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CHILDREN OF THE FLATHEAD: A STUDY OF CULTURE-
AND-PERSONALITY IN A CHANGING SOCIETY

By

Samuel V. Lang, Jr.

B. A. Idaho State University, 1963

Presented in partial fulfillment of the requirements for the degree of

Master of Arts

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1965

Approved by:

Chairman, Board of Examiners

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CHAPTER I

INTRODUCTION

This thesis is a study of the structure of culture-and-personality traits of a selected group of Flathead and white children in the context of the process of acculturation. As an introduction to a report of the investigation it will be necessary to review the relevant literature of culture-and-personality and the acculturation process. This review is presented in this and the following chapter. On the basis of this literature two general hypotheses will be formulated regarding the differential effects of acculturation on the culture-and-personality characteristics of the two groups studied. Specific hypotheses will then be developed around the four dimensions of acculturation which were studied in this investigation. The subjects of the investigation and the body of the data are presented in Chapters III through VI. Finally, some general conclusions will be presented in the closing chapter.

That the investigation of culture-and-personality is generally recognized as a legitimate division of anthropological science is evidenced by not only the course offerings found in American universities but by publications of eminent personages within the discipline (e.g., Benedict 1934; Linton 1945; Sapir 1949; Hsu 1961; Barnouw 1963). However, the particular nature of culture-and-personality as an area of study is often the subject of much discussion as well as confusion (Hsu 1961:1-4). For example, there is no succinct definition of the term "culture-and-personality"; nor have precise boundaries been set for the study of culture-and-personality. According to Hsu (1961:1), such a state of
affairs is of particular benefit to this area of anthropology. He states:

... attempts at delineating boundaries for culture-and-personality would do more harm than good. Too often precise boundaries have been used as excuse for lack of data, methods, and results. What we need in culture-and-personality is not orthodoxy but more specific research and discussion.

Notwithstanding the above considerations, attempts to clarify the limits and central concerns of culture-and-personality have been undertaken by a number of anthropologists (cf. Kluckhohn and Mowrer 1944; Linton 1945; Hsu 1952, 1961; Barnouw 1963). Before proceeding, however, with a brief discussion of these limits and central concerns, the term culture-and-personality must be clarified. In the present study the term is divided into its two component parts—culture and personality respectively—for purposes of definition. This procedure should help to clarify the term as a whole. It should be kept in mind, though, that no attempt is made here to provide a succinct definition.

Culture is here defined as "That complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" (Tylor 1871:1).

Personality is here defined as:

... a more or less enduring organization of forces within the individual. These persisting forces of personality help to determine response in various situations, and it is thus largely to them that consistency of behavior—whether verbal or physical is attributable. But behavior, however consistent, is not the same thing as personality; personality lies behind behavior and within the individual. The forces of personality are not responses but readinesses for response" (Adorno, Frenkel-Brunswick, Levinson, and Sanford 1950:5).
Although it is not stated in the above definition, the author is of the opinion that consistency of behavior, aside from being a matter of personality, is also attributable to cultural and social determinants. Having defined the two major components—culture-and-personality—there remains the addition of the conjunction **and**, an addition which now implies a necessary relation between the two major components. The addition of hyphenation further emphasizes this relation or unity, the final result being culture-and-personality.\(^2\)

According to Hsu (1961:10), culture-and-personality differs from psychology in that the former deals with (1) patterns related to conscious or unconscious ideas which the majority of members of a given society share in common as individuals (i.e., basic personality or model personality structure)\(^3\) and (2) the ideas, either conscious or unconscious, which govern the action of a number of individuals as a group within any given society (i.e., psychology, mob psychology, or collective conscience).\(^4\) The field of psychology, on the other hand, is concerned primarily with the unique psychology of individuals. This is not to say that the ideas which govern the group as a whole are distinct from those actions of the individual. Hsu (1961:10) regards both (i.e., the ideas which govern the group as a whole, and those actions of the individual) as forming a continuum. He concludes, however, that...

...before the psychological anthropologist can conclude that one is rooted in the other, he must make sure that he is not arguing merely from analogy, that he has made sure he is not confusing broad trends of cultural development, which may be psychologically propelled, with specific institutional details, which are usually historically determined.

It should be kept in mind, however, that psychology has contributed much to the field of culture-and-personality. The work of such
clinicians as Freud (1919), Kardiner (1945), Erikson (1950), Horney (1937), and Fromm (1941) among others, has added stature to culture-and-personality as well as valuable concepts and volumes of research (Hsu 1961:9-10).

Culture-and-personality is also distinguished from social psychology in that the former is concerned with "natural group differences along ethnic or societal lines," while the latter is often concerned more with group differences produced by experimental means. The two areas of study are alike, however, in that both (especially culture-and-personality) are concerned with discovering the antecedents of behavior (Hsu 1961:11).

