year in "Beginner"class, they were almost a year over-age as compared with most Anglo children. The "expected" grade level (national norm) is compared with the actual grade equivalent on the test, and shows these pupils to be one or more years retarded as early as the end of their second year of schooling. If these pupils had been called First Graders at the end of their second year of schooling, as they are in the usual test programs, they would have been "at grade level" when tested at the end of the first grade, and they would have fallen almost a year behind at the end of the fourth grade.

The "Cross-Over" Phenomenon?

The data from a number of testing programs involving Indian children since 1951 appear to be interpreted adequately by the foregoing discussion, with one exception. A study reported by John Bryde[8] concerning the test results on a group of Oglala Sioux pupils on the Pine Ridge Reservation indicated that the Sioux pupils were slightly above national norms at the 4th and 5th grade levels, and then their performance dropped well below the national norms in the 7th and 8th grades. This has been called "the cross-over phenomenon" and has been quoted widely.

Beside the Pine Ridge data, Bryde cites unpublished data from the Aberdeen area office of the Bureau of Indian Affairs to indicate that other Indian children tested in the Dakotas also were above grade level until about the 6th grade level, when their scores fell below national norms.

Bryde attributes great significance to the "cross-over phenomenon." He summarizes the situation as follows: The Sioux children whom he studied generally came from homes and families that were disadvantaged from the point of view of school achievement, and the young children were slow in their initial school learning.

Bryde, John S. The Sioux Indian Student: A Study of Scholastic Failure and Personality Conflict. Ann Arbor, Michigan: University Microfilms. 1965. Also, pp. 160-165 in U.S. Senate Special Subcommittee on Indian Education Hearings. Part 1. 1967. U.S. Government Printing Office, 1969.

> It takes the young Sioux student about three years to become acclimated to this new situation (school). During this time, which roughly comprises the first three grades, Sioux Indian students, as a group, do not come even close to national norms on standardized tests. At that time, these children thus range from six months to a year and a half behind standardized achievement norms. Their IQs, however, are perfectly normal.
>
> With almost dramatic suddenness, at about the fourth grade, Indian students achieve, and even excel standardized norms. (Aberdeen Area Office, 1965). This "golden age" of achievement often lasts until the seventh grade. At about the seventh and eighth grades, there begins a steady decline in achievement.[9]

Bryde goes on to state a hypothesis to explain the "cross-over phenomenon" as follows: "At the age of adolescence, there will be evidence of severe personality deviations and emotional problems on the part of the Sioux Indian students relative to White students of the same age. Rationale: At the age of adolescence, role diffusion (Erickson) and an emerging tendency to alienation (Keniston, Spilka and Bryde) may possibly result in loss of identity as well as motivational deficiency, causing a drop in achievement."[10]

It would be quite important, from the points of view of educational practice and theory, if this minority group, growing up in families which speak little or no English and generally do not read to their children or otherwise assist them in getting the basic school skills, produced children who were at or above the national norms from age 9 or 10 to age 12 or 14, after which they dropped sharply in school achievement.

Consequently we have analyzed the data presented in Dr. Bryde's doctoral

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[9] Bryde, John S., op.cit., pp. 51-52.

[10] Ibid., pp. 54-55.

dissertation. Bryde presents California Achievement Test data on 147 eighth grade Indian pupils in the Pine Ridge school who came from eight elementary schools on the Pine Ridge Reservation. These pupils averaged 7.5 grade-equivalent in the autumn of their 8th grade year, when the national norm was 8.2. Many of them were a year or more over-age for their school grade.

Bryde searched the school records in the eight elementary schools from which these students came, and found California Achievement Test data for 119, 73, 107, and 65 of these pupils for grades 7,6,5, and 4 respectively. He reported their average grade equivalents for these four grades as follows: 7.0, 6.7, 5.7, and 4.9, respectively.

This is the evidence for the "cross-over phenomenon."

There are two critical points to raise in connection with the Sioux data. The first has been noted already. A number of over-age (probably about half of the group) have been included in each grade, and probably have pushed up the average test score for the grade, compared with what it would have been if all children of the"normal" age for this grade had been included in computing the mean score, but no over-age children.

The second point concerns the constitution of the groups in grades 4, 5, 6 and 7 who were compared with the 8th grade group in Bryde's study. Out of 147 eighth graders, only 65 had test data for the 4th grade. Were they representative of the 147 eighth graders? Would it not have been better to sort out these 65 pupils and compare their mean achievement scores at grade 8 with their mean scores at grade 4, in order to test the hypothesis of the "cross-over effect?" Even the 119 seventh grade scores lack 28 pupils who are included in the eighth grade mean. Are these 28 above or below the average of the remainder of their group?

We have written to Dr. Bryde about these matters, and he has replied as follows:

> I studied with much interest your reservations about the cross-over as found among the Sioux students in my study published in 1966.

> Concerning the three critical points raised in your draft, I regret that they do not appear cogent enough to make one abandon the cross-over phenomenon for this Sioux group. The first point: over-aged children. The majority of the children easily qualified for normal according to the California norms quoted by you--children who range over an 18 month period--nine months on either side of the "normal" birth date. For the sake of argument, even if these children were depressed by statistical reworking, these children still show over-achievement then under-achievement--which is the essence of the cross-over--and not just starting out slow and falling further behind as they ascend the grades.
>
> The second point: Were the 65 fourth graders representative of the 147 eighth graders? Also, were the 28 missing seventh graders typical of their group? There seems to be more evidence for a positive response to these questions than for a negative response. In the three instances where Indian groups were separated for comparison, there were no significant differences of achievement: a) between Indian boys and Indian girls; b) among the four degrees of Indian blood; c) between dropouts and continuing Indians. This group inclines the odds for a similar non-significance for the 65 fourth graders and the 28 missing seventh graders.

Professor Bryde later wrote that he hopes to re-work the data for the 65 fourth graders who were among the 147 eighth graders whose average achievement scores had been reported. This requires a trip to Pine Ridge where his original records are located.

There appears to be no data from other Indian tribes or from other studies of Indian school achievement to support the existence of the "cross-over phenomenon." It has been claimed that the extensive study made by Coombs, et al, in the 1950's gives evidence for a cross-over effect. As noted in Table 1, the Indian group scored 4.3 in the fourth grade, and 5.0 in the fifth grade, against national norms of 4.1 and 5.1 respectively. The older Indian groups were substantially below national norms. In a letter dated July 2, 1969, Dr. Coombs wrote to the present author as follows: "I share with you doubt as to the existence of a 'cross-over' phenomenon for Indian children, although it is certainly true that they do much better by comparison with majority culture children in the lower grades than in the higher ones.... I have never used the term "cross-over" or thought of it in that way. In any case, the Coleman Report, I believe, shows that much of the same thing happens to the children of all disadvantaged groups."

Conclusion

Thus it appears that the soundest interpretation to make of available achievement data for Indian pupils is to suppose that they follow a pattern of other low-income and non-English speaking children. The children drop behind the national norms almost from the start of school.

This explains the fact that the absolute "deficit" in school achievement increases as the pupils grow older. They may be one year behind national norms at the 4th grade, two years at the 8th grade, and 3 years at the 12th grade. Such a finding would indicate that they learn in school at a slower rate than the average for the country, not that they suffer a drastic reduction in rate of learning at or after puberty.

This is not to say that "alienation" and loss of self-esteem do not affect Indian youth, both in school performance and in other ways. But the school performance pattern is probably negatively affected by environmental factors well ahead of the age of puberty, when the alienation factor is thought to come into play.

Future Expectations

In view of the information we now possess about the school achievement and the family socioeconomic circumstances of Indian children, what may we expect in the future? We may expect one thing certainly, and a second conclusion contingently.

We may expect the school achievement of Indian children, on the average, to rise, due to rising socioeconomic status of Indian families. As more Indian youth finish high school and go to college, they will improve their economic position and at the same time contribute more effectively to the success of their children in school. Furthermore, as more Indian parents learn to speak and read English, they will contribute more effectively to the success of their children in school.

The contigent expectation depends on the schools which Indian children attend. Will they do a better job of teaching Indian pupils, no matter what the children's family backgrounds are? They will do so only if the educational profession learns to teach Indian children more effectively and if the educational system supports such efforts.

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THE MEANING AND VALIDITY OF THE "PHENOMENAL SELF" FOR AMERICAN INDIAN STUDENTS

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This paper reports the methods used by the National Study to understand how Indian youth perceive themselves. The question to be answered is--how do Indian adolescent boys and girls see themselves as persons in relation to other young people? Do they think well or poorly of themselves?

Two paper-and-pencil self-report instruments are used, a Self-Esteem Inventory, and a Semantic Differential Inventory. It is important to test both the validity of the instruments for measurement of self-esteem, and their reliability. These tests are reported in this first paper of the series.

THE MEANING AND VALIDITY OF THE "PHENOMENAL SELF" FOR AMERICAN INDIAN STUDENTS

Philip H. Dreyer

The construct of "self" has been the subject of psychological and sociological investigation ever since the writings of William James in the late nineteenth century. Theorists such as Freud, Mead, Fromm, Sullivan, Adler, Allport, Erikson, and Maslow have tended to view the self as an unconscious construct which mediates and influences all behavior but which is never known to the individual as a conscious entity. Other theorists, such as Rogers, Lacky, May, and Leary, have postulated the self-concept as a conscious configuration of perceptions known to the individual as he exists within a given environment. These two versions of the self-concept have been described by Smith[1] as the difference between the ego and the self. The ego is a "non-phenomenal subjective construct representing a configuration of on-going processes, among which is the cognitive-perceptual function. Through exercise of this function, the ego "knows" among other things b) the self, a phenomenal subjective construct."[2] It is this phenomenal view of the self as a conscious awareness of who one is and how one stands in relation to his environment that has been most frequently studied, and it is this view that is adopted in this study. Various studies have referred to the "phenomenal self" in a number of different ways. For example, terms such as "self-esteem," "self-regard," "self-perception," "self-identification," "self-concept," "self-appraisal," and "ideal-self" all refer to the "phenomenal self" in that each asks a person to describe his awareness of who he is, how he stands in relation to others, or who he would like to be. For this reason, in this paper these terms will be used almost interchangeably as referring to the construct of the "phenomenal self." At the same time, it should be clearly understood that these terms used to describe the "phenomenal self" are not intended to have the same meaning

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[1] Smith, M. Brewster. "The Phenomenological Approach to Personality Theory: Some Critical Remarks. Journal of Abnormal and Social Psychology, 1950, p. 45, 516-522.

[2] Ibid., p. 522.

as other terms, such as Erikson's concept of "identity," Freud's notion of "ego," or Mead's concepts of "I" and "me," which fit better into Smith's description of "ego" as "non-phenomenal subjective constructs representing a configuration of on-going processes. . ." As a working definition of the "phenomenal self" this study relied on Rogers'[3] statement that, "The self-concept or self-structure may be thought of as an organized configuration of perceptions of one's characteristics and abilities; the precepts and concepts of the self in relation to others and to the environment; the value qualities which are perceived as associated with experiences and objects; and goals and ideals which are perceived as having positive or negative valence."

Attempts to define operationally or measure the "phenomenal self" have produced a wide variety of tests and instruments, many of which are critically evaluated in Ruth Wylie's survey of the research in this area.[4] As she points out, however, operational deffnitions of the self-concept have seldom used common instruments whose reliability and validity have been adequately demonstrated. As a result, self-concept studies have tended to produce a confusion of measuring instruments, most of which lack precision and validity, so that any confidence which might be placed in the inferences so often drawn from their results is severely undermined.

Studies involving American Indians traditionally have not dealt directly with the concept of "self," and those that have attempted to draw conclusions about the self-concept have stressed anthropological judgments by non-Indian observers, rather than Indian self-reports. The anthropologists, however, have pointed out a number of factors about the nature of the Indian self-concept which have been helpful, for they have noted the complexity of the self-concept for individuals who are non-Western in orientation, especially for those who live in what might be called cooperative societies, rather than competitive ones.

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[3]Rogers, Carl R. Client-Oriented Therapy. Boston: Houghton-Mifflin, 1951, p. 136.

[4]Wylie, Ruth C. The Self-Concept. Lincoln: University of Nebraska Press, 1961.

Dorothy Lee[5] analyzed linguistic form and structure along with mythical material from the Wintu Indians of Northern California to discuss how Indian definitions of the self differed from white society's way of defining the self. She noted that white society's definition of the self relied upon a law of contradiction that said that the self cannot be both self and not self, both self and other. According to this law, the self excluded the other and led to the distinction of the self and society. Wintu philosophy, on the other hand, had no such law of contradiction; the notion of self did not exclude the other, so that it was appropriate to refer to the self in society. She also noted that the language of white culture described the self as an analytic, isolated concept which had aggressive, active, and assertive meanings. For white culture linguistic useage implied that the self was narrowly delimited, separated from its encompassing situation, and usually in a position of active control. Wintu language, however, did not contain a word for the self and implied that there were no clear boundaries between the self and its encompassing situation. The Wintu self contained the total person as he completely, or upon occasion partially, identified with the others around him. In most cases, where white society saw a one-way relationship between self and other, where the self was asserted upon the other, the Wintu saw a two-way relationship between self and other, where the self participated to some extent and was coordinate with the other.

Charles Hughes[6] used his field work experiences along with participant observations to discuss factors which altered the self-definitions of Eskimo Indians on St. Lawrence Island in the Bering Sea off Alaska. He noted changes that had occurred since the Eskimos had become more dependent economically and socially upon the mainland, so that the mainland no longer supplied just material goods but also "basic criteria of choice and models for the identification

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[5]Lee, Dorothy. "Notes on the Conception of the Self Among the Wintu Indians, Journal of Abnormal Psychology. 45:538-43, July, 1950.

[6]Hughes, Charles Campbell. "The Patterning of Recent Cultural Change in a Siberian Eskimo Village, Journal of Social Issues, 1958, 14, No. 4, 27-37.

of self." He concluded that changes in self-definition occurred when there was a conjunction in time of four basic factors, which he labeled "observation of fact and reasoned thinking," "contact with other systems of belief," "all types of stress," and "new opportunities for achieving security and satisfying aspirations." Unfortunately, Hughes did not go into detail about the distinction between an individual's self-concept and a society's self-definition, so that his work did not help us understand this relationship; however, his paper did contribute to the notion that whatever the Indian self was it was a complex concept which should be seen in the context of a total cultural setting.

Seymour Parker[7] studied what he termed "ethnic identity" in two Eskimo villages, using participant observation and a story-telling instrument which was scored for expression of hostility, ethnic social distance, and attraction to western culture. His conclusions dealt with the impact of cultural change upon ethnic identity, leading him to the statement that ethnic identity would be negatively affected by exposure to western culture. The ethnic self-image would be devalued and hostility towards western society would emerge from a situation where individuals set new goals which they then perceived could not be reached. It was this process, rather than "acculturation" or "cultural confusion," which produced ambivalence towards both western culture and the Eskimo's own culture.

These three studies all used some concept which could be called a "self-concept" indicator, and they point to the varying ways in which the term has been defined by various studies. None of these used a psychological instrument to measure what this paper calls "phenomenal self," relying instead chiefly upon anthropological insights. Despite this, they pointed out that the separation of an individual's "self" from his social context, which white western society has traditionally made, may not apply to Indian societies where greater stress is placed upon the individual's cooperation with society than upon his competition against others in his society. Another way to state

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[7]Parker, Seymour. "Ethnic Identity and Acculturation in Two Eskimo Communities." American Anthropologist. April, 1964, 66, 325-340.

this problem was that Indian cultures may not perceive the self as having distinct boundaries, as western society does, but may view the self totally within the context of society, so that self and society become blurred and meaningless as separate entities.

Other studies dealing with American Indians have made reference to constructs similar to what this paper calls the "phenomenal self"; however, none has systematically measured the "self" or added significant clarification to the issue of the meaning of the self for Indians. Several studies, for example Voget,[8] Boggs,[9] James,[10] Berreman,[11] and Ablon,[12] viewed the self as a variable influenced by cultural change and as a measure of acculturation to white society. None used a psychological index of the self, using instead field observers' comments with anecdotal examples of major points, and none attempted to define the boundaries of the self within Indian society.

Three other studies are worthy of note because they did use some form of psychological instrument to measure Indian personality, even though their

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[8]Voget, Fred. "American Indians in Transition: Reformation and Status Innovations. (Handsome Lake's Great Message, Shakerism, and Peyotism.)" American Journal of Sociology. 1957, 62, 369-378.

[9]Boggs, Stephen T. "Culture Change and the Personality of Ojibwa Children," American Anthropologist, 1958, 60, 47-58.

[10]James, B.J. "Socio-Psychological Dimensions of Ojibwa Acculturation." American Anthropologist, 1961, 63, 721-746.

[11]Berreman, Gerald D. "Aleut Reference Group Alienation, Mobility, and Acculturation," American Anthropologist, 66, April 1964, 231-250.

[12]Ablon, Joan. "Relocated American Indians in the San Francisco Bay Area: Social Interaction and Indian Identity," Human Organization, 1964, 23 296-304.

major purpose was not to measure "self-concept." Randle[13] used TAT stories to analyze sex identification among Iroquois women, noting that her Indian subjects had a stronger feminine identity than white women used as a comparison group. Chance[14] attempted to measure "self-identification" among Eskimo Indians with the Cornell Medical Index questionnaire, using it as a scale of personal adjustment to compare with degree of cross-cultural contact; however, his stress was upon adjustment to cultural stress, rather than upon self-concept as a phenomenal construct. Helper and Garfield[15] used a semantic differential instrument to study ten concepts with Sioux Indian adolescents and white adolescents in South Dakota and included "phenomenal self" items such as "me" and "myself as I would like to be." This study was the closest to other non-Indian "phenomenal self" studies that had been done and led to the conclusion that the semantic differential could be used successfully to measure differences between groups for certain concepts. Helper's main purpose was to relate Indian and white SD responses to school achievement tests, where he found that high-achieving Indians were semantically more similar to white adolescents in their responses than were low-achieving Indians.

From these eleven studies of Indians that refer in some way to "self" constructs it is clear that only one[16] made an attempt to measure the "phenomenal self" as a psychological variable. The others made major points out of what they viewed as the Indians' concept of self, but each used its own global description of the self and most imposed the non-Indian field worker's judgment upon the final evaluation of what the Indian self-concept was. There

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[13]Randle, Marth Champion. "Iroquois Women, then and now." in Fenton, W.N. (ed.) Symposium on Local Diversity in Iroquois Culture, Bureau of American Ethnology, Bulletin 149.

[14]Chance, Norman A. "Acculturation, Self-Identification, and Personality Adjustment," American Anthropologist, 67, April, 1965, 372-393.

[15]Helper, Malcolm M. and Garfield, S.L. "Use of the Semantic Differential to Study Acculturation in American Indian Adolescents." Journal of Personality and Social Psychology, 1965, Vol. 2 (6), 817-822.

[16]Ibid.

was no uniform definition of the self used in these studies and few used a measuring instrument that could be replicated with other groups, tested for reliability, or demonstrated to have construct validity.

Perhaps even more important than these shortcomings is the fact that there is little clarity about what place, if any, the self-concept has in the thinking of American Indians. Dorothy Lee's paper discussed this in some detail with reference to her linguistic analysis of one Indian group; however, most of the other studies assumed that the self existed for Indians in the same way that it was said to exist for white, western culture, an assumption that may not be valid. The questions of what is the meaning of the self and how distinct are the boundaries between the self and society thus have been raised but neither clarified nor answered by recent studies.

Before turning to this study and its results it was important to review the literature on the "phenomenal self" which is focussed upon white and black samples.

Snygg and Combs[17] in their rejoinder to Dr. Smith, argued that the phenomonological approach to the study of behavior was preferable to other approaches because it offered the psychologist the opportunity to get at what they call "first order" constructs based upon empirical observation, rather than the confusion that surrounds "second order" constructs based upon theoretical formulations. As a "phenomenal" construct, the "self" would thus seem to be fairly easy to measure, and many studies have agreed with Snygg and Combs to the extent that they have relied upon "self" reports as a measurement of the "phenomenal self." In designing this study a number of such studies were referred to and used as guides to developing appropriate measuring instruments. In almost every case these studies used just one instrument of the self-report type as their index of self-concept.

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[17]Snygg, D. and Combs, A.W. "The Phenomonological Approach and the Problem of 'Unconscious' Behavior: A Reply to Dr. Smith." Journal of Abnormal and Social Psychology, 1950, 45, 5230528.

Coopersmith's[18] "Self-Esteem Inventory," after which this study modeled one of its instruments, was used along with teacher behavior ratings to produce five groups of seventeen fifth graders each. For these children he discussed the "antecedents of self-esteem" by correlating self-esteem inventory scores with data from interviews with the children's mothers. Using a small group of 30 children, Coopersmith got a five-week test-retest reliability coefficient of .88. With another group of 56 children he found a three year test-retest reliability coefficient of .70. These test-retest reliability coefficients were obtained with small groups of children who were not necessarily in the sample for whom he obtained behavior ratings. As for the validity of his instrument, he seemed to assume face validity, and offered no information about the consistency of the responses given by his subjects.

Rosenberg's[19] interesting study of adolescent self-esteem among 5,024 high school students in New York State used a series of Guttman scales to measure self-acceptance, reasoning that high self-acceptance was equivalent to high self-esteem. He reported a test-retest reliability coefficient of .85 which was derived from a smaller study by Earle Silber and Jean S. Tippett. As for validity, Rosenberg relied on a contention that his instrument had face validity and that the statements used in his instrument reflected observed indicators of neurosis, psychosomatic symptoms, and peer group estrangement, as reported by nurses for patients at the National Institute of Health Clinical Center. While the analogy between the validity of his measure for subjects at the NIH Clinical Center and for high school students seemed tenuous, Rosenberg's data from his adolescent sample confirmed most of his hypotheses about self-esteem, hence that his statements about validity seemed to be substantiated.

Several recent studies have used semantic differential scales in order

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[18] Coopersmith, Stanley. "A Method for Determining Types of Self-Esteem." Journal of Abnormal and Social Psychology, 1959, 59, 87-94; and The Antecedents of Self-Esteem. San Francisco: W.H. Freeman & Co., 1967.

[19] Rosenberg, M. Society and the Adolescent Self-Image. Princeton: Princeton University Press, 1965.

to measure self-concept. Davidson and Greenberg[20] measured "self-appraisal" among fifth grade "disadvantaged" Negro children in New York. The "self" was directly measured by their own Self-Appraisal Scale; however, they also used a semantic differential inventory to get at attitudes towards authority figures, and included concepts such as "mother," "teacher," and "me." They presented no data about either the reliability or construct validity of their measures; however, an investigation of their correlation matrix for all their variables reveals virtually no correlation between the Self-Appraisal Scale and the Semantic Differential cluster that included "me."[21] In another recent study Soares and Soares[22] investigated "self-perceptions of culturally disadvantaged children with a semantic differential type instrument and reported differences between the self-esteem scores of "disadvantaged" and "advantaged" fourth through eighth graders. Their use of this one instrument did not include any estimate of its reliability and validity. Long, Henderson, and Ziller[23] used the semantic differential to investigate the content and response set of the self perceptions of elementary school children in Maryland, including good reliability data but almost no discussion of the construct validity of their instrument as a measuring device for the "phenomenal self."

It seemed clear that while there have been many attempts made to define and measure the "phenomenal self," there still remained serious questions about the exact nature of the "self" and the most reliable and valid way to go about measuring it. In the case of American Indians these problems have been accentuated by the failure of most studies to attempt seriously to define the boundaries of the self-concept within non-western, cooperative societies. Studies of American Indians thus have not only been "culture-bound" in the sense that they used theoretical constructs which have not been shown to clearly exist in Indian society. The assumption has been made in most instances

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[20] Davidson, Helen H. & Greenberg, Judith. Traits of School Achievers from a Deprived Background. New York: Associated Educational Services Corp, 1967.

[21] Ibid., pp. 96-97.

[22] Soares, Anthony T. and Soares, Louise M. "Self-Perceptions of Culturally Disadvantaged Children." American Educational Research Journal, 1969, 6, 31-45.

[23] Long, Barbara H., Henderson, Edmund H., and Ziller, Robert C. "Self-Ratings on the Sematnic Differential: Content vs. Response Set." Child Development, June, 1968, Vol. 39, No. 2, 647-656.

that, since the "phenomenal self" as an organized configuration of conscious perceptions of one's characteristics and abilities seems to exist for members of western culture, the same "phenomenal self" must also exist for members of American Indian society. As Dorothy Lee helped us to see, this assumption must be challenged and the nature of the "phenomenal self" for Indians more carefully studied.

The purpose of this study was to attempt to improve upon some of the methodological shortcomings of earlier self-concept studies and to investigate the nature of the self-concept among American Indians. We sought to do this by measuring the "phenomenal self" as a psychological variable, using two conventional, and admittedly culture-bound, self-report instruments which were administered to American Indian students as part of the National Study of American Indian Education. The basic concern of this study was to establish the reliability and concurrent validity of the two measures, so that the nature of the Indian self-concept and its relationship to other factors might be better understood when reported in other papers.

Method

Two instruments were used in this study to measure the "phenomenal self," and both are reproduced in Appendix I and II of this paper.

The first instrument was a series of twenty statements after which the subject checked one of two places marked "like me" and "not like me." The statements referred to school work, feelings about the home, peer relations, and general feelings of competence. Both positive and negative sententce forms were used to avoid response set and four items were repeated in different form as a check on consistency of response. The positive responses: i.e., those reflecting positive self-regard, were scored "1" and non-positive responses were scored "0", so that a total score was obtained for each subject with a possible range of zero to twenty. This total score was used as the first measure of "self-esteem." This first unstrument was modeled after Butler

and Haigh's[24] Q-sort test of phenomenal self-regard and was adapted from the version of this instrument developed by Coopersmith.[25]

The second instrument was a semantic differential inventory, consisting of nine concepts which were rated for seven adjective pairs. The concepts used were "myself," "my home," "Indians," "my future," "this school," "teachers," "tribe's way of life," "white people's way of life," and "dormitory." The adjective pairs were "good-bad," "worthless-valuable," "weak-strong," "happy-unhappy," "lazy-active," "smart-dumb," "friendly-unfriendly." The adjective pairs were deliberately selected to stress Osgood's "evaluative" factor (5 pairs), while less stress was placed upon the "potency" (1 pair) and "activity" (1 pair) factors. This was done in order to measure the value placed upon the self as a concept having a positive or negative valence for the individual, and conforms with recent studies that report that children's semantic differential responses seem to be most heavily weighted on the evaluative factor.[26] Each adjective pair had a six-place scale and was scored from one to six with "one" being the more positive score, indicating higher positive self ragard. The mean value of the scores for the seven adjective pairs for the concept of "myself" was used as the second measure of self-concept.

These two instruments were designed to provide two separate, and hopefully complementary measurements of the Indian student's "phenomenal self." The twenty statement self-esteem inventory attempted to ask the subject directly about his perceptions of himself: i.e., whether he felt the stated situation was "like me" or "not like me." In this way the subject's feelings about his relationship to family, peers, and school were measured in a forced-choice

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[24]Butler, J.M. and Haigh, G.V. "Changes in the Relation Between Self-Concepts and Ideal Concepts Consequent Upon Client-Centered Counseling," in Rogers, C.R. and Dymond, Rosalind F. (eds.) Psychotherapy and Personality. Chicago: University of Chicago Press, 1954, 55-75.

[25]Coopersmith, op.cit, 1959 & 1967.

[26]See DiVesta, F.J. and Dick, W. "The Test-Retest Reliability of Children's Ratings on the Semantic Differential." Educational and Psychological Measurement, 1966, 605-617.; and Maltz, H.E. "Ontogenetic Changes in the Meaning of Concepts as Measured by the Semantic Differential." Child Development, 1963, 34, 667-674.

fashion. It is common for the answers to such direct questions to suffer in accuracy due to a subject's attempt to give socially desirable answers in order to present himself in the most favorable light and due to a subject's tendency to exhibit defensive behaviors by deliberately falsifying an answer when a question provokes strong feelings of threat and anxiety. An additional problem is that students with low reading ability might not understand the statements or might misread items, so that the accuracy of the final score would be decreased. It was hoped that the semantic differential inventory would overcome some of these problems by providing a measure of the "phenomenal self" which was less direct, more abstract, and which involved less reading.

The theory of the "semantic space" and its operationalization in the semantic differential scale developed by Osgood, Suci, and Tannenbaum[27] has been shown to provide fruitful results when used across cultures and language groups.[28] In all of these studies the three factors of semantic space--evaluation, potency, and activity--have been shown to account for most of the variance in semantic differential responses, regardless of culture or language. In addition, two studies of American Indian subjects[29] have shown that the semantic differential instrument secures responses which can be interpreted with Indians of the Southwest and Northern Plains states. Given this evidence for the cross-cultural similarity of the "semantic space," this study used an English language version of the semantic differential for all Indian students

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[27]Osgood, Charles E., Suci, G.J., and Tannenbaum, P.H. The Measurement of Meaning. Urbana: University of Illinois Press, 1957.

[28]See Kumata, Hideya and Schramm, Wilbur. "A Pilot Study of Cross-Cultural Meaning." Public Opinion Quarterly, 1956, 20: 229-238.; Kumata, Hideya. A Factor Analysis Investigation of the Generality of Semantic Structure Across Two Selected Cultures. Unpublished doctoral dissertation, University of Illinois, 1957.; Triandis, H. and Osgood, Charles E. "A Comparative Factorial Analysis of Semantic Structures of Monolingual Greek and American College Students." Journal of Abnormal and Social Psychology, 1958, 57:187-196.; Tanaka, Y., Oyama, T. and Osgood, C.E. "A Cross-Cultural and Cross-Concept Study of the Generality of Semantic Space." Journal of Verbal Learning and Verbal Behavior, 1963, 2:392-405.; and Osgood, C.E. "Semantic Differential Technique in the Comparative Study of Cultures." American Anthro.1964, 171-200.

[29]See Suci, George J. "A Comparison of Semantic Structures in American Southwest Culture Groups." Journal of Abnormal and Social Psychology, 1960, 61:25-30.; and Helper, Malcolm and Garfield, S.L., op.cit.

on the ground that, while some of the students were truly bilingual and all lived to varying degrees in two cultures, all were students in English-speaking schools and an English language measure of the "phenomenal self" would be a controlling device for comparing the self-concept of one Indian group with that of another. Nevertheless, the fact that this study used English language instruments should be noted, since it is possible that attributes of the "phenomenal self" were confounded with varying attributes of the English language for those students whose original language was not English.

Both instruments were administered at the same test session. In most cases they were administered to classroom groups by trained examiners from the National Study of American Indian Education. The examiners explained the instrument, read the instructions out loud, and gave examples on the blackboard when possible to insure that the subjects understood the task. If questions about procedures arose during the taking of the test, they were answered, and in group situations examiners walked around the classroom to correct any misunderstandings that seemed to exist. For elementary school subjects a special set of instructions were devised written in simpler language. Special emphasis was placed upon the fact that these inventories were not part of school work and would not be seen by teachers or principals in the subject's school. In some cases, where subjects were also given additional interviews, the inventories were administered individually during the interview session. Since each inventory was labeled with the words "National Study of American Indian Education," no attempt was made to disguise the nature of the study. It was pointed out that this was a government supported study to find out how Indians and white children felt about some issues; however, no mention was made of "self-esteem" and the test booklets were labeled "Student Inventory A," and "Student Inventory C." The design of the study called for testing the students in grades 5, 8, and 11-12. Since most of the schools were small, all students in these grades were included, and in some cases, grades 6 and 9 were included to obtain greater numbers. In the few cases where enrollments were large, one or more classrooms were omitted, with care taken to secure a cross-section of students according to academic achievement.

Once protocols were completed and collected they were screened to eliminate any which were incomplete, double checked, or inconsistent. This initial screening resulted in about 10 percent of the semantic differential protocols being dropped. As a check on consistency of response, four items on the Self-Esteem Inventory were repeated in different form, and any protocol which had an inconsistent scoring on more than two of these four pairs of items was dropped from the study. This consistency check resulted in about 20 percent of the Self-Esteem Inventory protocols being excluded from the data analysis. Contrary to expectations, older age group subjects' protocols were eliminated for these reasons as often, if not more often, than younger age group subjects' protocols. The elimination of data presents almost as many problems as it solves, since the researcher is left with questions such as--What about the subjects who were not included in the data analysis? Would they change the final conclusions of the study, if data had been collected successfully from them? And why did they not complete the protocols satisfactorily? This study did not attempt to go back to these students and explore the answers to these questions. However, while there were many possible reasons why these students did not complete the instrument satisfactorily, ranging from simple problems such as not understanding instructions in the group setting, through more complex reasons such as resentment of school or hostility towards researchers, to sophisticated reasons of defensive psychological behavior or inability to conceptualize a "self-image," we preferred to view the rejected protocols, especially Self-Esteem Inventory protocols, as resulting primarily from low reading ability and a lack of attention being given the instruments.

Sample

The final sample of American Indian students for whom both instruments were satisfactorily completed consisted of 2007 youths, 998 males, 1009 females, ranging from eight to twenty years of age. In addition, a non-Indian control group was included, consisting of 168 youths, 92 males, and 76 females.

The groups whose scores are reported here were the following:

Plains Indians. Five Indian communities (Blackfeet, Sioux, Navajo) studied by the University of Colorado Field Center. 253 boys and 242 girls in the age range 8-20 inclusive.

Southwest Indians. Ten Indian communities or schools (Pima, Papago, Apache, Hopi, Laguna, Acoma, Navajo) studied by the University of Arizona Field Center. 395 boys and 364 girls, aged 8-20.

Northwest Indians and Eskimos. Four Indian and one Eskimo communities or schools (Quinault, Makah, Tlingit, Eskimo) studied by the San Francisco State College Field Center. 186 boys and 143 girls, aged 8-20.

Minnesota-Wisconsin Indians. Three schools in Wisconsin and two in Minnesota (Chippewa, Menominee, Sioux) studied by the University of Minnesota Field Center. 97 boys and 85 girls, aged 8-17, mostly in schools where the great majority of students were Indian. There was also a junior high school in Minneapolis, called School C, with 21 Indian boys and 25 Indian girls, who were in the minority in this school, and are reported as part of the Urban Indian group.

Lumbee Indians (North Carolina). Two Indian schools in Pembroke County (North Carolina) with 26 boys and 31 girls, aged 8-17. These were studied by the North Carolina State University Field Center.

Oklahoma Indians. Two communities in north central Oklahoma, with a minority of Indian students (Pawnee and Ponca), 26 boys and 39 girls. These were studied by the Oklahoma State University Field Center.

Urban Indians. Students in several elementary schools and a high school in Chicago, with 59 boys and 55 girls, aged 8-17, studied by the University of Chicago staff; and 21 boys and 25 girls, aged 12-17, who were students at a junior high school in Minneapolis, studied by the University of Minnesota staff. All of these Indians were in a minority among students at the schools they attended.

Chicago and Colorado Non-Indians (Control). White, Black, and Oriental students in the same schools studied by the Chicago research staff and white students in the same schools studied by the Colorado staff, with 87 boys and 75 girls, aged 8-17.

Results

If Indian students had a "phenomenal self" as defined by the two instruments used in this study, it was expected that the results of these two separate instruments would correlate with each other to a relatively high degree, certainly to a degree significantly greater than zero. Thus, the working hypothesis was that the scores for the two instruments for each individual Indian student would correlate highly. In this sense, this study sought to determine the "concurrent validity" of the two instruments as measures of the "phenomenal self," as described by Cronbach[30] and Cronbach and Meehl.[31]

In order to estimate the concurrent validity of the two measures it was first necessary to estimate their reliability. This was done in an early study of 334 Indian students who attended school in Arizona. Limitations of geographical distance and expense made a test-retest estimate of the two instruments' reliability impractical, so a coefficient of reliability was computed by the split-half method for each instrument. The twenty statements of Inventory A were randomly divided into conceptually equal halves of ten items each. For the semantic differential Inventory C the split-halves consisted of word pairs for the concept "myself." The first half were the adjective pairs "good-bad," "valuable-worthless," and "happy-unhappy," while the second half was made up of the adjective pairs "smart-dumb," "friendly-unfriendly," and "strong-weak." It should be noted that since there were seven adjective pairs used for each semantic differential concept, the construction of split halves for reliability testing made it necessary to exclude

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[30]Cronbach, Lee J. Essentials of Psychological Testing. New York: Harper & Row Publishers, Inc., 1960.

[31]Cronbach, L.J. and Meehl, P.E. "Construct Validity in Psychological Tests," Psychological Bulletin, 1955, 4, 281-303.

one adjective pair. The choice of which pair to drop was based on the fact that of the two factors represented by only one adjective pair each, the "strong-weak" pair, representing the "potency" factor had more loading on "evaluation" than the "active-lazy" pair, representing the "activity" factor.[32] Hence, the adjective pair "active-lazy" was omitted from the split-half analysis, leaving split halves that were approximately equal in terms of the representation of Osgood's semantic space factors.

The correlations for the mean scores of the split halves of each instrument are given in Table I according to the four age groupings of the sample.