Several different techniques for eliciting knowledge of personality structures have been utilized in culture-and-personality studies. Among these techniques are (1) the direct observation of behavior, (2) the analysis of life history material, (3) the interpretation of dreams, visions, and phantasy, (4) the use of quantitative and projective techniques (i.e., the use of psychological tests) on a group basis, (5) the analysis of folklore, and (6) the interpretation of art (Barnouw 1963:171:339).

The basic methods involved in culture-and-personality studies have taken several forms, indicating that at least three major approaches have been pursued: (1) the orthodox Freudian (psychiatric) approach, (2) the "modified" Freudian approach, and (3) the socio-psychological (i.e., cultural) approach (Arieti 1956:34). Roughly speaking, these approaches fall into some three categories of theoretical orientation concerning the degree to which biological, environmental, and social and cultural factors structure personality: (1) those who largely deny
socio-cultural determinants in favor of biologically oriented explanations of behavior, (2) those who view culture as a function of the individual, thus admitting the importance, to some extent, of cultural determinants, but nevertheless maintaining that individual personalities can somehow control cultural determinants, and (3) those who view the individual as a function of his culture maintaining, therefore, that culture largely structures personality (Arieti 1956:26-39).

This brief survey of the area of culture-and-personality points to three general conclusions: (1) Although several attempts to clarify the limits and central concerns of culture-and-personality have been undertaken, this area of study remains, at best, ill-defined. (2) The techniques and methods of approach to culture-and-personality vary greatly. For example, techniques for eliciting knowledge of personality structure include the direct observation of behavior, analysis of life history material, the interpretation of dreams, visions, phantasy and art, as well as the use of quantitative and projective techniques. The methods of approach to the study of culture-and-personality are no less varied, ranging from the orthodox and "modified" Freudian (psychiatric) approaches, to the socio-psychological (i.e., cultural) approach. (3) The theoretical orientation concerning the degree to which biological, environmental, and social and cultural factors structure personality is subject to some debate (cf. White 1949).

Notwithstanding the above considerations, the present study endeavors to arrive at meaningful but tentative conclusions concerning the personality structure of Indian and white children living and attending school within a reservation environment. In an attempt to arrive at these data the author has elected to examine their patterns of
acculturation, the historical background of the subjects with whom the author worked, and the results of two psychological tests administered to a number of Indian and white children.

The variables of personality to be investigated in the present study are: (1) belief in immanent justice (Chapter IV); (2) belief in animism (Chapter V); (3) those interests and experiences uppermost in the children's minds as exhibited through analysis of their "free drawings"; and (4) the degree and kind of acceptance of white material culture among the Indian children in comparison to the white children, also to be determined by analysis of their free drawings (Chapter VI).

The basic theoretical orientation adopted in the present study is that social and cultural factors are the prime determinants of personality structure; and that among the Indian and white children tested each group respectively is subjected to somewhat different socio-cultural factors. From this it is hypothesized:

That measurable differences in the frequency distribution of all four variables will be found to exist between that part of the sample defined as Indian and that part defined as white.

The specific nature of the differences expected in relation to each of the four variables will be detailed after the appropriate literature has been examined.

Underlying the hypothesis is the following assumption:

That the biological makeup of all of the subjects is considered as being a constant, i.e., that there are no physiological differences between that part of the sample defined as Indian and that part defined as white that may be construed as affecting personality structure.

It is felt that such an investigation is important for the following reasons: (1) No similar study has ever been conducted among these
people to date; thus little data of a strictly scientific nature exist concerning their personality structure. (2) The collection and analysis of such data may be of great benefit to administrators and teachers since their approach to the problems now extant on the Flathead Reservation is often based on little or no knowledge of the "ways" of their subjects. (3) The acculturation process with specific reference to the Flathead is felt by some to be complete, an observation that is probably quite factual in relation to their material culture. Evidences suggest, however, that from a psychological point of view the Flathead still identify with their past cultural norms and traditions. The present endeavor, however, should not be interpreted as being a complete study of the personality structure of Indian and white children living and attending school on the Flathead Reservation. For example, the specific behavioral variables do not represent a complete picture of their personality structure. The variables studied are, at best, merely indicative of the differences between Indian and white personality structure as represented among the children of both groups (Indian and white) now living on the Reservation. The delineation of a more complete picture of their personality structure, within a cultural context, requires a more sophisticated study.

The techniques and methods used to obtain the data necessary to arrive at meaningful conclusions concerning the above aims are considered here under separate headings.

Techniques

The techniques employed include (1) the analysis of similar psychologically oriented anthropological studies relating directly to the present
study; (2) the elucidation of present-day socio-cultural factors supposedly affecting the psychological makeup of Indian and white children, to be determined through interviews with Bureau of Indian Affairs personnel, school administrators and teachers, and by personal observation; and (3) the administration of three psychological tests including the Progressive Matrices (Raven 1938), an adapted form of Piaget's Immanent Justice and Animism Test (Piaget 1948:250-251; Dennis 1943:30; Havighurst and Neugarten 1955:242), and the Free Drawing Projective Technique (Havighurst and Neugarten 1955). The Progressive Matrices Test (Raven 1938) was administered to the children in order to obtain data concerning their intelligence quotient. The results of this test may be found in the Appendix. The three tests were administered to Indian and white children attending grade and high schools in the villages of Arlee and Dixon, Montana. Techniques (2) and (3) were accomplished through direct fieldwork conducted by the author from the middle of December, 1964, to April, 1965. The descriptions and analysis of each of the three tests, in terms of past studies and the present endeavor, may be found in Chapters IV, V, and VI and in the Appendix.

Methods

The methods used to order the data collected by the foregoing techniques centered around the determination of the effect of historical and present-day socio-cultural factors on the Reservation as a whole and at each of the two schools within the context of the results obtained from the psychological tests. The test data were quantified in order to facilitate statistical analysis.

The acculturation process is also considered in historical terms as well as in terms of the present Reservation environment.
1. It should be noted that not all of the children studied were of Flathead origin per se. That is, the close geographical proximity of the Flathead with the Pend d'Oreille and Kutenai, among others, has resulted in some amount of "mixing" of social, cultural, and genetic factors which have tended to militate against the continuation of Flathead culture as a distinct entity. Thus, a small number of the Indian children are of Pend d'Oreille or Kutenai origin, but the exact number and the specific diagnostic features that distinguish them from the Flathead are for all practical purposes lost in the unwritten pages of the history of these tribes. In any case, the geographical locations of the present study—the villages of Arlee and Dixon, Montana—are the principal habitation sites of the Flathead per se, in both recent historical and modern terms.

2. The relevance of the phrase "culture and personality" has been questioned by Kluckhohn and Mowrer (1944:1) as not being a conceptual model "in accord with our data" since the phrase suggests a dualism between culture and personality that does not in fact exist. They advocate the use of "culture in personality" or "personality in culture" as being more adequate conceptual models. Victor Barnouw (1963:footnote on p. 3) recognizes the objection of Kluckhohn and Mowrer as being legitimate, but states "the most usual designation continues to be 'culture and personality.' I prefer to hyphenate the phrase to emphasize its unity" (viz., "culture-and-personality"). Although I prefer the phrase "personality in culture" I am accepting Barnouw's hyphenated version in this thesis.

3. Kardner (1939:237) defines the term basic personality structure as "the effective adaptive tools of the individual which are common to every individual in the society." Linton (1945:viii) adds, "The basic personality type for any society is that the personality configuration which is shared by the bulk of the society's members as a result of the early experiences which they have in common." Differences in methods of child training among various cultures thus structure different basic personality types. The term modal personality, first introduced by DuBois (1944:4-5), differs from the term basic personality in that it is considered to be "a more statistical concept" (Barnouw 1963:110).

4. I believe that the term "collective conscience" which Hsu (1961:10) equates (partly) with the ideas, either conscious or unconscious, which govern the action of a number of individuals as a group within any given society might possibly be related to the concept of "world view." World view refers to the characteristic spirit or sentiment as well as the "values and conceptions about the nature of things" held by the majority of members in a culture (Barnouw 1963:24). This concept, furthermore, ascribes importance to the individual's learning of his culture's traditions, religious concepts, ethical doctrines, and metaphysical assumptions, since these factors supposedly help to structure his personality (Barnouw 1963:24). However, this "analogy" between the two terms may be somewhat overdrawn.
The essential principle underlying the term "quantitative" is that "people or other items are grouped into categories on the basis of some variable characteristic which can be measured on a mathematical scale" (Ruch 1958:18).
CHAPTER II

THE ACCULTURATION PROCESS AND THE FLATHEAD INDIANS

The Acculturation Process Defined

In 1934, the Social Science Research Council (Linton 1940:463-464) defined the term "acculturation" in the following manner:

Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first hand contact, with subsequent changes in the original culture patterns of either or both groups.

A crucial note was appended to the definition by the Committee:

Under this definition acculturation is to be distinguished from culture change, of which it is but one aspect, and assimilation, which is at times a phase of acculturation. It is also to be differentiated from diffusion, which, while occurring in all instances of acculturation, is not only a phenomena which frequently takes place without the occurrence of the types of contact between peoples specified in the definition above, but also constitutes only one aspect of the process of acculturation (Linton 1940:464).

The major problem presented in the definition is that no attempt is made to specify the nature of the phenomena to be considered as a part of acculturation. Linton does, however, consider the delineation of phenomena of acculturation within the context of two determinants: (1) the specific situation under which the processes occur, and (2) the range, or limitation of those phenomena which appear to be the result of any particular situation (1940:464). The application of either determinant presents several difficulties. In relation to the first determinant the key factor is the phrase "continuous first hand contact," a situation that cannot be clearly or exactly delimited. Certainly, many cases of contact between cultures can be construed as constituting
continuous first hand contact, such as European immigrants who settle in the United States. On the other hand, cases involving contact as a result of trading where one culture is visited by another once or twice a year do not constitute situations involving continuous first hand contact. The general situation, however, cannot be reduced to "either-or" judgments since observed contacts between differing cultures exhibit many degrees of closeness and continuity. Within this context, then, the "lines of demarcation and the limits of acculturation" must remain vague, at least in reference to cultures in general (Linton 1940:464-465).