Test-Retest Calculation of Reliability (Note Added October 2, 1970)

Approximately 18 months after the initial administration of the two self-concept measures, students who had been tested in grades 5 and 8 were retested in grades 6 and 9 at one school in the Plains Indian area. Thirty-four Indian students were included in this retested group and made it possible for us to estimate the reliability of the two instruments by correlating initial scores of these students with their scores after eighteen months. For these students the test-retest reliability coefficient for the Twenty Statement Self-Esteem Inventory was +.28, while the test-retest reliability coefficient for the semantic differential concept "myself" was +.34. These coefficients were lower than the split-half reliability coefficients reported in this paper. It was interesting to note that the mean post-test scores for this group were more positive; i.e., the Indian students in this one school rated themselves higher in "self-esteem" at the end of the 18 month period than at the beginning, a change which contradicts most studies' findings that the "self-concept" is stable over time.

For the purpose of assessing the validity of the two instruments it was decided to use the original split-half reliability estimates. First, split-half estimates were available for all age groups and for a large sample.

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[32] Osgood, 1957 op. cit., pp. 53-61.

Second, it was felt that the split-half estimates made from the data collected at one point in time were more accurate than the test-retest estimates made over a relatively long period of time, such as a year and a half. Hence, the split-half reliability estimates given in Table I were used to evaluate the validity of the two instruments.

Table I

Split-Half Reliability Coefficients for Twenty Statement Self-Esteem Inventory and Semantic Differential Concept "Myself" by Age Groups

Age Group	N	Twenty Statement Self-Esteem	Semantic Differential "Myself"
1. 8-11 years	35	.391	.340
2. 12-14 years	105	.533	.474
3. 15-17 years	105	.654	.620
4. 18-20 years	94	.603	.362

These figures revealed that the reliability of the two instruments increases with age for each student group, except the oldest, with reliability of the twenty statement self-esteem inventory being higher than the semantic differential for each age group. More important than these observations, however, was the general point that the split-half reliability correlations were not high, ranging from a low of .340 to a high of .654. The meaning of these low reliability coefficients was that subsequent concurrent validity correlations of the two instruments were attenuated by errors in the reliability of the two instruments, so that "true" concurrent validity correlations were actually higher than the correlation figures indicated. This problem is discussed in greater detail below.

Table II

Product Moment Correlations of Mean Scores of Twenty Statement Self-Esteem (Inventory A) and Semantic Differential (Inventory C) Concept "Myself" by Age and Sex+

	MALES							
	N	8-11	N	12-14	N	15-17	N	18-20
Plains Indians	67	.47****	83	.19*	60	.30***	32	.41***
Southwest Indians	47	.58****	125	.36****	111	.23***	112	.47****
Northwest Indians & Eskimos	15	.54**	47	.02	77	.19*	47	.30**
Minnesota-Wisconsin Indians	11	.50*	56	.28**	30	.06		
Urban Indians	11	.41	44	.40****	4	.52		
Non-Indian Controls	39	.41****	26	.50****	22	.77****		
	FEMALES							
Plains Indians	75	.34****	85	.55****	73	.48****	20	.63****
Southwest Indians	45	.33**	.32	.30****	102	.38****	85	.46****
Northwest Indians & Eskimos	10	.67**	42	.18	71	.45****	20	.64****
Minnesota-Wisconsin Indians	11	.02	55	.54****	19	.42*		
Urban Indians	10	.34	37	.25	8	.04		
Non-Indian Controls	24	.36*	21	.52***	30	.42***		

* p .05
** p .025
*** p .01
**** p .005

+Since one instrument was scored with a high numerical score indicating high self-esteem, while the other was scored with a low numerical score indicating high self-esteem, the actual correlations were negative in sign; however, since the true relationship of the two measures is positive, Table II reports the correlations as positive.

These correlations, however, were attenuated by errors in the reliability of the two instruments, so that the actual correlation of the two instruments, or the correlation of the "true" scores, could be estimated by correcting each correlation for its degree of reliability according to the Spearman "attenuation formula"

$$p(T_x,T_y) = \frac{p(xy)}{\sqrt{p(xx')\ p(yy')}}$$

where $p(T_x,Ty)$ is the "dis-attenuated" correlation, or the correlation of "true" scores for x and y, while p(xy) is the attenuated correlation of x and y and p(xx') and p(yy') are the split half reliability coefficients for x and y.

The reliability coefficients, however, contained additional sources of variance because of the way the split halves were made up. Because of this additional variance the reliability coefficients tended to underestimate the reliability of the two instruments. With such underestimated reliability coefficients a rigid application of the attenuation formula, using the figures from Tables I and II, would have resulted in an overestimation of the "dis-attenuated" correlations.

To illustrate this point, the upper and lower limits of the "true" relationship were estimated by applying the attenuation formula to the correlations for Plains Indian males and Southwest Indian females, ages 12-14 and 15-17, ages which produced the highest reliability coefficients. This resulted i "dis-attenuated" correlations for Plains Indian females of +1.09 and +.75 and for Southwest Indian males of +.72 and +.36. Thus, while the attenuation formula could not be applied literally, because in at least one case it resulted in an overestimate of the true relationship, the principle of attenuation theory could be used to infer that the true correlations between the two instruments' scores were higher than the figures given in Table II. The lower and upper limits of the correlations were estimated to be +.30 and +.80, given the influence of the reliability coefficients upon the correlations.

The results of Table II must be interpreted within the framework of the effect of the reliability of the two instruments, an effect which tended to lower the correlations reported from what the "true" relationship between the two instruments could be said to be. In light of this, there appeared to be a positive relationship between the two instruments which was significantly greater than zero in most cases. Using the estimates of what we could expect the lower and upper limits of the correlations to be, the correlations were high enough to lead to the conclusion that the two instruments had a good degree of concurrent validity for most of the Indian groups. Two Indian groups were too small in number to be included in Table II by age group. Of these two, Oklahoma Indians as a whole appeared to have a good degree of concurrent validity with attenuated correlations of +.25 to +.63, while North Carolina Indians appeared to have a low degree of concurrent validity with attenuated correlations ranging from -.24 to +.47. The North Carolina Indians were a notable exception to the general rule that the instruments seemed to have concurrent validity.

It appeared that while the two instruments could not be said to have measured exactly the same theoretical construct; i.e., the "phenomenal self," they did appear to have measured aspects of the same construct, so that we could infer that such a construct existed. The concurrent validity correlations were highest for Plains Indians, Southwest Indians, Northwest Indians and Eskimos, and Non-Indian Controls, so that we could say that these groups had the most definite sense of a "phenomenal self" as distinct from other societal factors. There did not appear to be any significant sex or age differences in these findings; there were fluctuations in the correlations by both sex and age; however, these fluctuations were neither significantly large nor consistent in direction.

Conclusions

The first conclusion drawn from this study was that it was possible to define the construct of the "phenomenal self" operationally with English language instruments that were originally designed for white samples to obtain

results with American Indian students which appeared to have concurrent validity, indicating that the instruments did measure self-concept among American Indian students.

At the same time the results of this study revealed that the concurrent validity of the two instruments varied from one Indian group to another, so that it appeared that the "phenomenal self" was not measured to the same degree for every group by the two instruments. This fluctuation led to the second conclusion that the nature of the "phenomenal self" was not the same for all Indians and that the cultural context of an Indian group was a significant factor in determining the degree to which our two instruments succeeded in measuring the self. It seemed that some Indian cultures had a more clear-cut sense of their "phenomenal self," perceiving clear boundaries between what was individual and what was societal. The most important issue seemed to be the degree to which a culture had a sense of a coherent "phenomenal self" that was defined by perceived boundaries of what was self and what was other. The coherence of the self and the nature of the boundaries between self and others emerged as the most important factors in determining the nature of the "phenomenal self."

In Indian societies that stress cooperation between individuals, with great emphasis being placed upon such values as harmony, sacrifice, and reciprocity, the boundaries between self and others are more likely to be blurred and the self-concept more likely to be diffuse and incoherent, so that the "phenomenal self" would be difficult to define and measure. In other societies that stress competition between individuals, with emphasis upon such factors as achievement, power, and assertiveness, the boundaries between self and others are more likely to be distinct and the self-concept more likely to be stable and coherent, leading to a definite "phenomenal self" concept. The language which a culture uses may provide important insights into whether a culture is cooperative in this sense or competitive; however, linguistic analyses alone, such as those proposed by Whorf and demonstrated by Dorothy Lee, cannot be said to provide a total picture of what conceptions a society

holds. It is not the belief of this study that language determines the manner in which people think and behave, for much of a person's thought, especially in the area of the "phenomenal self," tends to be amorphous and non-verbal. In fact, it is just this problem of measuring the "phenomenal self" with written language instruments which makes the psychologist's task so difficult. But the fact that language may not be the best method of measuring the "phenomenal self" does not mean that a given person or culture does not have a "phenomenal self."

Finally, while this study was able to establish concurrent validity between its measures of the "phenomenal self," it was clear that the measures tapped only part of the Indian students' total self-concept, so that these conclusions must be taken as tentative until more research in the area of the self-concept is completed. The meaning which the "phenomenal self" has for a given individual appeared to depend upon the extent to which he perceived clear boundaries between himself and others and the values which his society stressed with regard to individual differences and interpersonal relations. Thus, while this study found that the "phenomenal self" did exist for most of the Indian students studied, the exact meaning which that self had depended to a great degree upon factors which our instruments did not completely measure.

APPENDIX I

NATIONAL STUDY OF AMERICAN INDIAN EDUCATION

STUDENT INVENTORY A

Name_____ Code Number _____
Age_____
Sex_____
School_____

Please mark each sentence in the following way:

If the sentence describes how you usually feel, put a check (✓) in the column, "Like Me." If the sentence does not describe how you usually feel, put a check (✓) in the column "Not Like Me."

Remember, there are no right or wrong answers.

	THIS IS:	LIKE ME	NOT LIKE ME
1.	I think I'm as good as everybody else.	_____	_____
2.	I usually do the wrong things.	_____	_____
3.	Things often bother me.	_____	_____
4.	I am much like other people.	_____	_____
5.	I find it hard to talk in front of the class.	_____	_____
6.	I do all right in school.	_____	_____
7.	No one pays much attention to me at home.	_____	_____
8.	I often feel left out of things that are going on around here.	_____	_____
9.	There are many times that I'd like to leave school.	_____	_____
10.	I am usually able to get the things I need by myself.	_____	_____
11.	No one pays much attention to me at school.	_____	_____
12.	Kids usually pick on me.	_____	_____
13.	There are many times I'd like to leave home.	_____	_____
14.	I can make up my mind without too much trouble.	_____	_____
15.	I think most people understand the way I feel about things.	_____	_____
16.	Others have to help me in the things I need.	_____	_____
17.	I usually do what my parents want me to do.	_____	_____
18.	I have trouble making up my mind.	_____	_____
19.	My parents expect too much of me.	_____	_____
20.	I usually do the right thing.	_____	_____

APPENDIX II

NATIONAL STUDY OF AMERICAN INDIAN EDUCATION

Instructions for Student Inventory C

We want to know how you feel about some people and things. Under each person or thing that we would like to know about, you will find seven sets of words. The words in each set mean the opposite of each other. Between each set of words there are six circles. The circles let you say how you think that set of words fits the person or thing at the top of the box. The circles mean

0 VERY	0 FAIRLY	o SOMEWHAT	o SOMEWHAT	0 FAIRLY	0 VERY
good	good	good	bad	bad	bad
worthless	worthless	worthless	valuable	valuable	valuable
weak	weak	weak	strong	strong	strong
happy	happy	happy	unhappy	unhappy	unhappy
lazy	lazy	lazy	active	active	active
smart	smart	smart	dumb	dumb	dumb
friendly	friendly	friendly	unfriendly	unfriendly	unfriendly

For example, suppose we wanted to know how you feel about a person, such as a cowboy. You might mark your sheet like this

COWBOY

GOOD	0	●	o	o	0	0	BAD
WORTHLESS	0	0	o	●	0	0	VALUABLE
WEAK	0	0	o	o	●	0	STRONG
HAPPY	0	0	o	●	0	0	UNHAPPY
LAZY	0	0	o	o	0	●	ACTIVE
SMART	0	0	●	o	0	0	DUMB
FRIENDLY	●	0	o	o	0	0	UNFRIENDLY

This would mean that you think a cowboy is fairly good, somewhat valuable, fairly strong, somewhat unhappy, very active, somewhat smart, and very friendly.

Mark only one circle for each set of words. Work as fast as you can, and don't go back and change a mark after you have made it.

NATIONAL STUDY OF AMERICAN INDIAN EDUCATION

Code Number_____

Student Inventory C

Name_____Age_____

Sex_____School_____

We want to know how you feel about various people and things. Beneath the name of each person, idea or thing you will find a series of scales of opposite words. Locate the person or idea or thing where you think it belongs on each scale.

For example: suppose you have a person, Cowboy, and beneath it the scale Good-Bad:

Good	0	0	o	o	0	0	Bad
	very	fairly	some-what	some-what	fairly	very	

If you think a Cowboy is very good, mark a cross (X) in the large circle on the left. Or, if you think a Cowboy is fairly good (but not very good) mark a cross in the middle-sized circle. But, if you think a Cowboy is only somewhat good or neither good nor bad, mark a cross in the small circle. If you think a cowboy is somewhat bad, fairly or quite bad, or very bad, mark a cross in the proper circle on the other side of the scale. Mark only one circle.

Work as fast as possible; do not stop to review or think about your marks. We are interested in your first impressions and your real feelings.

MYSELF		MY HOME	
GOOD	0 0 o o 0 0 BAD	GOOD	0 0 o o 0 0 BAD
WORTHLESS	0 0 o o 0 0 VALUABLE	WORTHLESS	0 0 o o 0 0 VALUABLE
WEAK	0 0 o o 0 0 STRONG	WEAK	0 0 o o 0 0 STRONG
HAPPY	0 0 o o 0 0 UNHAPPY	HAPPY	0 0 o o 0 0 UNHAPPY
LAZY	0 0 o o 0 0 ACTIVE	LAZY	0 0 o o 0 0 ACTIVE
SMART	0 0 o o 0 0 DUMB	SMART	0 0 o o 0 0 DUMB
FRIENDLY	0 0 o o 0 0 UNFRIENDLY	FRIENDLY	0 0 o o 0 0 UNFRIENDLY

INDIANS								MY FUTURE							
GOOD	0	0	o	o	0	0	BAD	GOOD	0	0	o	o	0	0	BAD
WORTHLESS	0	0	o	o	0	0	VALUABLE	WORTHLESS	0	0	o	o	0	0	VALUABLE
WEAK	0	0	o	o	0	0	STRONG	WEAK	0	0	o	o	0	0	STRONG
HAPPY	0	0	o	o	0	0	UNHAPPY	HAPPY	0	0	o	o	0	0	UNHAPPY
LAZY	0	0	o	o	0	0	ACTIVE	LAZY	0	0	o	o	0	0	ACTIVE
SMART	0	0	o	o	0	0	DUMB	SMART	0	0	o	o	0	0	DUMB
FRIENDLY	0	0	o	o	0	0	UNFRIENDLY	FRIENDLY	0	0	o	o	0	0	UNFRIENDLY

THIS SCHOOL								TEACHERS							
GOOD	0	0	o	o	0	0	BAD	GOOD	0	0	o	o	0	0	BAD
WORTHLESS	0	0	o	o	0	0	VALUABLE	WORTHLESS	0	0	o	o	0	0	VALUABLE
WEAK	0	0	o	o	0	0	STRONG	WEAK	0	0	o	o	0	0	STRONG
HAPPY	0	0	o	o	0	0	UNHAPPY	HAPPY	0	0	o	o	0	0	UNHAPPY
LAZY	0	0	o	o	0	0	ACTIVE	LAZY	0	0	o	o	0	0	ACTIVE
SMART	0	0	o	o	0	0	DUMB	SMART	0	0	o	o	0	0	DUMB
FRIENDLY	0	0	o	o	0	0	UNFRIENDLY	FRIENDLY	0	0	o	o	0	0	UNFRIENDLY

_____(TRIBE'S) WAY OF LIFE								WHITE PEOPLE"S WAY OF LIFE							
GOOD	0	0	o	o	0	0	BAD	GOOD	0	0	o	o	0	0	BAD
WORTHLESS	0	0	o	o	0	0	VALUABLE	WORTHLESS	0	0	o	o	0	0	VALUABLE
WEAK	0	0	o	o	0	0	STRONG	WEAK	0	0	o	o	0	0	STRONG
HAPPY	0	0	o	o	0	0	UNHAPPY	HAPPY	0	0	o	o	0	0	UNHAPPY
LAZY	0	0	o	o	0	0	ACTIVE	LAZY	0	0	o	o	0	0	ACTIVE
SMART	0	0	o	o	0	0	DUMB	SMART	0	0	o	o	0	0	DUMB
FRIENDLY	0	0	o	o	0	0	UNFRIENDLY	FRIENDLY	0	0	o	o	0	0	UNFRIENDLY

DORMITORY								_____							
GOOD	0	0	o	o	0	0	BAD	GOOD	0	0	o	o	0	0	BAD
WORTHLESS	0	0	o	o	0	0	VALUABLE	WORTHLESS	0	0	o	o	0	0	VALUABLE
WEAK	0	0	o	o	0	0	STRONG	WEAK	0	0	o	o	0	0	STRONG
HAPPY	0	0	o	o	0	0	UNHAPPY	HAPPY	0	0	o	o	0	0	UNHAPPY
LAZY	0	0	o	o	0	0	ACTIVE	LAZY	0	0	o	o	0	0	ACTIVE
SMART	0	0	o	o	0	0	DUMB	SMART	0	0	o	o	0	0	DUMB
FRIENDLY	0	0	o	o	0	0	UNFRIENDLY	FRIENDLY	0	0	o	o	0	0	UNFRIENDLY

Check the statements that describe you best.

I am an American _____
I am an Indian _____
I am a White _____
I am a member of _____tribe.
I am _____

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THE INDIAN SELF-IMAGE AS EVALUATED WITH THE SEMANTIC DIFFERENTIAL

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The Semantic Differential can be used as a test of attitude toward an object. In this research, the semantic differential was used to measure the attitude of Indian youth toward themselves. Since an identical instrument had been used with adolescents in other societies, it is possible to compare the Indian groups among themselves and with non-Indian groups. This paper reports the results of these comparisons.

THE INDIAN SELF-IMAGE AS EVALUATED WITH THE SEMANTIC DIFFERENTIAL

Robert J. Havighurst

The Semantic Differential can be used to measure the attitude toward oneself as well as toward other persons or institutions. With this instrument, it should be possible to get some information about the self-image of Indian youth. Do they describe themselves in favorable, neutral, or derogatory terms? By using the same instrument with Indian boys and girls and also with non-Indian groups, it should be possible to make comparisons between Indians and non-Indians, and also between sub-groups among the Indian respondents to the test.[1]

The Semantic Differential is a relatively easy measure to use with respondents who do not read English easily. It makes a minimum use of language. It has been used successfully with children below the age of 10, and it has been used with apparent success for comparison of teenagers of various social classes, age groups, and ethnic groups.