The second determinant is intricately related to the phrase "continuous first hand contact" since it implies that only those phenomena that occur under such conditions are a specific part of the acculturation process. Linton notes, however, that the presence of such phenomena have not been reported in studies made to date. Certain phenomena, of course, can take place only under situations of first hand contact, but are not always present under such conditions. An example would be the European gypsies now living in the United States; they have resisted assimilation for many centuries, although there has been continuous first hand contact with the dominant culture (Linton 1940:465).

Notwithstanding the limitations of the definition Linton concludes that the phrase "continuous first hand contact" must remain at the crux of the definition of acculturation since many situations of this nature are recognizable (1940:465).

The definition of acculturation presented above, as well as the note appended by the Committee, are adopted in the present study.
The dynamics of the acculturation process are varied and complex and cannot be fully analyzed within the space of these few pages. The rudiments of such processes may, however, be briefly presented.

Beginning with culture change in general, it may be stated that the fundamental processes involved in this aspect of acculturation are concerned, ultimately, with modification in the knowledge, attitudes, and behavior of individuals (Linton 1940:468). The form of the culture element involved may be a new idea, habit, or material object, or a combination of all three of these. The culture element may originate within a specific cultural configuration through discovery or invention, or it may originate in another culture and be introduced in developed form. When a culture element spreads from one configuration to another and is itself taken as the point of reference the process is referred to as diffusion. On the other hand, culture borrowing results when the culture receiving the element is taken as the point of reference.

Culture change not only involves the addition of a new element to a cultural configuration, but also means the alteration and reorganization, as well as elimination, of other preexisting culture elements. The specific element involved in any particular incidence may also be modified to fit the needs of the receiving culture. Linton (1940:470-482) divides the processes involved in the introduction of a new culture element into three phases: (1) the initial acceptance of the element by innovators, (2) the dissemination of the element to other members of the society, and (3) the necessary modifications of the element in order that it may become a functional part of the preexisting culture matrix. The basic stimuli behind the introduction of new culture elements is the
discomfort or discontent of certain individuals within a society which stimulates them toward change. After initial acceptance, the new element need not be disseminated to every member of the receiving culture. Indeed, in many cases a new culture element may be accepted by only a certain class or group of individuals within a society, yet the new element may be successfully incorporated into the preexisting culture matrix (Linton 1940:482).

Culture change then is an integral part of the acculturation process, but the former need not always occur under conditions of continuous first hand contact. There are, however, phenomena that are prerequisite to such contact, and these phenomena fall under the heading of acculturation per se. Such phenomena include those connected with directed culture change, and those connected with social-cultural fusion. The term "directed culture change" refers to situations in which one of the cultures in contact actively and purposefully interferes with the other's cultural matrix. "Social-cultural fusion" refers to situations in which two distinct cultures and societies ultimately evolve into a single homogeneous socio-cultural unit. The processes of directed culture change occur where dominance and submission are present. On the other hand, the processes involved in social-cultural fusion may take place under conditions of dominance and submission, as well as under conditions of equality. In both cases, however, continuous first hand contact is a prerequisite of such conditions (Linton 1940:501-520).

Several factors may now be considered in relation to the psychological aspects involved in the acculturation process. First of all, it may be safely asserted that no two cultures ever react in exactly the
same manner to the processes of acculturation. In effect, this implies that each distinct culture harbors within itself certain elements which are unique only to that culture: elements which preclude certain specific reactions to the acculturation process on an overall socio-cultural basis, as well as among that society's individual members. The distinctness of a specific culture may be exhibited in one or more of the following areas: (1) the ecological, (2) the material, (3) the socio-political, (4) the religious, and (5) the particular world view extant in the culture. This is not to say, however, that all cultures need necessarily differ radically. What is probably the crux of the matter is that specific environments preclude quite definite patterns or ways of life. Thus all hunting and gathering cultures will display certain factors in common which differ from those found among all farming cultures. However, the cultures found within any specific environment may well exhibit differing ways of life, indicating that socio-cultural factors are also determinants of particular patterns of thought and behavior on an overall cultural basis (cf. Benedict 1934; Steward 1936).

The acculturation process alters and eventually destroys all or most of those elements by which specific cultures may be identified. Thus the death of any specific culture as a distinct entity in the world of man and nature, includes alteration and most likely eventual eradication of the ecological, material, socio-political, religious, and, finally, the world view of that culture.
Linton (1940:507) maintains, however, that only certain forms of behavior can be forced upon one culture by another.