The form of the SD used in this study was partially identical with a form which has been used by Havighurst and others with teenagers in Chicago, Buenos Aires, Kansas City, and Puerto Rico. The instrument asked for a rating of several concepts, including Myself, My Future, Teachers, This School, Indians, Indian Way of Life, and White People's Way of Life, on several pairs of adjective scales, including Good-Bad, Happy-Unhappy, Strong-Weak, and

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[1] When one asks a respondent to rate himself on a Semantic Differential, one runs into the problem of the "social desirability" effect. Will not respondents rate themselves "better" than they actually feel about themselves, so as to make a good appearance? Heise, [Heise, David R. "Some Methodological Issues in Semantic Differential Research." Psychological Bulletin, 1969, 72, 406-422.] in reviewing research with the SD, concludes that there probably is a considerably social desirability effect when certain "salient" concepts are used, such as "Myself" and "my home culture." However, if one uses the SD data to compare two or more groups, without giving an absolute value to the group scores, one might assume that social desirability effects are the same in the several groups to be compared. This assumption is one we must make in this research, though we must also recognize that the effect of social desirability considerations on respondents may be different in different cultures --different between Spanish-American and Anglo-American groups, for example, or between various Indian groups.

Active-Lazy. These all have a substantial weight on the Evaluative Factor, though Strong-Weak and Active-Lazy (Passive) have a considerable weight on the Power or Potency Factor.

Thus we are in a position to compare the Self-Image and the Attitude Toward Teachers of the Indian groups with attitudes by non-Indian boys and girls of the same ages in Chicago and elsewhere. If Indian youth are severely alienated, and if they are antagonistic toward teachers and schools, we might expect the Semantic Differential to tell us so.

The scales used allowed for six ratings (rather than the seven often used on a SD). Thus a respondent could score from 1 to 6 on a given scale. The scores reported in the tables are averages over the six steps of the instrument, with the most favorable end of the scale always scored (1) and the most unfavorable scored (6). (Several of the scales were reversed in the instrument, but they are reported here in a manner that makes the lowest scores indicate the more favorable responses.)

The scores of Indian boys and girls are grouped into age groups; 8-11; 12-14; 15-17; and 18-20. Since the comparison groups were always 13 to 17, only the 12-14 and 15-17 Indian groups are used in the comparisons. For this part of the comparison, the respondents from a given Field Center are combined into one large group. Comparisons between the individual school groups will be made in another paper.

The mean score for a group on a given scale was computed in the usual way, and mean scores are reported in the Tables. When two mean scores differ somewhat, the question of the statistical significance of this difference is raised. With a Semantic Differential, a t-test for the significance of the difference between two means is seldom useful, because the distribution of scores on the SD is seldom even approximately normal. It ordinarily shows a modified J-curve. A chi-square procedure is more satisfactory. This is done by comparing frequencies on a given scale from two groups of respondents.

Where the number of responses at a given point on a scale is below 5, this category is combined with a contiguous one. We have computed the chi-square value for a number of comparisons, and can indicate the level of significance of any difference which we report as worth attention.

The groups whose scores are reported here were the following:

Plains Indians. Five Indian communities (Blackfeet, Sioux, Navajo) studied by the University of Colorado Field Center. 150 boys and 160 girls in the age range 12-17 inclusive.

Southwest Indians. Ten Indian communities or schools (Pima, Papago, Apache, Hopi, Laguna, Acoma, Navajo) studied by the University of Arizona Field Center. 236 boys and 237 girls, aged 12-17.

Northwest Indians and Eskimos. Four Indian and one Eskimo communities or schools (Quinault, Makah, Tlingit, Eskimo) studied by the San Francisco State College Field Center. 129 boys and 120 girls, aged 12-17.

Minnesota-Wisconsin Indians. Three schools in Wisconsin and two in Minnesota (Chippewa, Menominee, Sioux) studied by the University of Minnesota Field Center. 86 boys and 74 girls, aged 12-17, mostly in schools where the great majority of students were Indian. There was also a junior high school in Minneapolis, called School C, with 21 Indian boys and 25 Indian girls, who were in the minority in this school, and are reported separately.

Lumbee Indians (North Carolina and Baltimore). Two Indian schools in Robeson County (North Carolina) with 21 boys and 25 girls. Also a junior high school group in Baltimore (Lumbee Indians) 23 boys and 28 girls, who were a minority group in the school. These were studied by the North Carolina State University Field Center.

Oklahoma Indians. Two communities in north central Oklahoma, with a

minority of Indian students (Pawnee and Ponca), 14 boys and 27 girls. These were studied by the Oklahoma State University Field Center.

Hoopa Indians. Students in the high school at Hoopa, California (27 boys and 21 girls) were studied by Professor James H. Myers, of the Chico State College.

Chicago Indians. Students in several elementary schools and a high school in Chicago, with 36 boys and 33 girls, who were a minority in the schools they attended. They were studied by the University of Chicago staff.

Chicago and Colorado White Students (Controls). White students in the same schools that were studied by the Colorado and Chicago research teams were asked to respond to the SD so that their scores might be used for comparison purposes. There were 52 boys and 52 girls aged 12-17.

Chicago Working-Class Students. In 1961, a group of 50 boys and 50 girls in the 8th and 11th grades of a Chicago suburb were tested with a form of the SD which was comparable to the form used with the Indian students. These students were all from upper-working class families. This has been reported in the work cited.[2]

Kansas City Maladjusted Boys. In 1964 a group of 14-15 year old boys in the Kansas City Public Schools were given a form of the SD which was comparable with the form used in this study. There were approximately 300 boys, all screened out in the 7th grade as possible dropouts and delinquents. These boys were studied through the following years, and assessed at the age of about 18 as belonging in one or the other of two categories: Adaptive and Maladaptive--127 in the first and 150 in the second category. These are only comparative terms, since the Adaptive Group were barely at the level of minimal competence in school and at work. Thus this study provides us with two com-

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[2]Havighurst, Robert J. et.al. A Cross-National Study of Buenos Aires and Chicago Adolescents. (Bibliotheca "Vita Humana" Fasc. 3) New York and Basel (Switzerland), 1965.

parison groups of boys who were visibly maladjusted at the ages of 13 or 14, and with marginal adjustment or serious maladjustment at the age of 18.

Rees--Virginia White Students. The SD was administered by Miss Martha Rees of the Colorado research staff to a group of high school students in a Virginia middle-class suburb of Washington, D.C. There were 25 boys and 25 girls. They may serve as a kind of comparison group.

Buenos Aires Students. As part of the cross-national study of Havighurst, et.al., 50 boys and 50 girls in Buenos Aires were given the same form of the SD that was given in Chicago, but in a Spanish version. They, too, were from upper working-class families.

Puerto Rico Students. In 1967-68 a field study was made by Professor Guy Manaster at the University of Puerto Rico, which was parallel to the Chicago-Buenos Aires Study. An upper working-class sample of 150 boys and 150 girls was given the SD. These students were from the cities of San Juan and Ponce, and from a rural area in central Puerto Rico.

Results of the Comparative Study

Boys and girls were asked to rate the concept Myself on the following adjective scales: Good-Bad, Happy-Unhappy, Strong-Weak, Active-Lazy, Valuable-Worthless, Smart-Dumb, Friendly-Unfriendly. (Strong-Weak and Active-Lazy were reversed on the instrument, so as to correct any tendency to mark the instrument automatically, without paying attention to the separate scales.) The first four adjective-pairs have been used in SD studies with other groups of the same age (as described above). Therefore we can compare the self-evaluation of Indian students with that of non-Indian students of the same age in several different societies.

Much has been written and said about "alienation," lack of "identity," and lack of self-confidence of Indian youth as they reach adolescence. A statement of this sort may be made as a comparison: "Indian youth are less

sure of themselves than non-Indian youth." or "Indian youth are more alienated, as measured by a certain instrument, than non-Indian youth." This kind of statement is seldom made, because there is very little comparative data of this sort. More generally, a statement of this sort is made as a general assertion, with the implication that Indian youth are below the average of other youth or are below some desirable level, which is not defined. It seems more useful to make comparative statements about Indian self-evaluation, with the nature of the comparison stated clearly. We have tried to do this in this study with the Semantic Differential.[3]

Comparing Indians with Other Groups. Tables 1A and 1B compare nine groups of Indian adolescents with parallel groups of Anglo-American and Latin-American youth. With only minor exceptions, the non-Indian youth are of the same socio-economic level as the Indian youth. That is, they are from working-class homes, possibly slightly higher in relative income than is true of the Indian youth. They are defined in the ordinary social science terminology as upper working-class.

The most directly comparable groups are the Chicago-Colorado "controls," and the Chicago and Plains Indians. The "controls" are the non-Indian students in the same schools and classes with the Indian youth who were studied.

For boys, the mean self-evaluation score is 2.06 for the controls and 2.11 and 2.16 for the Plains and Chicago Indians respectively. The differences

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[3]It is possible to make comparative statements about Indian youth if they are asked to respond to a standardized psychological instrument where the norms for other groups are published or available. This has been done in a few cases. For instance, it has been done with the Minnesota Multiphasic Personality Inventory. In such a case, it is necessary to establish the validity of the instrument for the group being studied--the Indian group. In our judgment, the MMPI is not valid for use with ordinary Indian adolescents, who, on the average, have relatively poor reading ability. If the MMPI was used with a group of Indian adolescents, their scores should be compared with those of a group of Anglo adolescents of similar reading ability and socioeconomic status. If both groups turned out to be low, then the interpretation of the results would not emphasize the ethnic factor.

among these figures are not statistically significant. For girls, the controls have a mean score of 1.98, while the Plains and Chicago Indian female groups score 2.19 and 2.30 respectively. These differences are statistically reliable at the .05 level or less. However, the differences are not very great in an absolute sense. We note here that the Indian girls appear to be more self-critical than the Indian boys, though this is due largely to the sex difference in scores on the Strong-Weak scale. It seems natural and not an indication of self-rejection for girls to rate themselves below boys on a Strong-Weak scale. This will be discussed more fully below.

The Chicago (1961) data for Anglo-Americans give identical average scores for girls with the controls, but show an average of 1.90, compared with 2.06 for control-group boys. This would indicate a reliable difference in favor of Chicago Anglos over Chicago Indians, (score 2.16), though relatively small in an absolute sense.

For boys we have a very useful set of comparison scores from Kansas City, where two groups of lower working-class boys were studied--one of which adapted with barely acceptable success to the society during adolescence, while the other had a history of continued delinquency and school maladjustment. The Kanses City scores are reliably different in the direction of self-rejection from the Indian scores.

The Latin-American scores show a relatively large sex difference, with boys giving a more positive picture of themselves than girls do. We would interpret this hypothetically as a correlate of the often-stated Latin-American belief in male superiority. Latin American boys rate themselves more positively than Indian boys, but Latin American girls rate themselves at about the same level as Indian girls do.

We may summarize the comparisons of Indian boys and girls with Anglo-American youth as follows: There is no reliable difference, on the average, between Indian boys and Anglo-American boys of the same socioeconomic level.

For girls there is a slight but statistically reliable difference, the Anglo-American girls rating themselves more favorably.

Inter-group Comparisons among Indians. Looking at the Indian data for the various sub-groups it is clear that there are some differences of fairly large magnitude between groups in self-evaluation. Since some of the groups in Table 1 are composites of several tribal groups from several different communities, it seems wise to examine the data, community by community and school by school, in the search for meaningful differences. This will be done in another paper. The largest composite groups--Plains, Southwest, and Northwest--are not reliably different in their average scores, though there are reliable differences among the smaller groups that are barely at the .05 level of significance. (For two groups of approximately 25 members each, a difference of .50 is reliable at the .05 level.)

For instance, the Hoopa group and the North Carolina group are reliably different from the all-Indian average in the favorable direction, for boys and girls. On the other hand, the Minnesota boys are reliably different from the all-Indian average in the unfavorable direction, as are the School C girls. This suggests that there is some influence in the Hoopa and in the Robeson County communities that promotes self-confidence and positive self-evaluation in young Indians; while there is some influence in the Wisconsin and the School C situations (not necessarily in the schools) that contributes to alienation and negative self-evaluation in young Indians.

These communities and these data should be studied further for clues to the sources of positive and negative self-evaluation of Indian youth.

Another striking difference is that between the Indian girls and the Indian boys. This is summarized in Table 2, and shown in more detail in Table 1A. Table 1A shows the Indian boys to have a more favorable average score than girls in 8 of 10 comparisons. This is not true for Anglo-Americans, but it is true for Latin-Americans. It should be added at once that much of the dif-

ference between the sexes comes from the Strong-Weak scale, where boys give themselves a more favorable self-evaluation than girls do. The mean score for Indian girls would drop from 2.21 to 2.13 if the Strong-Weak scale were omitted, while the boys' score would remain at 2.06. There is just a little indication that Indian girls evaluate themselves slightly more in a negative direction than Indian boys in the SD on scales that are fairly neutral. There is similar evidence from the Self-Esteem Inventory.

Conclusion

The Semantic Differential, when used to compare the self-evaluation of Indian teen-agers with the self-evaluation of non-Indian teenagers of comparable socioeconomic status, indicates that Indians have about the same level of self-evaluation as non-Indians. When the self-evaluations of Indian boys are compared with those of distinctly maladjusted groups of Anglo-American boys, the Indian boys appear to be in a relatively favorable situation. There is some evidence that Indian girls are slightly more self-critical than Indian boys--as this is measured by the SD.

Table 1A

Comparison of Group Mean Scores on the Semantic Differential

Indian Groups on MYSELF, ages 12-17

Group	Plains	South-west	North-west	Okla-homa	North Caro.	Balti-more	Hoopa	Minn-sota	School C	Chi-cago
M A L E S										
Number	150	236	129	14	21	23	27	86	21	36
Adj.-Pair										
Good-Bad	2.18	2.07	2.20	2.00	1.81	2.43	1.81	2.41	2.19	2.08
Happy-Sad	2.24	1.96	1.83	1.85	1.57	1.65	1.30	1.85	2.14	1.95
Strong-Weak	2.07	2.30	2.27	2.14	1.95	2.00	1.52	2.53	1.76	2.22
Active-Lazy	1.93	2.40	2.23	2.74	1.81	2.22	1.52	2.67	2.19	2.38
Average	2.11	2.18	2.13	2.18	1.79	2.08	1.54	2.39	2.07	2.16
F E M A L E S										
Number	160	237	120	27	25	28	21	74	25	33
Good-Bad	2.02	2.21	2.22	2.18	1.68	2.04	1.71	2.34	2.56	2.17
Happy-Sad	2.64	1.89	2.06	2.12	1.48	1.61	1.57	2.25	2.36	1.88
Strong-Weak	2.27	2.53	2.81	2.50	2.16	2.75	1.81	2.73	2.32	2.65
Active-Lazy	1.84	2.66	2.50	2.76	1.44	2.43	1.43	2.27	2.84	2.83
Average	2.19	2.32	2.40	2.39	1.69	2.21	1.63	2.40	2.52	2.38

Note: Low score is the more favorable response.

Table 1B

Comparison of Group Mean Scores on the Semantic Differential

Non-Indian Groups on MYSELF, ages 12-17.

	M A L E S						
	Anglo-American					Latin-American	
Group	Chicago 1961	Chicago-Colorado 1969	Kansas City 1964 Adap.	Kansas City 1964 Mal.	Virginia-D.C. 1970	Buenos Aires 1961	Puerto Rico 1968
Number	50	52	127	150	25	50	150
Good-Bad	2.18	1.94	2.41	2.64	1.43	1.69	1.54
Happy-Sad	1.52	1.97	2.18	2.52	1.68	1.66	1.61
Strong-Weak	2.16	2.23	2.30	2.36	1.81	2.05	2.25
Active-Lazy	1.73	2.11	2.26	2.52	2.17	2.00	1.94
Average	1.90	2.06	2.29	2.51	1.77	1.85	1.84

	F E M A L E S						
Number	50	52			25	50	150
Good-Bad	1.81	1.96			1.65	1.87	1.72
Happy-Sad	1.79	1.63			1.72	1.86	2.12
Strong-Weak	2.58	2.23			2.35	2.92	3.17
Active-Lazy	1.72	2.09			2.30	1.95	2.25
Average	1.98	1.98			2.01	2.15	2.32

Note: The low score is the more favorable response.

Table 2

Male-Female Comparisons on the Semantic Differential

Indian and Non-Indian Responses by Sex of Respondent

Group Average Scores, ages 12-17

MYSELF

	Indian		Anglo-American		Latin-American	
Adjective pair	Males	Females	Males	Females	Males	Females
Good-Bad	2.12	2.11	2.02	1.81	1.61	1.80
Happy-Sad	1.84	1.95	1.88	1.71	1.63	2.00
Strong-Weak	2.08	2.45	2.13	2.39	2.15	3.05
Active-Lazy	2.21	2.33	2.10	2.04	1.96	2.10
Average	2.06	2.21	2.03	1.99	1.82	2.23

Note: The low score is the more favorable response.

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THE SELF-ESTEEM OF AMERICAN INDIAN YOUTH

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It has been said by some observers of Indian education that a very large proportion of Indian boys and girls are severely damaged by negative feelings of "alienation," "depression," and "rejection" by the society which surrounds them. If this is true, we would hope that educational methods would be used to help Indian youth become more secure and positive in their feelings about themselves.

This paper reports the relationship between "self-esteem"--as this construct has been measured in the National Study--and age, sex, and the proportions of Indian students in the various schools. The data tend to disagree with the opinions of the several observers noted above.

THE SELF-ESTEEM OF AMERICAN INDIAN YOUTH

Philip H. Dreyer
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As reported in an earlier paper, most studies of American Indians have been conducted by anthropologists who relied upon participant reports and global estimates of what various studies called the "Indian self," "cultural assimilation," and "cultural identity." Many of these studies made references to the "self-concept," but few, if any, attempted to measure it carefully with psychological instruments. As part of the larger National Study of American Indian Education, this study collected data from over 2,000 Indian students who attended public, mission, and BIA schools from Alaska to North Carolina, using two paper and pencil self-report questionnaires dealing with the Indian student's self-concept.

The purpose of this paper is to report the findings of this study regarding the influences of age, sex, and majority or minority status in school upon the self-concept of the various Indian groups studied. For the most part, only comparisons between these Indian groups will be made. However, when appropriate, comparisons to a small group of Non-Indian Controls will also be made in the interest of adding information to questions of the uniqueness of the Indian groups within the larger society.

The self-concept data will be interpreted by readers in mental-health terms. It will be supposed that a favorable self-concept as measured by our instruments is evidence of good mental health. We have some reservations concerning this proposition, as will be seen, but we also believe that the self-concept as we have defined and measured it has some relevance to the mental health of Indian children and youth.