The attitudes and values of the dominant group cannot be transferred in this way. The receiving group can usually modify and reinterpret the new enforced behavior in terms of its own value system and finally assimilate it successfully. However, if there is no inhibition of pre-existing patterns, this process will not differ fundamentally from that which goes on in any situation of culture transfer. The assumption of the new element will merely result in a temporary duplication of function, a condition to which all cultures are highly tolerant. The inhibition of pre-existing patterns, on the other hand, inevitably leaves some of the society's needs unsatisfied, with resulting hardship (1940:507).

The acceptance of a new element, then, depends greatly on the nature of the preexisting patterns found in the receiving culture, as well as on the nature of the new element. At the same time, the use of force may be of secondary importance, since the ultimate acceptance or rejection of a new element may well depend on the intensity of belief in a particular way of life or element therein which members of a distinct culture display.

Within the context of the acculturation process, the Flathead Indians occupy a unique position. Let us now turn to an evaluation of their particular patterns of acculturation, beginning with their historical background, continuing with a brief ethnography of these people, and finally, ending with an analysis of the specific patterns of acculturation as found among the Flathead.

**Historical Background of the Study--The Setting**

The present study was conducted on the Flathead Indian Reservation of Western Montana. The Flathead Indians are a Salishian-speaking people who have had a long and essentially friendly association with
the white man. Their initial contact with the white man is first re-
corded in the Journals of Lewis and Clark (DeVoto 1953:233). Clark
wrote of them:

... those people receved us friendly, threw white robes
over our Sholders & Smoked in the pipes of peace, we Encamped
with them & found them friendly. The Chief Harangued until late at
night, Smoked in our pipe and appeared Satisfied.

In that same journal (DeVoto 1953:234) Whitehouse concurred with
Clark's observation. He stated, "... they are the likelyest and
honest Savages we have ever yet Seen..."

Although the explorers' first recorded contact with the Flathead
was in the Bitterroot valley, Teit (1930:303-306) believes them to have
lived east of the Rocky Mountains extending at least to the Upper
Yellowstone Valley. Perhaps driven westward by the approaching
Crows or other intruders of the Plains, the Flatheads settled in the
Bitterroot valley while the closely-related Pend d'Oreille moved into
the Flathead Lake regions. These two tribes are the easternmost
representatives of the Salishian language family. According to Turney-
High (1937:11-21), these tribes left their Salishian relatives to the west
and moved to the upper reaches of the Columbia River at an early
period and thus are, in point of time, among the oldest inhabitants of
any of the Indians now living in the State of Montana.

Beginning in 1831 and extending to 1842 the Flatheads were in-
volved in a dramatic search for Christianity. During that time four
delegations left what is now western Montana, crossing the hostile
plains to go to St. Louis. Some of the groups were killed en route;
others reached there but could not persuade the priests to come.
Finally as a result of their diligence Father DeSmet met a group of them in southern Montana in 1841 and agreed to return the next year to establish St. Mary's Mission at Stevensville (DeVoto 1947:7-10).

Governor Isaac Stevens of Washington Territory met with the Flathead, the Pend d'Oreille, and the Kutenai at Council Grove just below present-day Missoula in July, 1855, and concluded the Hellgate Treaty with those tribes. The treaty provided for the establishment of the Flathead Indian Reservation with a land area of some 1,248,000 acres (Stevens 1901:81-92). However, in concluding this treaty the destiny of the Flatheads themselves was brought into question, for Governor Stevens insisted that they move into the area claimed by the Pend d'Oreille, thus relinquishing their claim to the Bitterroot valley. But Victor, then head chief of the Flathead, refused to move (Report of Commissioner of Indian Affairs 1872:115). A compromise was reached, as evidenced by Article 11 of the treaty, which stated that all of the lands lying south of Lolo creek should remain unsurveyed until government representatives could decide the final destiny of the Flatheads (Stevens 1900:81-92).

In 1872, after the Bitterroot was quite well settled (Buck 1910:117), a commission sent from Washington and headed by James A. Garfield concluded an agreement with Charlot (Victor's son), who was then head chief. The details of this "agreement" are of some interest, since Charlot steadfastly refused to affix his X to the document. The document in its final form, however, includes Charlot's mark.
Garfield explains the matter in the following manner (Report of Commissioner of Indian Affairs 1893:187):

In carrying out the terms of the contract...I have concluded to carry out the work in the same manner as though Charlot, the first chief, had signed the contract. I do this in the belief that when he sees the work actually going forward he will conclude to come with the other chiefs and thus keep the tribe unbroken.

Since Charlot continued in his refusal to leave the Bitterroot valley, the government replaced him with a lesser chief, Arlee, who moved, with about five families, to the Jocko valley in 1873 (Dusenberry 1957:177). Charlot himself was to follow in the move from the Bitterroot to the Jocko valley with 172 followers some twenty years later (a number of other families had already moved to the Jocko) when he realized that the game had disappeared and the hunting areas had been fenced by white farmers and ranchers (Report of Commissioner of Indian Affairs 1893:187). Although Charlot and his band settled in the Jocko valley, this "Bitterroot band," as they were called by early writers, refused to comply with many of the dictates of the government. In his annual report (1897:109) the agent at the Flathead agency wrote: "He...[Charlot]...does all in his power to stay the civilization of his people--to keep the children from attending school." 

Surveying of all the Flathead Reservation for purposes of allotting land to the Indian inhabitants was begun in 1907 and completed in 1908. Some 2,390 Indians were allotted either 80 acres of irrigable land or 160 acres of grazing land (Report of Commissioner of Indian Affairs 1909:40). However, by virtue of President Taft's proclamation of May 22, 1909, approximately one million acres were opened to settlement by white farmers and ranchers (Dusenberry 1957:177).
Homesteaders began settling the Reservation in 1910. Today there are 4,883 enrolled members in the Confederated Salish and Kutenai Tribes, with about fifty per cent living off the Reservation. The land area of the Reservation as of 1950 was 629,922 acres (House Report 82nd Cong., 2nd Sess., 1952:809-810).

With the advent of the Indian Reorganization Act in 1934, the Flathead Indians gained a certain distinction when, as part of the inhabitants of the Reservation, the tribes voted to adopt the provisions of the Act and to be incorporated themselves as the Confederated Salish and Kutenai Tribes. This Reservation was the first one in the United States to accept the provisions of the Act, and its charter and constitution are on display in the museum of the Interior Department Building in Washington, D. C.

The village of Arlee, Montana, was established about 1883 as a station on the newly-completed Northern Pacific Railway. Its purpose first was to serve the Flathead Agency at Jocko, located some three miles to the east. Later, after the homesteaders arrived, the village served the needs of the white ranchers, as well as catering to the needs of the Indian colony. It is interesting to note that even today it is the descendants of Charlot's "Bitterroot band"--the Vanderburgh, Nine Pipe, Big Sam, Combs, Lumphry, and Pierre families as well as others in the Arlee district--who are singled out as being the least acculturated of the Flathead Indians. Among these people the Salish language is still being used, some aboriginal religious practices followed, the long hair is still seen, and the dress is frequently of Indian style. Partly because Arlee is one of oldest of the settlements
on the Reservation, but chiefly because the descendants of the Charlot band still live there, the author chose the Arlee school as one of the two schools for this study.

The students in the other school, Dixon, were selected because of the different background of the town and its inhabitants. As a townsite on the Reservation Dixon was not established until well after the opening of the Reservation. It is named for Joseph M. Dixon, lone representative from Montana to Congress from 1904 to 1908 (Karlen 1957: 250). A few straggling buildings served the white populace until the agency moved from Jocko to a spot one mile east of Dixon in 1917. A few Indians moved along to be near the agency and thus a small Indian community has developed near the town. Especially since 1934 numerous Indians have been employed by the Bureau of Indian Affairs, and their children attend the Dixon Public School. The Indian children of Dixon, therefore, are of a somewhat different background from those of Arlee. It was on the basis, then, of this difference that the author chose these two schools.

A Brief Ethnography of the Flathead Indians

The acculturation process among the Flathead Indians displays several unique features. However, before proceeding with the discussion of these features a brief ethnography of the Flathead is in order. The following account is taken entirely from Harry Holbert Turney-High's The Flathead Indians of Montana (1937), except for one brief quote taken from Teit (1930).

The Flathead Indians are a Salishian-speaking people, a fact which strongly indicates some past unity with the Salishian-speaking
peoples of the North Pacific Coast. Flathead patterns of culture and subsistence, however, vary greatly from those found among the Salmon area residents (i.e., the Coast Salish), the former being typical of other Plateau tribes, with some Plains affinities (1937:11).

The Flatheads practiced a hunting and gathering form of subsistence, the principal game animals being deer, antelope, elk, and bison. The principal wild plant foods harvested included bitterroot (Lewisia rediviva), wild carrots, and camas (Quamasia quamash and esculenta). Fishing was conducted on a day-to-day basis and formed an important part of Flathead subsistence (1937:111-126).

Family organization was based on matrilinear descent and patrilocal residence. A word of explanation is in order concerning patrilocal residence. According to Turney-High (1937:90) newlyweds lived with the bride's parents until the camp of her parents was moved, after which time the groom took his bride to the camp of his own parents. The levirate and sororate were practiced among the Flathead, as well as some polygyny (1937:93-95). It should be noted, however, that all marriages were not always polygynous. Some monogamous marriages were evident but, according to Turney-High, "Only the very poor, lazy, unskillful, or unfortunate men were monogamous" (1937:94).