Sample

The final sample of American Indian students for whom instruments were satisfactorily completed consisted of 2,007 youths, 998 males, 1,009 females,

ranging in age from eight to twenty. In addition, a non-Indian control group was included, consisting of 168 youths, 92 males and 76 females.

The groups whose scores are reported here are the following:

Plains Indians. Five Indian communities (Blackfeet, Sioux, Navajo) studied by the University of Colorado Field Center--253 boys and 242 girls in the age range 8-20 inclusive.

Southwest Indians. Ten Indian communities or schools (Pima, Papago, Apache, Hopi, Laguna, Acoma, Navajo) studied by the University of Arizona Field Center--395 boys and 364 girls, aged 8-20.

Northwest Indians and Eskimos. Four Indian and one Eskimo communities or schools (Quinault, Makah, Tlingit, Eskimo) studied by the San Francisco State College Field Center--186 boys and 143 girls, aged 8-20.

Minnesota-Wisconsin Indians. Three schools in Wisconsin and two in Minnesota (Chippewa, Menominee, Sioux) studied by the University of Minnesota Field Center--97 boys and 85 girls, aged 8-17, mostly in schools where the majority of students were Indian. There was also a junior high school in Minneapolis, called School C, with 21 Indian boys and 25 Indian girls, who were in the minority in this school, and are reported as part of the Urban Indian group.

Lumbee Indians (North Carolina and Baltimore). Two Indian schools in Robeson County (North Carolina) with 26 boys and 31 girls, aged 8-17. These were studied by the North Carolina State University Field Center.

Oklahoma Indians. Two communities in north central Oklahoma, with a minority of Indian students (Pawnee and Ponca)--26 boys and 39 girls. These were studied by the Oklahoma State University Field Center.

Urban Indians. Students in several elementary schools and a high school in Chicago, with 59 boys and 55 girls, aged 8-17, studied by the University of Chicago staff, and 21 boys and 25 girls, aged 12-17, who were students at a junior high school in Minneapolis, studied by the University of Minnesota staff. All of these Indians were in a minority among students at the schools they attended.

Chicago and Colorado Non-Indians (Controls). White, Black, and Oriental students in the same schools studied by the Chicago research staff and white students in the same schools studied by the Colorado staff, with 87 boys and 75 girls, age 8-17.

Method

Two paper and pencil self-report instruments were used. The first was a Twenty Statement Self-Esteem Inventory modeled after a similar instrument developed by Coopersmith.[1] This consisted of a series of statements, such as "I think I'm as good as anybody else." and "No one pays much attention to me at school." to which the subject was asked to check one of two spaced labeled "like me" and "not like me." These statements reflected attitudes about the self in relation to peers, family, and school. The items were worded in both positive and negative forms to prevent response-set, and four items were repeated in different form to act as a check on the consistency of response. Each of the statements was scored "1" or "0" with "1" indicating positive self-regard. This resulted in the instrument having a possible range of scores from zero, indicating low self-esteem, to twenty, indicating high self-esteem.

The second instrument was a semantic differential inventory using the

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[1] Coopersmith, Stanley. "A Method for Determining Types of Self-Esteem." Journal of Abnormal and Social Psychology, 1959, 59, 87-94. and The Antecedents of Self-Esteem. San Francisco: W.H. Freeman and Co., 1967.

concept "myself" which was rated on a six-point scale for the adjective pairs "good-bad," "worthless-valuable," "happy-unhappy," "weak-strong," "lazy-active," "smart-dumb," and "friendly-unfriendly." These adjective pairs were chosen deliberately to stress Osgood's[2] "evaluation" factor, using five pairs for the "evaluation" factor and one pair each for the "potency" and "activity" factors. For each adjective pair the subject's response was scored from "1" to "6" with "1" indicating positive and "6" negative value. The mean score for these seven adjective pairs was then used as the second "self-esteem" score, with a possible range of from one, indicating high "self-esteem," to six, indicating low "self-esteem."

It was hoped that these two instruments would each measure the same theoretical construct--i.e., the "phenomenal self"--and that both would show a high degree of reliability and concurrent validity, thus strengthening any claims that were made about their resulting measurements. However, a careful study of the split-half reliability showed them to have only a moderate degree of reliability, ranging from a low of +.34 to a high of +.65, and a moderate degree of concurrent validity, with correlations between the two instruments being positive for all groups with a median correlation of .41.[3] These reliability and concurrent validity statistics led to the conclusion that the two instruments were measuring aspects of the same theoretical construct but could not be said to be measuring exactly the same construct. Hence any conclusions made about the self-concept from studying either instrument alone would be lacking in completeness. To derive a more complete score for self-concept than either instrument alone provided, a third score was made up which combined the two separate scores.

This third measure was developed by normalizing the distribution of

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[2]Osgood, Charles E., Suci, G.J., and Tannenbaum, P.H., The Measurement of Meaning. Urbana: University of Illinois Press, 1957.

[3]For a complete discussion of the validity study, see "The Meaning and Validity of the 'Phenomenal Self' for American Indian Students." Series III. No. 7.

"myself" scores from the semantic differential inventory and comparing them with the distribution of scores from the Twenty Statement Self-Esteem inventory to form a scale of values from one to twenty that were equivalent to the "myself" scores. This was done by assigning the mean score for "myself" a value of thirteen on the third scale and then arbitrarily fixing similar equivalent values from 14 to 20 for "myself" scores above the mean and values from 1 to 12 for "myself" scores below the mean. The scale was developed from data taken from Minnesota-Wisconsin Indians and Northwest Indians and Eskimos originally, 514 cases, and then applied to the other Indian groups. The equivalent value of from one to twenty for each subject's "myself" score was then added to his score from the Twenty Statement Self-Esteem inventory, so that a new score, called "Combined Self," was then devised for each subject. The "Combined Self" score then had a range of three, indicating low "self-esteem" to a high of forty, indicating high "self-esteem;" a normal distribution, and high correlation with each of the two original measures (+.85 or higher with the mean score for the Twenty Statement Self-Esteem inventory and -.80 or higher with the mean score for "myself" from the semantic differential inventory). It was this "Combined Self" score which was used throughout this study as the measure of "self-esteem."

Age and Self-Esteem. The first issue studied was the effect of age upon the "self-esteem" of Indian students. While most self-concept ratings show stability over time for white subjects, some Indian studies have noted that there appears to be a kind of "adolescent crisis" phenomenon among American Indians; i.e., a drop in level of cultural adjustment, school achievement, and self-esteem that occurs about the beginning of adolescence. It is claimed that Indian youngsters drop in school achievement dramatically beginning in the seventh grade and continuing through the rest of high school. The Indian adolescents have a high dropout rate. The Indian adolescent, according to this hypothesis, is caught in a cultural conflict between his native Indian culture and the dominant white culture; he has few adult role models, suffers from what Erickson calls "identity diffusion," and exhibits clinical symptoms of alienation and depression.[4]

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[4]Bryde, John. The Sioux Indian Student: A Study of Scholastic Failure and Personal Conflict. Ann Arbor, Michigan: University Microfilms, 1965.

To examine this hypothesis, this study divided the "self-esteem" data into four age groups--one pre-adolescent group, ages 8-11, and three adolescent groups, ages 12-14, 15-17, and 18-20. The results of this breakdown are given in Table 1 for all groups studied.

The data in Table 1 indicate that, while the four largest Indian groups tended to drop in "self-esteem" score between the ages of 8-11 and 12-14, for only two groups was this drop significant statistically (Plains Indians, $p < .01$, and Southwest Indians, $p < .005$.) The three smallest groups, North Carolina, Oklahoma, and Urban Indians, increased in "Self-Esteem" score between the ages of 8-11 and 12-14, although not significantly. Thus these data did not confirm the "adolescent crisis" hypothesis in most cases, although there was a trend supportive of the hypothesis for the four largest Indian groups.

The hypothesis was also not confirmed for the adolescent age groups--ages 12-14, 15-17, and 18-20. For these ages all groups except two--15-17 year old Plains and Urban Indians--tended to increase in "self-esteem" score from the 12-14 year old level, contrary to the expectation derived from the hypothesis. For one group, Northwest Indians, there was a significant rise in "self-esteem" score between the ages 15-17 and 18-20 ($p < .001$). The only group which showed a steady, although slight, drop in "self-esteem" score across all age groups was the Non-Indian Control group, thus indicating that the "adolescent crisis" phenomenon, as it concerns "self-esteem" measured by our instruments does not seem to accurately describe the Indian students in this sample.

In summary, the "self-esteem" scores of the Indian students in this study did tend to decrease from age 8-11 to 12-14, a drop which was significant for two groups out of seven. After age 12-14, however, the "self-esteem" scores tended to increase slightly for ages 15-17 and 18-20, in some cases reaching or surpassing the 8-11 year level. The "adolescent crisis" hypothesis, which predicted that "self-esteem" would decrease markedly between the ages of 8-11 and 12-14 and continue to decrease for older age groups, was

not confirmed.[5]

In evaluating this evidence concerning the "adolescent crisis" hypothesis, it should be remembered that the subjects in this study were all students in school. Since only 60 percent who are in 8th grade stay on to finish high school, school attendance itself tended to act as a selective force, suggesting that Indian young people who attended school were more likely to be "better adjusted," higher in achievement, and commanding higher respect in their communities than their non-school attending peers. Thus the "self-esteem" scores may have reflected the students' awareness of their relatively better position within the Indian community and may not have been an accurate indication of the "self-esteem" patterns of the total population of Indian youths.

Sex and Self-Esteem. In order to better understand the complexity of the Indian self-concept, the results of Table 1 were broken into two groups by sex. Given the widely different sex roles taught by the various Indian groups in this study, it was not feasible to generate a sex difference hypothesis that would be applicable to all groups in this study. Instead, this study sought to find out whether the data showed any interesting differences between boys and girls who were students in English-speaking schools, and if there appeared to be sex differences with regard to the "adolescent crisis" phenomenon, described above. The results are given in Table 2.

Looking first at age changes across the two sexes, it should be noted that Indian girls were more likely than boys to show a significant decrease in "self-esteem" from pre-adolescence to adolescence. Three of the four largest

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[5]It should be noted that Bryde's thesis tested the "adolescent crisis" phenomenon for Oglala Sioux Indians only. Youth of another Sioux reservation were part of our group of Plains Indians and did show a significant drop in "self-esteem" between the ages 8-11 and 12-14 and a further slight drop in the 15-17 year old group which would seem to give limited support to Bryde's findings.

Indian groups showed a significant drop in "self-esteem" between ages 8-11 and 12-14 for girls (Plains Indians, $p < .001$; Southwest Indians, $p < .01$; and Minnesota-Wisconsin Indians, $p < .01$), while only one group showed a significant decrease for boys (Southwest Indians, $p < .05$). Thus, if the "adolescent crisis" hypothesis holds at all, it would appear to be a more accurate description of girls than boys. After this drop between pre-adolescence and adolescence, however, both girls and boys "self-esteem" scores tended to increase for ages 15-17 and 18-20, with Northwest Indians and Eskimos showing a significant increase for both boys and girls over the last two age groups (girls, $p < .05$; boys, $p < .025$).

These generalizations did not seem to hold for the Urban Indian group, where girls increased in "self-esteem" while boys decreased from pre-adolescence to adolescence, although neither of these changes was statistically significant when the t-test was applied. Also, comparisons with the Non-Indian Control group revealed no such sex differences; both girls and boys in the control group decreased slightly in "self-esteem" across the age groups.

Looking next at sex differences (Table 3) in "self-esteem" scores within age groups, it appeared that there were no significant trends in the pre-adolescent group; three out of five Indian groups rated boys higher than girls, while two rated girls higher. For the adolescent age groups, there was a strong tendency for Indian boys to rate higher in "self-esteem" than girls. Table 4 gives the results of averaging the "self-esteem" scores of males and females for age groups 12-14 and 15-17 with differences and significances derived from t-tests for the means.

The only Indian group which consistently produced this strong sex difference was Northwest Indians and Eskimos, where boys rated significantly higher than girls at all age levels. For the other groups, as can be seen in Tables 3 and 4, the adolescent boys produced higher ratings consistently only for the two middle age groups. It should be noted that the Control group did not show this effect; in fact, among the controls adolescent girls tended to rate themselves more positively than the boys. Also noteworthy are the

Urban Indians who rated adolescent boys higher than girls, but not significantly so, a finding which seems to put them in the middle between the other Indian groups and the Non-Indian Controls.

There are at least two possible explanations for this sex difference among the adolescent group. The first is that the semantic differential concept "myself" contained the adjective pair "strong-weak" which as Havighurst notes elsewhere, tended to find boys rating themselves much more positively than girls; i.e., boys tended to rate themselves as being "strong," while girls tended to say they were "weak." The great differences in ratings on this one adjective pair tended to influence the overall rating for "myself" which in turn changed the rating for "Combined Self" in some cases. A second reason is less conclusive. There seems to be a general tendency for adolescent girls to be more self-critical and self-doubting than adolescent boys, in some special groups. We are not prepared to explain this, and there are exceptions.

In sum, the data from this study showed that Indian girls showed a more marked decrease in "self-esteem" rating than boys at adolescence and that Indian girls rated themselves significantly lower in "self-esteem" during adolescence than did boys. These changes were less marked for Urban Indians, while the Non-Indian Control group showed no such sex differences.

Mental Health Interpretation of Self-Esteem Data. Before continuing with our analysis of the self-esteem data, it is appropriate to consider the mental health implications of these data for Indian youth. We have seen that there is little or no drop in self-esteem scores between the age groups 8-11 and 12-14. We have seen that the differences between boys and girls in self-esteem scores do not appear to have any mental health implications.

What, then, do the self-esteem data signify? If the data are reliable and if the data possess construct validity, we believe they tell us:

1. How the Indian youth perceives and evaluates his "phenomenological self."

2. How comfortable the Indian youth feels in his present situation. This feeling is influenced by (a) the support he gets from his age-mates; (b) the emotional support he gets from his family and neighbors; and (c) the support he gets from his teachers or employers or other adults with whom he comes into contact.

The self-esteem data reflect the social adjustment of Indian youth rather than their mental health as a psychiatrist would use the term. We doubt that any paper and pencil test would give valid information about the mental health of Indian adolescents in the psychiatric sense. Consequently, we have grave doubts concerning the validity of the Minnesota Multiphasic Personality Inventory for use with Indian adolescents as a group. The MMPI was created for use in diagnosing adults who might suffer from psychosis. Then it was applied to normal groups of people as a test of tendencies of groups of people toward various kinds of deviant behavior. Though not designed for use with adolescents, it has been used as a group test to compare various groups of adolescents with respect to delinquency and to other forms of deviant behavior. But its validity and its value for use with adolescents to determine their mental health status has been seriously questioned.

This question has been raised by Bernard Spilka, who has made an intensive study of the attitudes of Oglala Sioux adolescents toward school and toward school achievement.[6] He has written:

> A number of researchers on the status and condition of the Indian today have applied personality tests to Indian children and youth. Among these are the MMPI, the Rorschach, and a wide variety of Self-Concept measures. Invariably the results of these studies portray the Indian in "mental health" or "adjustment" terms implying a psychologically disturbed state on the part of the Indian relative to a "normal" and desirable referent for the white child and white society. These notions are both

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[6] Spilka, Bernard. Alienation and Achievement Among Oglala Sioux Secondary School Students. Report to National Institute of Mental Health. Bethesda, Maryland, August, 1970.

> insulting to Indians and conceptually inappropriate. Lost sight of are the heritage of the Indian groups, the status relative to the mainstream of American society. . . . The use of "mental health," "medical" and "adjustment" models of behavior for explanatory purposes plus psychological instruments that surreptitiously introduce such assumptions simply work to hide the truth and protect the existing order.[7]

The Minnesota Multiphasic Inventory is especially open to criticism as a measure of the Indian adolescent's feelings about himself because many of the items are expressed in language which is difficult for poor readers to understand. Therefore when given to Indian youth in the 8th or 9th grade, it generally lacks validity. This is seen in the fact that the "F-scale" which is designed to discover respondents who (quoting the authors of the test) were "careless or unable to comprehend items," shows many high scores for the Indian adolescents and therefore indicates that the MMPI is not valid for use with these young people.[8]

Our conclusion is that the self-esteem and self-concept data from our study indicate that the great majority of Indian youth see themselves as fairly competent persons within their own social world. This social world is characterized for the majority of these young people by Indianness and by poverty.

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[7]Personal communication.

[8]It is for these reasons that we find it necessary to disagree with the claim by John F. Bryde [Bryde, John, op.cit.] that the Sioux Indian adolescents he studied suffered from "severe personality deviations and emotional problems." According to Hathaway and Monachesi [Hathaway, Starke R. and Monachesi, E.D. Adolescent Personality and Behavior. Minneapolis: University of Minnesota Press, 1963.] F-scores of 0-15 are within "valid" range, but F-scores of 16 and over indicate that the test is not valid. Bryde reports for eighth grade Indians a mean F-score of 14.61 with a standard deviation of 6.5. This means that approximately 42 percent of these students scored 16 or over on the F-scale. Their scores on the MMPI were all technically invalid. For the ninth grade Indian sample the mean F-score was 13.26, which means that some 35 percent of those students scored 16 or over, and their MMPI scores were technically invalid. Only when he reaches the 12th grade, where the Indian youth no doubt read much better than the 8th or 9th graders, does the mean F-score drop to 8.56. But for 12th grade Indian students there were relatively few MMPI scores reliably different from the scores of white students whom Bryde tested.

If they come into contact with expectations by teachers or others from the social world of the urban-industrial and middle-class society, we should expect them to show some doubts about their competence, and we should expect the self-esteem to be lowered.

Minority Group Status and Self-Esteem. One of the most frequent assertions of self-concept theorists is that the level of self-esteem is determined by the social context in which the individual exists. The individual comes to know his "self" as it is defined by "significant others" around him, and once a self-concept is firmly rooted it is evaluated according to the responses the individual receives from the "significant others" he later encounters. The level of so-called "self-esteem" then is based upon the individual's perception of himself in relation to others around him and their responses to him. Soares and Soares[9] used such an explanation to account for the fact that so-called "disadvantaged" youngsters had higher self-esteem ratings than "advantaged" youngsters when they were in elementary school with their "disadvantaged" peers, since the "disadvantaged" students judged themselves in relation to their peers within the homogeneous group. In high school, when the "disadvantaged" environment of early years to the heterogeneous environment of high school years. Such findings led this study to test out these notions by checking the self-esteem ratings of the Indian students against their status in school, namely, whether the Indian student was in a homogeneous, all-Indian environment or whether he was part of a small minority within a heterogeneous environment. The hypothesis was that minority group Indian students would have lower self-esteem ratings than majority group Indian students.

To test this hypothesis the data were divided by schools into four groups, two groups where the Indian students were less than 25 percent of the total school population, urban and rural-small city schools; and two groups

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[9]Soares, Anthony T. and Soares, Louise M. "Interpersonal and Self-Perceptions of Disadvantaged and Advantaged High School Students." Proceedings, American Psychological Association, 1970, 457-458.

where the Indian students were more than 80 percent of the school population, rural-small city and boarding schools. The mean scores for "Combined Self" ratings for these groups are given in Table 5.

The mean scores for these groups reported in Table 5 indicated that both minority groups had significantly lower "self-esteem" ratings (t test, $p < .025$) than rural and small city Indians who were in the majority of students in their schools. However, this difference did not hold for boarding school students in the majority whose scores were lower than all other groups, although not significantly lower than the minority group Indians. Our hypothesis was thus confirmed for rural and small city Indians but unconfirmed for boarding school students.

The self-concept does seem to be formed through interaction with the social environment and does appear to be evaluated within the context of the immediate social group. Thus the notion that lower class "disadvantaged" or "minority group" individuals have lower "self-esteem" ratings because of their status with the total American environment does not necessarily hold. As Soares and Soares noted and this study seemed to confirm, the individual's "self-esteem" is more dependent on the homogeneity of his immediate social environment than upon any larger social status. Thus, our Indian students who attended school in predominantly Indian student populations judged themselves against their Indian peers and rated themselves positively by those standards, while Indians who attended schools in predominantly non-Indian student populations judged themselves by several standards, some of which may have been hostile towards the Indian, so that these minority group Indians rated themselves lower in "self-esteem." For these reasons of complexity, assertions about the level of "self-esteem" of various groups should be made carefully, noting the group standard against which any individual conceptualizes and evaluates his "phenomenal self."

The Boarding school group was important for the qualifications which it forced on these statements about the nature of the "phenomenal self" and its evaluation. While for the purposes of this study the boarding schools were included in the majority Indian student group, their unusually low "self-esteem"

scores required that this group be examined more closely.

There were a number of educational and social requirements for admission to boarding school. However, most students came to these schools for one or more of four reasons. First, Indian students who lived in remote areas came because there was no other school available. Second, students who were unusually low in school achievement in public schools were referred to the boarding schools for remedial studies and special training. Third, students who were neglected by their parents or who lived in extremely crowded homes were referred to the schools by social agencies in order to improve their living conditions and to place them in an environment more conducive to school achievement. Fourth, students who showed numerous behavior problems or who were judged delinquent by local authorities were referred to the schools for reform and counseling. These four reasons were represented to varying degrees in the different schools, so that no two schools were exactly comparable. In most of the boarding schools these students had little contact with their families and relatively little contact with their home communities. Furthermore, while the total Indian student group usually meant that there were strong peer group formations, the staff and orientation of these schools tended to be white, Anglo-Saxon, rather than Indian. Most of the adult role models for these students were Anglo-Saxon. Furthermore, conditions at some of the boarding schools were conducive to low student morale and feelings of isolation, depression, and hopelessness.

For these reasons the boarding school group was unique among other Indian student groups and was characterized by wide differences in both student background and local conditions from school to school. Not all the boarding schools had low "self-esteem" scores, the highest being a school where most students came because there was no school within a long distance from their homes. However, the overall low level of "self-esteem" of the boarding school students seemed to result from the unique circumstances of the students who attended such schools and the unique position which such schools hold in the larger society.

Summary

This study of over 2,000 American Indian students measured the level of "self-esteem" using a Twenty Statement questionnaire and a semantic differential concept "myself" rated across seven adjective pairs. The scores from these two instruments were combined into a third scale, labeled "Combined Self" which was used to describe "self-esteem" in this study. An investigation of the "adolescent crisis" hypothesis revealed that Indian student "self-esteem" did not drop significantly from pre-adolescent to adolescent years for most groups and tended to increase slightly during adolescence, while the Non-Indian Control group decreased slightly in "self-esteem" over the years from ages 8 to 17. These results contradicted the hypothesis proposed by Bryde.[10] The data revealed further a significant sex difference in "self-esteem" ratings with adolescent girls generally rating themselves lower than adolescent boys. The level of "self-esteem" was then studied according to the student's minority or majority group status in his school. This showed that rural and small city Indians who were in the majority in their schools had significantly higher "self-esteem" scores than urban Indians and rural and small city Indians who were in the minority among students at their schools, while boarding school students who were in the majority at their schools had lower "self-esteem" scores than any of the other groups.

Discussion

This study attempted to study "self-esteem" as it related to several major variables, such as age, sex, and the minority group status of Indian students within their respective schools. The results of this study indicated that the "self" concept is a very complex one which must be studied more extensively before it is understood. The conclusion which seemed to emerge most clearly from this study is that the context within which an individual judges himself is critical to attaching meaning to his so-called "self-esteem" ratings. For example, as Soares and Soares noted and this study confirmed, a person who judges his "self" within a homogeneous social environment may rate himself higher in "self-esteem" than another person who judges his "self" within a

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[10] Bryde, John, op.cit.

heterogeneous social environment, so that crude expectations about the "self-esteem" of racial and ethnic minority group members in society cannot be taken seriously until the more immediate social environment of individuals is clearly understood. It is also possible that an individual may evaluate himself within the context of different social roles that he plays and that personality differences lead some people to be more "self" critical than others.

The emphasis of this study was upon comparing Indian students with other Indian students and not upon the comparison of Indian students with Non-Indian control groups. From Tables 1 and 4 it can be seen that the Non-Indian control group has a higher "self-esteem" rating than almost all of the Indian groups, regardless of age or sex. Before too much is made of this difference it should be remembered that the instruments used to measure "self-esteem" were modeled after instruments developed by white, Anglo-Saxon researchers originally for use with white, Anglo subjects. Hence, it is likely that the instruments contained cultural biases which would tend to favor non-Indian subjects. It has been noted earlier that concurrent validity correlations for the various groups were not high but tended to be higher for the Control group than for the Indian groups. This led to the speculation that the instruments measured aspects of the Indian "phenomenal self" but not all of it in any absolute sense. For Indians, who are often described as a cooperative rather than a competitive people, the "self-concept" may be best described by factors which the instruments in this study did not measure, so that comparisons of the Indians and non-Indians in this study may reflect the cultural bias of the instruments used rather than real differences in "self-esteem." Again, this points to the complexity of the "phenomenal self" and the need to exercise caution in making statements about the "self-esteem" of groups who have different cultural traditions and values than those of the researchers.

Table 1

Mean "Combined Self" Scores for Age Groups

	1 8-11			2 12-14			3 15-17			4 18-20		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Plains Indians	142	27.4	6.1	168	25.8	5.9	133	25.5	5.9	52	26.5	5.8
Southwest Indians	92	26.7	6.9	257	24.3	5.9	2.3	25.3	5.7	197	25.0	6.1
Northwest Indians and Eskimos	25	27.0	5.7	89	25.3	5.7	148	25.9	6.1	67	28.7	5.9
Minnesota-Wisconsin Indians	22	26.3	4.9	111	25.4	6.4	49	26.2	4.5			
No. Carolina Indians	10	29.2	5.5	14	29.4	4.0	33	31.1	3.7			
Oklahoma Indians	14	23.4	7.3	31	25.7	7.2	11	28.3	4.9	9	29.8	4.4
Urban Indians	21	25.5	7.4	81	25.6	6.4	12	23.4	5.4			
Non-Indian Controls	63	30.3	6.2	47	28.9	5.6	57	28.4	5.7			

Note: Probabilities of differences greater than those given:

Group 1-2 (Plains Indians) $p < .01$
1-2 (Southwest Indians) $p < .005$
4-3 (Northwest Indians) $p < .001$

Table 2

Mean "Combined Self" Scores for Age Groups by Sex

Males

Age Group	1 8-11			2 12-14			3 15-17			4 18-20		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Plains Indians	67	26.8	6.3	83	27.2	4.7	60	26.1	5.2	32	26.5	5.4
Southwest Indians	47	26.9	6.5	125	24.9	6.0	111	26.2	5.5	112	25.9	5.8
Northwest Indians and Eskimos	15	28.6	5.3	47	26.5	5.0	77	27.3	5.3	47	29.3	5.2
Minnesota-Wisconsin Indians	11	25.1	5.1	56	27.1	5.9	30	26.0	4.3			
Urban Indians	11	26.5	8.8	44	25.9	7.3	4	23.8	4.1			
Non-Indian Controls	39	29.7	6.1	26	28.0	5.6	22	28.8	6.7			

Significance of Difference: Plains (2-1) N.S.; Southwest (1-2) p .05; Northwest (4-3) p .025; Minnesota (2-1)N.S.

Females

Plains Indians	75	27.9	5.9	85	24.5	6.6	73	24.9	6.4	20	26.5	6.6
Southwest Indians	45	26.6	7.3	132	23.8	5.9	102	24.4	5.7	85	23.8	6.4
Northwest Indians and Eskimos	10	24.7	5.6	42	23.9	6.1	71	24.5	6.6	20	27.3	7.3
Minnesota-Wisconsin Indians	11	27.5	4.5	55	23.7	6.5	19	26.4	4.9			
Urban Indians	10	24.4	5.8	37	25.3	5.4	8	23.3	6.2			
Non-Indian Controls	24	31.2	6.5	21	30.0	5.4	30	28.6	5.1			

Significance of Differences: Plains (1-2) p .001; Southwest (1-2)p .01; Northwest (4-3) p .05; Minnesota (1-2) p .01; (3-2) p .05.

Table 3

Comparison of Self-Concept Scores by Sex

Mean Scores by Age Group

	8-11		12-14		15-17		18-20	
	M	F	M	F	M	F	M	F
Plains Indians	26.8	27.9	27.2	24.5	26.1	24.9	26.5	26.5
Southwest Indians	26.9	26.6	24.9	23.8	26.2	24.4	25.9	23.8
Northwest Indians and Eskimos	28.6	24.7	26.5	23.9	27.3	24.5	29.3	27.3
Minnesota-Wisconsin Indians	25.1	27.5	27.1	23.7	26.0	26.4		
Urban Indians	26.5	24.4	25.9	25.3	23.8	23.3		
Non-Indian Controls	29.7	31.2	28.0	30.0	28.8	28.6		

Table 4

Mean "Combined Self" Scores for Age Groups 12-17

Males and Females

	N	$\bar{X}$	SD	N	$\bar{X}$	SD	M-F Diff.	t-test Significance
Plains Indians	143	26.8	4.9	158	24.6	6.5	2.2	$p < .001$
Southwest Indians	236	25.5	5.8	234	24.1	5.8	1.4	$p < .055$
Northwest Indians and Eskimos	124	27.0	4.9	113	24.2	6.4	2.8	$p < .001$
Minnesota-Wisconsin Indians	86	26.7	5.2	74	25.2	6.1	1.5	$p < .05$
Urban Indians	48	25.8	7.0	45	25.0	5.5	.8	N.S.
Non-Indian Controls	48	28.4	6.1	51	29.2	5.2	-.8	N.S.

Table 5

Mean "Combined Self" Scores for Indian Students
Who Are In A Majority and Minority Among Students in Their Schools

	N	Mean Score	SD
Minority Indian Students (0-25%)			
Urban Indians (Chicago and Minneapolis)	114	25.4	6.6
Rural and Small City Indians Cut Bank, Montana; Shawano, Wisconsin; Pawnee, Oklahoma; Moclips, Washington; Ponca City, Oklahoma (High School).	188	25.7	6.0
Majority Indian Students (80-100%)			
Rural and Small City Indians Eagle Butte, So. Dakota: Browning, Montana; Todd County, So. Dakota; St. Joseph, Wisconsin; Ponca City, Oklahoma (Elementary).	283	26.9	6.1
Boarding School Indians St. Francis Mission, So. Dakota; Phoenix Indian, Arizona; Flagstaff Dormitory, Arizona; Chemawa, Oregon; Theodore Roosevelt, Arizona; Shonto, Arizona	534	24.8	5.7

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THE RELATION OF SELF-ESTEEM TO PERSONAL-SOCIAL ADJUSTMENT AMONG AMERICAN INDIAN STUDENTS

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This paper completes the series of four papers which report on the measures of Self-Esteem used in the National Study. In the third paper it was seen that Self-Esteem of Indian youth does not decrease appreciably during adolescence, as had been claimed by some observers.

In this final paper, the measured Self-Esteem of Indian students is studied in relation to their attitudes toward their own personal future, to their school achievement level, and to their attitudes about Indian and White culture. The results are somewhat unexpected, and lead to an interpretation that sees the school and school achievement as factors of lesser importance to Indian than non-Indian youth.

THE RELATION OF SELF-ESTEEM TO PERSONAL-SOCIAL ADJUSTMENT AMONG AMERICAN INDIAN STUDENTS

Philip H. Dreyer

Several questions about the relationship of Indian student "self-esteem" to other variables motivated this study. The first of these was: how did Indian students view their future, especially when compared to their self-evaluation in the present? A second was: how did Indian students rate Indian and White cultures and did their "self-esteem" ratings correlate more with their ratings of one culture than with the other? A third was: how did Indian self-esteem relate to school achievement as measured by rank in class? These questions emerged from earlier studies of the "phenomenal self"[1] of Indian students and were attempts to gain more knowledge of the construct of the "self." as well as attempts to find out more about the relationship of the "self" to other aspects of Indian students' thinking and experience. While there was an extensive literature about the "self" concept among white students and a growing literature focusing upon black students, American Indians have seldom been studied, so that it was hoped that this study would contribute to the self-concept literature by studying a minority group which has been largely ignored by psychologists in the past.

The data for this study were collected from over 2,000 American Indian elementary and high school students who attended schools from Alaska to North Carolina. Two paper and pencil questionnaires were administered to these

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[1]The term "phenomenal self" is used here to designate a person's conscious awareness of who he is and how he stands in relation to his total environment. In this sense it is a global perception which a person has of his position, function, and feeling with regard to his or her relationship to the objects, persons, and institutions around him. It is not meant to designate a person's unconscious organizing ability, coping style, or other personality attributes which are sometimes referred to as subconscious "ego" qualities.

students by field research teams from seven universities who cooperated in the National Study of American Indian Education.

Description of Variables

Four variables were defined for this study. They consisted of three self-concept measures, an index of each student's feelings about "my future," two adjustment to culture measures, one for "Indian culture" and one for "white culture," and a class rank rating for school achievement. All variables, except the class rank rating, were derived from two paper and pencil questionnaires, which were labeled "Student Inventory A" and "Student Inventory C." "Student Inventory A" was a twenty statement "self-esteem" questionnaire modeled after a similar instrument developed by Coopersmith.[2] This consisted of a series of twenty statements, such as "I think I'm as good as anybody else." and "No one pays much attention to me at school.", after which the subject was asked to check one of two spaces labeled "like me" or "not like me." These statements reflected attitudes about the individual in relation to peers, family, and school. The items were worded in both positive and negative forms to prevent a response set, and four items were repeated in different form to act as a check on the consistency of response. "Student Inventory C" was a semantic differential questionnaire modeled after the measures developed by Osgood, Suci, and Tannenbaum.[3] This consisted of the concepts "myself," "my future," "my home," "Indians," "tribe's way of life," "this school," "teachers," and "white people's way of life," each of which was rated on a six-place scale for the seven adjective pairs of "good-bad," "worthless-valuable," "weak-strong," "happy-unhappy," "lazy-active," "smart-dumb," and "friendly-unfriendly." These adjective pairs were chosen to stress Osgood's "evaluation" factor, with five adjective pairs for "evaluation" and one pair each for the "potency" and "activity" factors. The variables "self-esteem," "my future," and two "adjustment to culture"

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[2]Coopersmith, Stanley. "A Method for Determining Types of Self-Esteem." Journal of Abnormal and Social Psychology, 1959, 59, 87-94; and The Antecedents of Self-Esteem. San Francisco: W.H. Freeman and Co., 1967.

[3]Osgood, Charles E., Suci, G.J. and Tannenbaum, P.H. The Measurement of Meaning. Urbana: University of Illinois Press, 1957.

measures were then defined as follows:

1. "Self-esteem" measures. Three measures for "self-esteem" were used. The first was the total score from the twenty statements of Inventory A, where a response indicating positive self regard was scored "1" and negative self-regard was scored "0". This scale had a possible high score, indicating high self-esteem, of 20, a normal distribution, and a mean of 12.5. The second was the mean score for the seven adjective pairs describing the concept "myself" from Inventory C. Here positive self-regard responses were scored "1" and negative responses "6," resulting in a scale ranging from "1," indicating high "self-esteem," to a possible low of "6," indicating low "self-esteem." This scale had a skewed distribution towards the positive end of the scale with an overall mean of 2.20.

As a result of a study of the reliability and concurrent validity of these two "self-esteem" measures, which were discussed elsewhere by this author, it was concluded that neither of these two measures alone could be said to represent an accurate measure of the "phenomenal self" of Indian students. To improve upon their validity and thus hopefully lead to a more total measure of Indian student "self-esteem," a third self-esteem scale was developed.

This third measure was developed by normalizing the distribution of "myself" scores from the semantic differential Inventory C and comparing them with the distribution of scores from the Twenty Statement Self-Esteem Inventory to form a scale of scores from one to twenty that were equivalent to the "myself" scores. This was done by assigning the mean score for "myself" a value of thirteen on the third scale and then arbitrarily fixing similar equivalent values from 14 to 20 for "myself" scores above the mean and values from 1 to 12 for "myself" scores below the mean. The scale was developed from data taken from Minnesota-Wisconsin Indians and Northwest Indians and Eskimos originally, 514 cases, and then applied to the other Indian groups. The equivalent value of from one to twenty for each subject's "myself" score was then added to his score from the Twenty Statement Self-Esteem Inventory A, so

that a new score, called "Combined Self," was then devised for each subject. The "Combined Self" score then had a range of from three, indicating low "self-esteem," to a high of forty, indicating high "self-esteem," a normal distribution, and high correlation with each of the two original measures (+.85 or higher with the mean score for the Twenty Statement Self-Esteem Inventory A and -.80 or higher with the mean score for "myself" from the semantic differential Inventory C). It was this "Combined Self" score which was used most often in this study as the measure of "self-esteem."

2. "My Future." This rating was defined as the student's mean score for ratings across the seven adjective pairs used to describe the semantic differential concept "my future" on Inventory C. The possible range of scores was from positive or "high" value of 1.00 to a negative or "low" value of 6.00; however, the data again revealed a skewed distribution towards the positive end, so that the actual range fluctuated from 1.00 to 4.00 with a mean of about 1.60.

3. Adjustment to Culture. Two adjustment scores were used, each of which was defined as the mean score of ratings of adjective pairs used to describe three semantic differential concepts on Inventory C. "Adjustment to Indian Culture" was made up of the mean score for the 3 sets of 7 adjective pairs used to describe the concepts "My home," "Indians," and "Tribe's Way of Life." "Adjustment to White Culture" was made up of the mean score for the 3 sets of 7 adjective pairs used to describe the concepts "This School," "Teachers," and "White People's Way of Life."[4] Both of these measures produced more normal distributions than the other semantic differential concepts, particularly "myself" and "my future."