Flathead political organization was based on the principle of chieftainship, the head Chief having attained his position at least in the minds of the Flathead by hereditary right (1937:49). A council of local subordinate leaders acted as advisory bodies to the Head Chief (1937:52).
Social control was maintained by both informal and formal means. The informal methods centered mostly around social ridicule, while the formal methods included the use of "internal police" who looked for wrongdoers, but did not mete out punishment. Formal punishment was left to the Chief and was considered to be one of his most important functions. Whipping the wrongdoer with a switch and in later times with a buckskin lash loaded with buckshot was the usual form of punishment (1937:44-49).

Flathead religious practices included a belief in the concept of the soul. Turney-High (1937:27) states:

All...informants...agree that people recognized the existence of the soul and its survival after death, and that it was considered the substance with which a man is lined. The same term used to signify the soul also indicates the lining of a garment. There is the slightest indication of a former belief in the plurality of souls, but informants are by no means in agreement on this point.

With the approach of puberty the children (including girls as well as boys) were sent in search of a guardian spirit, for among the Flathead the world was full of "medicine" that worked only through the intervention of a specific helper (1937:26). The characteristic features of this medicine, or "sumesh" as it is called among the Flathead, and the search for it by the children, are taken directly from Turney-High (1937:27-28):

At the approach of puberty all children...were and sometimes are sent off to the wilderness to obtain a guardian. They were carefully prepared for this adventure, required to bathe in cold water and to fast rigorously.... A spot famous for successful medicine dreams was chosen.... Arriving at the spot, the watcher builds a low wall of stone around himself and sits down to fast, pray, and wait for the guardian.... Most commonly the sumesh appears to the individual in theriomorphic form, the rattlesnake and bear being the most usual. Anthropomorphc guardians also occur; the dwarfs, as mentioned, being especially powerful. Peripatetic decomposed
corpses and skeletons are also encountered. A common guardian is the spirit of some ancestor, or rarely of some famous person to whom the seeker is not related. The apparition usually begins by saying, "You have sought me and I have sought you. I will now tell you something good." The guardian then tells the seeker how to call upon him. It teaches him at least one song, at times even more, and rehearses him until he can sing it. Ordinarily the seeker has never heard the song before. It is supposed to be new and individual. The Person then gives the postulate some object, a piece of the animal represented, or, if human, even a piece of the helper's own bone. As soon as possible this is made up into a very small medicine bundle which should be held or deposited on the ground before the supplicant when the helper is invoked. This bundle was kept close to its owner throughout life and buried with him at death.

From Turney-High's account it now appears that: (1) The aboriginal (i.e., traditional) Flathead world is overridden by the idea of a great and mysterious power which is felt to be in all things, but with no real organization. (2) Both the individual, as well as the group must rely on this mysterious power; humbling themselves and supplicating it in order to live successfully. (3) Certain sanctioned mechanisms for accomplishing this on an individual and group basis are present among the Flathead (i.e., the quest for an individual guardian spirit). (4) The power in this essentially hunting society (there was, of course, some gathering of wild plant foods) reveals itself among individuals mainly through their success with animals which requires, essentially, the winning of an individual guardian spirit. (5) If the individual does not comply with this scheme of things then he is doomed to failure and sickness (i.e., the aboriginal or traditional Flathead world view included a belief in immanent justice and to some extent animism on a cultural level). Thompson (1948:200-215) envisions similar world-views in relation to the belief in immanent justice among other
essentially hunting cultures including the Dakota Sioux, Navaho, Northern Ojibwa, and the Papago. These world-views are said to survive, to some extent, the acculturation process.

It should be noted, however, that the concept of animism is not clearly displayed among the Flathead. While the few old-time residents to whom the author has talked have mentioned "spirits," a tangible definition of them seems impossible to secure. Their most definite reference seems to be to the sweat lodge, for that structure seems in their minds to be endowed with life. Teit (1930:383) mentions spirits only once when he wrote:

Different kinds of spirits are said to haunt certain lakes and parts of the mountains.... Offerings were made to them to obtain good weather, good hunting, and immunity from harm of any kind when people were within their sphere of influence.

That Turney-High ignores mentioning spirits at all in his work is a possible indication that he could get little or no information about the subject. Yet the vague indications made in the literature as well as their preoccupation with charms as Turney-High reports (1937:26) gives one the insight that the Flathead attributed life, will, and meaning to some aspects of their aboriginal world.

Flathead religious practices also included the services of shamans who were highly regarded personages (Turney-High 1937:28-34), as well as a number of ceremonials, including the First Roots Ceremony, Camas Dance, First Bison Ceremony, Bison Calling Ceremony, and the Bluejay Dance, among others.
Patterns of Flathead Acculturation

The Flathead Indians, as previously noted, have had a pleasant relationship with the white man. However, the nature of this association has meant that much of their original way of life no longer exists. For example, their present subsistence patterns are little different from those found among other lower income groups now present in Montana. The cultural and social norms and traditions that still remain from the past are fast becoming "things to be remembered" but not practiced. And death is no mean character in this drama. The "Long Hairs" are quickly passing from the scene, and as one elderly informant put it (he is now dead), "the younger generation does not care about our ways; they won't even learn the language of their people."  