The fourth variable used in this study was class rank rating and was the only variable not derived from either Inventory A or C. Each student was rated as being in the top, middle, or bottom third of his class in school. In most cases these ratings were made by the student's classroom teacher or coun-

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[4]It may be noted that the concepts used to define "adjustment to white culture" are not as appropriate as those used to define "adjustment to Indian culture." This is a weakness.

selor on the basis of comparing each student with others in his or her class. In some cases, where teacher ratings were not available, ratings were made by research staff members who evaluated either a student's report card grades or his standardized achievement test scores against other members of the student's class in his school. Thus, the class rank ratings were made by different people using different criteria, but always attempting to use the student's own class group as a reference group. We do not know much about the reliability of these data. It turned out that less than one-third of the students were ranked in the "top third." It was of considerable interest and surprise to the study that no matter what method of rating class rank was used, the relationship between "self-esteem" and class rank seemed to be the same, as will be discussed below.

Description of the Sample

The final sample of American Indian students for whom both instruments were satisfactorily completed consisted of 2007 youths, 998 males, 1009 females, ranging in age from eight to twenty. In addition, a non-Indian control group was included, consisting of 168 youths, 92 males and 76 females.

The groups whose scores are reported here were the following:

Plains Indians. Five Indian communities (Blackfeet, Sioux, Navajo) studied by the University of Colorado Field Center. 253 boys and 242 girls in the age-range 8-20 inclusive.

Southwest Indians. Ten Indian communities or schools (Pima, Papago, Apache, Hopi, Laguna, Acoma, Navajo) studied by the University of Arizona Field Center. 395 boys and 364 girls, aged 8-20.

Northwest Indians and Eskimos. Four Indian and one Eskimo communities or schools (Quinault, Makah, Tlingit, Eskimo) studied by the San Francisco State College Field Center. 186 boys and 143 girls, aged 8-20.

Minnesota-Wisconsin Indians. Three schools in Wisconsin and two in Minnesota (Chippewa, Menominee, Sioux) studied by the University of Minnesota Field Center. 97 boys and 85 girls, aged 8-17, mostly in schools where the majority of students were Indian. There was also a junior high school in Minneapolis, called School C, with 21 Indian boys and 25 Indian girls, who were in the minority in this school, and are reported as part of the Urban Indian group.

North Carolina Indians (Lumbee). Two Indian schools in Robeson County (North Carolina) with 26 boys and 31 girls, aged 8-17. These were studied by the North Carolina State University Field Center.

Oklahoma Indians. Two communities in north central Oklahoma, with a minority of Indian students (Pawnee and Ponca), 26 boys and 39 girls. These were studied by the Oklahoma State University Field Center.

Urban Indians. Students in several elementary schools and a high school in Chicago, with 59 boys and 55 girls, aged 8-17, studied by the University of Chicago staff, and 21 boys and 25 girls aged 12-17, who were students at a junior high school in Minneapolis, studied by the University of Minnesota Field Center staff. All of these Indians were in a minority among students at the schools they attended.

Chicago and Colorado Non-Indians (Controls). White, Black, and Oriental students in the same schools studied by the Chicago research staff and white students in the same schools studied by the Colorado staff, with 87 boys and 75 girls, aged 8-17.

Results

Self-Esteem and My Future. The attitude which a person has about his future has often been noted as one indication of mental health and of an individual's general feelings about what life holds in store for him. For Indian

youths who are members of one of America's most neglected and impoverished minority groups there was reason to expect that the future would be seen as a time of uncertainty and doubt. The purpose of this study was to investigate the attitudes of Indian students toward their future, particularly in comparison to their view of themselves in the present. It sought to answer the general questions: did Indian students see their future as being different from the present, and were they optimistic or pessimistic about the future?

The instruments used in this case were two concepts from the semantic differential Inventory C. The measures used were the mean scores for the concepts "myself" and "my future" rated across seven adjective pairs from a positive score of "1" to a negative score of "6." The results are given in Table 1.

The results from Table 1 clearly indicate that all groups of Indian students rated their future more positively than their present self. Chi-square tests of these differences revealed that the differences were statistically significant in almost every group, the exception being North Carolina Indians. Furthermore this trend was consistent across all age groups for both sexes.

These results would seem to indicate that Indian students looked toward the future with feelings of optimism and hope, as a time when they expected that life would be better than it was in the present and as a time when their personal aspirations would be fulfilled. In no sense do these data indicate a feeling of what some researchers have termed "alienation" or a view of the future as a time of hopelessness and frustration. There appeared to be no difference between the comparative views of the Indian students and the non-Indian Controls in this regard. Both groups saw the future significantly more positively than the present, and neither appeared to be "alienated" in the sense of looking upon the future pessimistically.

We could not tell, of course, what the nature of the future was for the Indian students, since each student held his own view of what he hoped from the

future; however, the consistency and size of the difference between the "myself" and "my future" ratings had important implications for Indian educators. Regardless of school achievement problems, difficulties in social adjustment, or economic problems, the picture this study revealed was of a student who was basically positive in his attitude about his future and who looked forward to the future as a time of self-improvement and personal fulfillment.

Self-Esteem and Adjustment to Culture. This study sought to add clarity to the complex issues of cultural "adjustment" or "assimilation" by looking at two aspects of the data. The first of these was the relationship of "self-esteem" to the two measures "adjustment to Indian culture" and "adjustment to white culture." The object of this correlational analysis was to find out with which culture the Indian studentseemed to identify more closely. The second type of analysis was designed to see whether Indian students rated the two cultures, as defined by our instruments, differently, and if so, what the ratings indicated about the Indian students' perceptions of the two cultures. The correlations of "Combined Self" and the two cultures are given in Table 2, while the mean ratings for the two cultures are given in Table 3.

Table 1

Mean Scores for Concepts "Myself" and "My Future" for Indian Student Groups and Non-Indian Controls

(Lower score is more positive rating)

	N	"Myself"	"My Future"	Difference
Plains Indians	495	2.12	1.86	.26
Southwest Indians	759	2.30	1.98	.32
Northwest Indians and Eskimos	329	2.12	1.63	.49
Minnesota-Wisconsin Indians	185	2.37	1.80	.57
North Carolina Indians	57	1.70	1.37	.33
Oklahoma Indians	65	2.26	1.78	.48
Urban Indians	114	2.29	1.76	.54
Non-Indian Controls	167	1.92	1.56	.36

Table 2

Product Moment Correlations of Mean Scores for "Combined Self"
And Adjustment to White and Indian Cultures
For Indian Students by Geographical Area and Age Groups

AREA	8-11			12-14			15-17			18-20		
	N	White	Indian	N	White	Indian	N	White	Indian	N	White	Indian
Plains Indians	142	.254	.326	168	.426	.356	133	.304	.307	52	.225	.280
Southwest Indians	92	.487	.414	257	.354	.419	213	.284	.473	197	.198	.475
Northwest Indians and Eskimos	25	.534	.428	89	.294	.158	148	.099	.365	67	.448	.585
Minnesota-Wisconsin Indians	22	.315	.183	111	.404	.493	49	.523	.578			
No. Carolina Indians	10	.584	.499	14	.039	.068	33	.052	.645			
Oklahoma Indians	14	.403	.567	31	.571	.566	11	.570	.499			
Urban Indians	21	-.039	.493	81	.277	.462	12	.073	.382			
Non-Indian Controls	63	.509	.120	47	.431	.428	57	.340	.334			

The correlations between "Combined Self" scores and ratings of the two cultures given in Table 2 showed that there was a consistently positive relationship between the "self" and culture ratings, indicating that perceptions of the "phenomenal self" are generally related to perceptions of the cultures in which the Indian students lived. This relationship seemed to fluctuate in both an upward and a downward direction across age groups with no consistent age trend appearing. A separate analysis of these trends for males and females also revealed that there was no consistent sex difference in this relationship for the various age groups.

Table 2 also showed that Indian students generally related their "self-esteem" to both White and Indian cultures about equally and did not seem to be identified with one culture more than the other. The only exception to this was the Urban Indian group which had a higher correlation between "self-esteem" and Indian Culture for every age group and which seemed to be the only group that was clearly identified with one of the two cultures, in this case Indian culture.

The nearly equal relationship of "self-esteem" with the measures of adjustment to Indian and to White culture may be due in part to the fact that half of the self-esteem score is based on the semantic differential inventory which also included the concepts on which the Indian and White culture adjustment scores are based. Insofar as there is a "social desirability" element in the semantic differential, this may have operated on all three mean scores, making them less than truly independent means, and raising their intercorrelations.

In the light of this consideration, the departure of the Urban Indian group from the others is especially noteworthy, since it is likely that truly independent measures would have produced an even stronger indication of their closeness to Indian culture and their relative distance from White culture. It might be expected that Urban Indians would be at least moderately acceptant of their predominantly White cultural surroundings; however, quite the reverse

appeared to be true. Given their minority group status amid the larger White urban environment, the urban Indian students appeared to become stronger in their cultural identification as Indians.

If such a differentiation between the relationship of "self-esteem" to White and Indian culture were the result of the urban Indians perceiving themselves as a minority "out-group" which "suffered" from discrimination by the majority, we would expect that all Indian student groups who were in a minority among the students at their schools, regardless of the schools' location, would also show such a distinction between their perceptions of their "self-esteem" and the two cultures. An analysis of our data by minority group status of the Indian students among students attending rural and small city schools did not reveal this to be the case. For six schools which were located in rural areas and small cities where Indians comprised no more than 25 percent of the student population the correlations between "Combined Self" scores and ratings of White and Indian cultures were essentially the same, with no clear difference indicated between the Indian students' relative closeness to Indian and White cultures. Thus it appeared that the pattern of closer identification with Indian culture exhibited by the urban Indian students was a fact unique to the large city Indian students.

The urban Indian student data came about equally from Chicago and Minneapolis. Examination of the data from these two places indicates that the low or negative correlation between self-esteem and adjustment to White culture comes largely from one junior high school in Minneapolis, which we have called "School C." The situation in this school will be discussed in some detail below. There has been a good deal of friction between Indian students and their parents, on the one hand, and the school administration as well as other groups of students in the school. Since the score on "adjustment to White culture" depends heavily on ratings of "This School" and "Teachers," this special situation probably caused at least part of the difference between "urban Indians" and other Indian students that appear in Tables 2 and 3.

Given the fact that most Indian students did not seem to show a dif-

ference between the relationship of their "self-esteem" ratings to White and Indian cultures, this study sought to find out if Indian students rated the two cultures differently, particularly if they rated one culture more positively than the other.

The ratings for White and Indian cultures given in Table 3 indicated that five of seven Indian student groups rated Indian culture more positively than White culture, and that for three groups--Minnesota-Wisconsin, North Carolina, and Urban Indians--the more positive rating for Indian culture was statistically significant. Of the two groups which did not fit this trend, one, Southwest Indians, rated the two cultures the same and the other, Oklahoma Indians, rated White culture slightly more positively than Indian culture.

Reviewing the data for the ratings of White and Indian cultures for age trends and sex differences revealed no significant differences across age groups and no significant differences in the ratings made by males or females. There was a tendency for ratings of White culture to fluctuate more across age groups than the ratings of Indian culture. Eight to eleven year olds tended to be more positive in their ratings of both cultures than did 12-14 and 15-17 year olds, a trend which was more accentuated for the ratings of White culture than for Indian culture; however, these age trends were not statistically significant. Some groups did show slight differences in the ratings for the two sexes, but these differences were not uniform across the groups and were not significantly large in any case.

The most conspicuous exceptions among those studied were the Urban Indians and the North Carolina Indians. They rated Indian culture positively and White culture considerably less favorably than the other student groups. These findings were especially interesting in the light of the earlier findings about the correlation between "self-esteem" and adjustment to White and Indian cultures. The two groups had different patterns of response and will be discussed separately.

The Urban Indian group apparently had a stronger sense of differentiation between White and Indian cultures than did the other Indian groups, and they also felt more strongly than the other groups that White culture was less favorable than Indian culture. What seemed to emerge from the data of Tables 2 and 3 was the conclusion that Urban Indian students had a clearer sense of what might be called cultural boundaries and a clearer perception of cultural differences with an accompanying view of themselves as more clearly belonging to one culture and not to the other.

The North Carolina Indian group showed a different pattern of correlations and of ratings of White and Indian cultures from any of the other groups. Since the numbers of North Carolina students are small, the findings are less reliable than they are for the groups with larger numbers, but there clearly is something unique about this group. The North Carolina students were in schools with something like 95 percent Indian enrollment; and they lived in a county that also had all-white and all-black schools, of which they must have been aware, especially as they grew older. For the 12-17 year old groups, the correlation coefficients of self-esteem with ratings of White culture were practically zero, as was true with most of the Urban Indians. However, the correlations of self-esteem with ratings of Indian culture fluctuated from zero to .645. Table 3 shows the North Carolina Indians to be the most favorable of all groups toward "Indian culture," and considerably less favorable toward White culture. Here it may be suggested that the Indian adolescents were becoming acutely aware of the existence of three color or racial groups in their county, and were distinguishing among them in a way that is favorable to their own group. It would have been interesting to get their ratings of "Negroes" and "the Negro way of life."

The Special Case of School C

We have noted that the urban Indian students rated Indian culture much more favorably than White culture. They rated the School and Teachers very low, as can be seen in Table 4A. Upon examination, we found that the low

scores of the urban Indians were produced mainly by the 46 pupils in School C, a junior high school in Minneapolis. Accordingly, we looked into this situation to see whether we could learn something from it.

School C and another junior high school in Minneapolis were scenes of much hostility among students and between students and teachers in the period from 1968 to 1970, when this study was made. The schools both had a minority group of about 20 percent Indian pupils, and another minority group of black pupils. There was a good deal of hostility between these groups.

There was also a considerable amount of hostility of Indian pupils toward teachers. Students in their interviews frequently singled out teachers by name as onestthey thought were prejudiced against Indian pupils. Teachers were asked to comment on the attitudes of a random list of Indian pupils, and they said with respect to the majority on this list that they were "hostile" toward the school and toward teachers. They also mentioned certain ones as having called them names in public and having defied them. Yet the teachers of School C, on the attitude questionnaire to which teachers from all schools in the study responded, were more favorably disposed toward Indian pupils and less authoritarian than the other teachers in the Minnesota-Wisconsin area.

Thus, from the Student Inventories, from Teacher Inventories, and from public knowledge, School C presented an unusual degree of conflict and hostility of Indian pupils toward the school and toward teachers.

The situation of Indian adults in Minneapolis is one of greater militancy and greater protest against the Establishment than was true of any other community in the study. The Minneapolis Indian group is known to be more militant than any other large city Indian group in recent years. Thus the children may be expected to have heard a good deal of hostile talk and to have observed a good deal of militancy on the part of their parents. This critical attitude of Indian parents showed clearly in the interviews conducted by the Study with Minneapolis Indian parents. On the scale which measured the extent

to which the parent perceived the school as meeting the needs of his child, the most frequent rating by the 800 parents from the 30 communities in the Study was 4, which indicated mild approval. But 75 percent of the School C parent respondents were below 4, expressing degrees of disapproval ranging from mild to extreme. On the scale measuring the parent's opinion of his child's teacher's performance, the most frequent score was 5, indicating definite approval. But 55 percent of School C parents rated below 4, indicating definite disapproval of the teacher's performance. By comparison, only 15 percent of the sample of Chicago Indian parents scored below 4 on this scale. On the scale measuring parents' opinion of the school administration, the most frequent scores from the 800 parents were 4 or 5. School C had 65 percent below 4, indicating definite disapproval of the school administration.

Observation of this school in comparison with other urban schools by staff members of the Study did not disclose any striking difference visible to neutral observers, except the greater hostility of the students in School C.

Thus it appears that the junior high school pupils to some extent were reflecting attitudes of the adult Indian community toward the institutions of Minneapolis.

The most reliable measure we have of the students' attitude is the Semantic Differential, which gave the following average scores for School C compared with Chicago Indian pupils. (The lower score indicates a more favorable attitude.)

	Teachers	White Culture	Indian Culture
School C	3.47	3.34	1.93
Chicago	2.07	2.20	1.90

Here we see that the School C students are much less favorable to Teachers and to the White culture than they are to Indian culture, and that they differ from the Chicago Indian students by being more negative to Teachers and White culture.

Reading the interviews with the School C students reveals a considerable degree of ambivalence on the part of the Indian pupils toward the life they lead in the city. Nearly all of them reported that they travel frequently (by bus or automobile) to the lake country or the Indian reservations where their grandparents or aunts and uncles are today. Weekly or monthly visits are the rule, and the junior high school youth often make these trips alone. Some quotations from these interviews illustrate the ambivalence of some students, and the actual preference of others for the "Indian way." The most hostile girl (a Chippewa) says, of the lake area where her forbears lived, "I like it and I would like to stay there." A boy says, "I go up almost every weekend to visit my grandfather. I like to hunt and fish up there. I'd like to stay there all the time because I like to hunt and fish and the dog can run free." The most frequent kind of comment is this from a girl, "I like it there. You can do almost anything you want. But I wouldn't want to stay there all the time. I like the city and have friends here." A rare comment came from a boy. "I'd rather live down here because some of the adults are funny up there and it's always quiet and a little restricted."

When we consider that the pupils of School C were all in the age range 12 to 15, it is not strange that there should be a general romantic feeling about the woods and the lakes and the free life, especially on the part of the boys. It is surprising that the girls of School C are somewhat more negative to the school than the boys are, as measured by the Semantic Differential.

Apparently, very few of these young people of either sex can see themselves growing up into a satisfactory future through achievement in school. Most of their parents have not done so, and cannot set them an example of rewards gained from schooling. Just at present their parents are actively dissatisfied with employment and housing in Minneapolis, and are setting an example of protest against White institutions.

Parents and students alike at School C are strongly in favor of studying Indian culture. The schools are moving in that direction. It will

be interesting to see whether this has any influence on the attitudes of Indian students toward education and life in the city.

Table 3

Mean Ratings for "White Culture" and "Indian Culture"
for Indian Students by Geographical Area
(Lower score is more positive rating)

AREA	N	White Culture	Indian Culture	Indian-White Difference	Significance of Difference
Plains Indians	495	2.13	1.94	.19	N.S.
Southwest Indians	759	2.04	2.04	.00	N.S.
Northwest Indians and Eskimos	329	1.90	1.79	.11	N.S.
Minnesota-Wisconsin Indians	182	2.40	1.89	.51	$p < .05$
No. Carolina Indians	57	2.32	1.55	.67	$p < .05$
Oklahoma Indians	56	1.97	2.14	-.17	N.S.
Urban Indians	114	2.66	1.91	.75	$p < .025$
Non-Indian Controls	167	1.96	2.13	-.17	N.S.

Ratings of School and Teachers on Semantic Differential

In connection with the study of differential adjustment of the Indian students to Indian and White culture, it is useful to look at the data from the semantic differential on Teachers as a concept to be rated by the Indian students. Although this rating makes up one-third of the rating on White culture, it seems to throw a special light on the situation of the Urban Indians that is worth separate consideration.

Tables 4A and 4B give detailed data on the SD ratings by boys and girls, and by the various Indian and non-Indian sub-groups. The correlation between SD ratings on Teachers and This School was quite high, and indicated that the ratings of Teachers would be quite similar to those of This School.

Teachers were evaluated slightly more negatively than Myself by all the major groups except the Latin-American girls. The Anglo-Americans displayed a greater negative evaluation than the Indians, if the difference between the average rating is taken as a measure. The differences between ratings for Myself and Teachers were .41 and .34 for Anglo-American boys and girls respectively, and .13 and .10 for Indian boys and girls.

Thus, in general, we might infer that Indian adolescents like their teachers better than the Anglo-American adolescents of the same general socio-economic status. At any rate, we do not have any evidence here of widespread alienation from the school on the part of Indian adolescents aged 12-17, who are now in school.

Comparison of Indian Boys and Girls. When Indian boys and girls are compared on their attitudes toward Teachers, the boys have the more favorable attitude in 9 of the 10 possible comparisons. The differences are usually small, but consistent. Indian girls are slightly more critical of teachers than Indian boys.

There are two schools or school groups in which the Indian girls are much more negative toward teachers than are Indian boys. These two are in the Minnesota study. In three Wisconsin schools as a group, the girls average 2.58 against 2.32 for boys. For School C, the Minneapolis junior high school, girls are very negative, averaging 3.71 against 3.23 for boys.

Conclusions on Self-Esteem and Cultural Adjustment

In conclusion, the results of this study of the relationship between

Table 4A

Comparison of Group Scores on the Semantic Differential

Indian Groups on Teachers. Age 12-17.

M A L E S

Group	PLAINS	SOUTH WEST	NORTH WEST	OKLA-HOMA	NO. CARO.	BALTI-MORE	HOOPA	MINNE-SOTA	SCHOOL C	CHI-CAGO
Number	150	236	129	27	21	23	27	86	21	36
Adjective Pair										
Good-Bad	2.22	1.66	1.72	1.65	1.96	1.87	1.63	2.16	3.24	1.57
Happy-Sad	2.49	1.98	1.76	2.42	2.19	2.22	1.96	2.35	3.05	2.00
Strong-Weak	2.25	2.12	2.02	2.36	2.28	2.00	2.30	2.52	3.43	2.18
Active-Lazy	2.25	1.94	1.98	1.79	2.33	1.74	1.93	2.25	3.19	2.38
Average	2.30	1.92	1.87	2.06	2.19	1.96	1.96	2.32	3.23	2.03

F E M A L E S

Number	160	237	120	14	25	28	21	74	25	33
Good-Bad	2.45	1.65	1.77	2.11	2.35	1.71	1.81	2.55	3.75	2.38
Happy-Sad	2.49	1.84	1.95	2.15	2.40	2.11	1.86	2.85	3.29	1.98
Strong-Weak	2.13	2.32	2.26	2.26	2.35	2.33	1.81	2.68	3.79	2.10
Active-Lazy	2.25	2.22	2.06	2.01	2.20	1.89	1.90	2.24	4.00	1.94
Average	2.33	1.99	2.01	2.13	2.33	2.04	1.85	2.58	3.71	2.10

Note: Low score is the more favorable response.

Table 4B

Comparison of Group Scores on the Semantic Differential

Non-Indian Groups on Teachers. Age 12-17

	Anglo-Americans			Latin-Americans	
GROUP	Chicago 1961	Colorado 1969	Virginia D.C. 1970	Buenos Aires 1961	Puerto Rico 1968
M A L E S					
Number	50	52	15	50	150
Adjective Pair					
Good-Bad	2.04	2.28	2.25	1.52	2.25
Happy-Sad	2.30	2.57	2.69	2.58	2.23
Strong-Weak	3.14	2.37	2.50	2.42	2.41
Active-Lazy	2.38	1.89	2.81	1.78	2.02
Average	2.47	2.28	2.56	2.07	2.23
F E M A L E S					
Number	50	52	16	50	150
Good-Bad	1.90	1.79	2.14	1.47	2.22
Happy-Sad	2.40	2.10	3.00	2.50	2.49
Strong-Weak	2.24	2.31	2.93	2.45	2.15
Active-Lazy	1.93	2.22	3.00	1.84	2.30
Average	2.12	2.11	2.77	2.06	2.29

Note: Low score is the more favorable response.

For description of these groups, see paper III, No. 9, "The Indian Self-Image as Evaluated in the Semantic Differential."

"self-esteem" and cultural adjustment for Indian students revealed that most Indian groups showed a mild positive correlation between their "self-esteem" ratings and their ratings of White and Indian cultures. The correlations fluctuated across both geographical groups and age groupings. There appeared to be no clear difference in the relationship of the "self" to the two cultures. In rating the cultures themselves without regard to "self-esteem" the Indian students tended to rate Indian culture more positively than White culture; however, the differences in the ratings were not statistically significant in most cases. Urban Indians and North Carolina Indians appeared to be an exception to these generalizations, revealing both a higher correlation between their "self-esteem" and Indian culture than with White culture and a significantly more negative view of the White culture than Indian culture. This was interpreted as meaning that the Urban Indians and North Carolina Indians had a clearer sense of cultural boundaries than the other groups and a closer identification with Indian culture than the other groups.

It did not appear from these data that there was a strong sense of what some have called "alienation" from either Indian or White culture among the Indian students studied. If "alienation" is meant to mean a mental health status, such as depression, negativism, or neuroticism, the data from this study did not reveal such symptoms. The data from one Minneapolis school did, however, reveal evidence of negativism. On the whole, the Indian students tended to be positive about both cultures and rated their own native culture slightly more favorably than White culture, as might be expected. If "alienation" is meant to mean a sociological state, such as feelings of powerlesness, normlessness, and social isolation, our data did not show such feelings. It appeared that by and large the Indian students viewed themselves as belonging about equally to both cultures which they tended to rate positively.

Rather than make much of the term "alienation," it appeared that a more useful way to interpret these data was to view them as indicative of the Indian students' awareness of cultural boundaries and their sense of themselves as having a "self" which was clearly defined and clearly identified with a culture.

Using the data in this sense, it appeared that most of the Indian students did not have a well differentiated notion of separate cultures and that they did not identify with a particular culture. The Urban Indian and North Carolina Indian groups, which were the most exceptional, provided a good example of students who did seem to have both a clear feeling of two distinct cultures and a sense of personal identification with one of those cultures, so that we could better see the issue as one of perception of cultural boundaries and a feeling of distance from cultures that are perceived distinctly. For most of the Indian students it appeared that cultural distinctions were blurred, so that they perceived themselves as not so much belonging or not belonging to a culture as a different meaning for each individual. For the Indian students, being an "Indian" or a "White person" was not so important as being an individual, a boy or girl, a student, or a member of a family. Thus the entire issue of "adjustment to culture" did not seem to bear in an important way upon the Indian students' feelings of "self-esteem."

Self-Esteem and School Achievement

Perhaps the most widely published finding with regard to the "self-concept" and its measurement as "self-esteem" is that it is positively related to school achievement. A student who does well in school usually has a positive "self" image and higher "self-esteem" than others who do less well in school. Similarly a student who has high "self-esteem" is likely to have a high level of achievement in school tasks. Rosenberg,[5] for example, states that "Our data show that school grades are clearly related to self-esteem. . ." To cite only one other example, the Coleman report on Equal Educational Opportunity[6] included as part of the student questionnaires self-report items to measure attitudes such as "interest in school. . .pursuit of reading outside

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[5]Rosenberg, M. Society and the Adolescent Self-Image. Princeton: Princeton University Press, 1965, p. 51.

[6]Coleman, James S. Equality of Educational Opportunity. Washington: U.S. Department of Health, Education, and Welfare, Office of Education, 1966.

school. . .and self-concept," the results of which he stated were that

> These tables show that, whatever measure is chosen, the attitudinal variables have the strongest relation to achievement. It is, of course, reasonable that self-concept should be so closely related to achievement, since it represents the individual's estimate of his own ability. . . . The relation of self-concept to achievement is, from one perspective, merely the accuracy of his estimate of his scholastic skills, and is probably more a consequence than a cause of scholastic achievement....[7]

Since most of these studies that reported the relationship between "self-esteem" and scholastic achievement were done with white students, this study proposed to see if the relationship also held for American Indian students. Initially the large literature supporting the relationship led us to expect that Indian students would also show a high correlation between their "self-esteem" ratings and their class rank ratings; however, one cautionary note regarding the relationship for minority group students was sounded by Coleman that led us to test this expectation carefully.

> ...of the three attitudinal variables, however, it (self-concept) is the weakest, especially among minority groups, where it shows inconsistent relations to achievement at grades 9 and 12...[8]

The first analysis of our data with regard to self-esteem and scholastic achievement was to study the mean self-esteem scores of the Indian students who were ranked in the top, middle, and bottom thirds of their respective classes in school. Table 5 gives these results.

The figures for the total Indian group showed that "self-esteem" scores did tend to decrease with rank in class, a decrease which was significant from

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[7] Ibid., p. 320.

[8] Ibid.

top to middle (t-test, $p < .005$) but not significant from middle to bottom thirds. The figures for the various geographical area groups revealed that three out of six groups showed such a decrease in "self-esteem" scores from top to middle thirds of the class but little difference between the middle and bottom thirds. Of the remaining three geographical groups, two showed an increase in "self-esteem" from top to middle thirds, and one showed a decrease across all thirds of the class. Thus, while there appeared to be a trend in the direction of a positive relationship between "self-esteem" and class rank, the relationship did not appear to be very strong, nor did it appear to be consistent across all groups.

Table 5

Mean Score for "Combined Self" of Indian Students in the Top, Middle, and Bottom Thirds of Their Class in School

	Top 3rd			Middle 3rd			Bottom 3rd		
AREA	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Plains Indians	118	27.4	5.6	243	26.0	6.2	153	26.2	5.9
Southwest Indians	39	25.1	7.9	35	27.1	6.2	34	24.1	5.2
Northwest Indians and Eskimos	51	27.8	5.5	111	26.0	5.8	167	26.3	6.3
Minnesota-Wisconsin Indians	14	28.5	3.3	87	26.6	5.7	83	24.5	5.9
No. Carolina Indians	24	31.8	3.4	20	29.2	4.5	12	29.2	4.4
Oklahoma Indians	14	28.9	6.3	9	29.8	4.4	21	25.6	6.7
Total Indians	260	27.7	5.6	505	26.4	5.9	470	25.8	6.0

To explore this relationship further the data were analyzed for individual students to see the nature of the correlation between "self-esteem" scores and rank in class. Table 6 lists the correlations for students of

different ages for three geographical areas.

Table 6

Product-Moment Correlations Between "Combined Self" Scores and Rank in Class of Indian Students by Age and Geographical Area

	N	8-11	N	12-14	N	15-17	N	18-20
Plains Indians	142	-.03	168	.06	133	.22*	52	-.03
Northwest Indians	25	.28	89	.15	148	.07	67	.09
Minnesota-Wisconsin Indians	22	-.07	111	24**	49	.10		

*p .025
**p .005

These correlations revealed that there was a very low order relationship between "self-esteem" and rank in class. In only two instances did the relationship appear to be significantly greater than zero, so that in most cases it could be said that there was no relationship at all between "self-esteem" and class rank. In fact, the correlations were even lower than might be expected given the trends revealed by Table 5 of mean level of "self-esteem" by various class rank groups.

It was noted in an earlier paper that Indian boys had "self-esteem" scores which were significantly higher than Indian girls, especially for ages 12 to 20. Given this earlier finding, the relationship of "self-esteem" and class rank was studied for the two sexes to see if the trends noted for the total group varied by sex. The mean scores for "Combined Self" for boys and girls in each of the three class rank groups are given in Table 7.

Table 7

Mean Scores for "Combined Self" of Indian Student Males and Females by Class Rank Groups

	Top Third			Middle Third			Bottom Third		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Males	116	28.0	5.5	237	27.3	4.8	261	26.4	5.2
Females	119	26.8	6.2	249	25.3	6.4	197	26.1	6.7

For males there appeared to be a trend in the direction of a positive relationship between "self-esteem" score and class rank. Self-esteem scores dropped as class rank dropped; however, the differences from one class rank group to another, from top to middle and from middle to bottom thirds, were not statistically significant. Females showed a significant (t-test, $p < .05$) drop in "self-esteem" score from top third to middle third, but then an increase in "self-esteem" from middle third to bottom third, so that there was no consistent relationship between "self-esteem" and class rank. For all three class rank groups boys had higher "self-esteem" scores than girls, the same finding that was noted earlier when "self-esteem" was studied for boys and girls of different age groups; however, in only the case of middle third students was this sex difference significant. The distribution of boys and girls among the three class rank groups revealed that boys were significantly more likely to be ranked in the bottom third of their class than were girls (chi-square, $p < .025$).

From these data it appeared that the relationship between self-esteem and class rank was weak for both sexes but seemed stronger in a positive direction for boys than for girls. An examination of the correlation coefficients between "self-esteem" and class rank for boys and girls of different

age and geographical area groups confirmed the general weakness of the relationship and showed that for most cases there was no great difference between the sexes. The correlations for the two sexes are given in Table 8.

Table 8

Product-Moment Correlations Between "Combined Self" Scores and Class Rank for Male and Female Indian Students by Age and Geographical Area

	8-11		12-14		15-17		18-20	
	N	r	N	r	N	r	N	r
Plains Indians								
Males	67	.04	83	.12	60	.33***	32	-.15
Females	75	-.11	85	.04	73	.19	20	.15
Northwest Indians and Eskimos								
Males	15	.44*	47	-.02	77	.07	47	.11
Females	10	-.03	42	.36**	71	.11	20	.06
Minnesota-Wisconsin Indians								
Males	11	-.36	56	.21	30	.11		
Females	11	.21	55	.31**	19	.08		

*$p \leq .05$
**$p \leq .025$
***$p \leq .01$

The results of these analyses led us to conclude that for Indian students "self-esteem" was not related to school achievement, at least not to the extent that it appeared to be related for white populations which were reported

in most studies. The value placed upon the "self" by Indian students seemed to be quite separate from performance in school and led to the hypothesis that scholastic achievement was not an important factor in the overall thinking of Indian students.

It may be that Indian students are different from white students in their orientation toward school, and we believe that there is some truth in this proposition. However, we also believe that the previous studies on the relation of self-esteem to school achievement have over-simplified the situation.

One important fact is that economically disadvantaged students have as high or higher self-esteem as do economically advantaged students. The several studies of Soares and Soares indicate that elementary and secondary school students of low socioeconomic status in a New England community have higher self-esteem than do students of high socioeconomic status. These writers point out that self-esteem is partly a reference-group phenomenon. A person's self-esteem is related to the group (family, socioeconomic, ethnic) against which he is likely to compare himself. Consequently, since children of low SES are likely to attend school with and to play with other children of low SES, their self-esteem is based, in part at least, on comparison of themselves with other children whose school achievement is below average.

There is also some evidence that students from middle-class homes are more critical of themselves than students from working-class homes. Thus, Rosenberg found that high school juniors and seniors in the state of New York from "old Yankee" stock had lower self-esteem scores than students from ethnic groups who arrived later as immigrants. Possibly these students were subjected at home and in school to expectations of superior school achievement, and therefore were less likely to rate themselves high on a self-esteem scale.

Therefore the self-esteem scores of Indian students should be interpreted in relation to their socioeconomic status as well as to their Indianness. While middle-class white students appear to see school achievement as

an important part of their total view of themselves, Indian students may view school achievement as a separate activity which does not influence greatly their personal feelings of self-esteem.

The Indian student appears to be psychologically less invested in his school work than middle-class white students, taking as self-evaluation measures his performance in other, non-academic areas of activity. If the Indian youth as a student is to be better understood, it might be by investigating these areas of the orientation towards school and the place which academic achievement has in the thinking of Indian students. It seems clear that commonly held notions about the importance of school performance for the overall "self-concept" of students do not hold for Indian students and that much more needs to be known about the other factors in an Indian student's life, such as his orientation towards his family and Indian society in general, before the "phenomenal self" of Indian students can be accurately assessed and the role of formal education among Indians can be understood.

Conclusions

This study attempted to investigate the relationship of Indian students' "phenomenal self-esteem" to factors such as orientation towards the future, attitudes about Indian and White culture, and school achievement. What was found was that Indian students were generally optimistic about their future and rated their future more positively than their present. Most of the student groups rated Indian culture more positively than White culture, as defined by a semantic differential instrument, but the differences in ratings for the two cultures were generally insignificant, leaving the impression that most Indian students do not see cultural boundaries between Indian and White very clearly and do not have a definite sense of themselves as more closely related to Indian culture than to White culture. The relationship between "self-esteem" and rank in class for Indian students was weak, tending to be more positive for boys than girls, so that it seemed that Indian students did not view school performance as an important index of their overall self-evaluation,

a finding which is different from the relatively high relationship between "self-esteem" and school achievement noted for middle-class white students in so many previous studies.

It is important to remember that these findings were derived from studying Indian youngsters who were still in school and who therefore were likely to be "better adjusted," more upwardly mobile, and more accepting of White societal values that permeated their schools than other Indian youths who had left school. These students might be expected to see the future brightly, for the White society at large teaches that education is the key to future employment and a better way of life.

On the other hand, the Indian youth who are still in school do not perceive themselves as people who are better or worse in relation to their achievement in school. They seem to have made only tentative and weak commitments to the values of the school and the White culture which it represents. They do not appear to be heavily "future oriented" in the sense that they are "wrapped up" in plans for the future which involve vocational preparation and school success.

In addition to these "post-hoc" interpretations, it is useful to note that this study did not find evidence to support the often-made remarks about Indian students being mal-adapted, "alienated," or negativistic. The Indian students did not appear to view school achievement, for example, the same way as most studies report that white students do; however, the Indian students did not appear to be "alienated" from school so much as directed towards other activities and values which have not yet been clearly defined. In a similar way, the measures of Indian and White culture used in this study showed that the negative feelings about White culture, which appeared to be slight, were not so important as the Indian students' feelings of positive regard for Indian culture.

It seems important, from the point of view of the educator, to ask why White culture, including white-oriented schools, is treated with indif-

ference by Indian youth except in places where there is a sharp contrast and some degree of Indian militancy. It seems important to study how the Indian student, who operates within two somewhat contrasting cultures, attempts to develop a sense of personal identity which is Indian in a positive sense, rather than non-White in a negative sense. It is this positive quality of the Indian students which seemed to emerge most strongly from this study.