Indeed, the acculturation process among the Flathead has altered and in most cases eradicated the greater part of their aboriginal socio-cultural patterns. Those few patterns that remain, such as the use of magical love potions (on a restricted basis), the telling of tales and myths, the stick game, the gathering of bitterroot and camas in the spring and summer respectively, and the occasional "pow wows," are practiced today in adulterated form and are losing their esthetic impact.

Table 1 is an attempt to illustrate, by stages, the acculturation process among the Flathead. The important point illustrated in the table is that each specific kind of contact with the white man's way of life has altered certain areas of Flathead culture and society as well as their ecology.

Initial contact with the white man, beginning with the Lewis and Clark Expedition in 1805, set in motion the processes leading toward
<table>
<thead>
<tr>
<th>Date</th>
<th>Nature of Contact With Whites</th>
<th>Stage in Acculturation Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1805</td>
<td>Lewis and Clark Expedition</td>
<td>Culture-contact. First recorded contact with the white man</td>
</tr>
<tr>
<td>1841-1842</td>
<td>Introduction of Christianity on an organized basis</td>
<td>Diffusion of a culture element. Culture borrowing on the part of the Flathead</td>
</tr>
<tr>
<td>1842-1855</td>
<td>Establishment of St. Mary's Mission and establishment of the Flathead Reservation</td>
<td>Culture-change increased. Beginnings of more intense assimilation and acculturation. Federal control. Coming of agents and traders</td>
</tr>
<tr>
<td>1855-1910</td>
<td>Close and rather intimate contact with whites. Opening of Reservation to homesteaders. Beginning of complete and overall changes in social, cultural, and ecological patterns</td>
<td>Assimilation and acculturation process in full force</td>
</tr>
<tr>
<td>1910-1934</td>
<td>Continued close and intimate contact. Signing of Indian Reorganization Act</td>
<td>Period of continued assimilation and acculturation</td>
</tr>
<tr>
<td>1934-1965</td>
<td>Increased encroachment by white farmers, ranchers, and merchants</td>
<td>Acculturation process reaching final stages leading toward death of Flathead social and cultural elements and psychological patterns as distinctly recognizable elements in relation to white socio-cultural norms and traditions</td>
</tr>
</tbody>
</table>
essentially peaceful acculturation. White man and Indian had come face to face and the meeting had produced no ill effects among either of the two groups (DeVoto 1953:233-234).

The period of contact extending from 1841 to 1842 is of crucial importance, since the institution of Christianity among the Flathead (at their own "insistence") heralded the beginning of widespread changes in their socio-cultural norms and traditions. For example, their aboriginal religious practice of seeking an individual guardian spirit now began to be replaced by the quest for a God who did not manifest himself in the body of wild animals and who demanded that each person follow him according to a strict set of moral and behavioral norms. Within the context of these new moral and behavioral norms demanded by Christianity other aboriginal practices such as the levirate and sororate were also doomed to become extinct. Indeed, the long road toward full acceptance of the white man's way of life had begun in earnest with the coming of the Jesuit Fathers.

The period 1842-1855 may be viewed as a period of rather intense indoctrination into the teachings of Christianity. Of no less importance was the establishment of the Flathead Reservation in 1855, which brought traders as well as government agents into the Montana territory. The destiny of the Flatheads now became a matter of Federal control.

Between 1855 and 1910 the Flathead were subjected to increased indoctrination into the ways of the white. By 1910 the Flathead Reservation had been opened up to homesteaders (approximately one million acres), which undoubtedly destroyed the greater majority of their former hunting, fishing, and collecting areas, as well as greatly
altered their traditional social structure and cultural elements, especially those of a material nature. For example, aboriginal Flathead socio-cultural institutions, such as chieftainship and marriage, were rapidly replaced by the ways of the dominant culture; the chief's sovereignty over his people gave way to the rule of the white man's law, and the marriage of a man to more than one wife was taboo according to the white man's religion. The aboriginal material culture was also affected; bows and arrows were replaced by the rifle, and aboriginal dress by the cloth of the white man.

The period extending from 1910 to 1934 can be considered as a time in which the above white socio-cultural norms and traditions became more intense as well as more solidified among the Flathead. The date 1934 is, however, of particular importance, since it represents the introduction and signing of the Indian Reorganization Act by the Flathead Indians. (They were among the first Indians in America to sign the act. See page 20 of this thesis.)

As originally composed, the Congressional bill relating to the Act contained six parts (Collier 1948:157). However, only the first four parts of the bill became law. They were:

1. The Indian societies were to be recognized, and be empowered and helped to undertake political, administrative, and economic self-government.

2. Provision was made for an Indian Civil Service and for the training of Indians in administration, the professions, and other vocations.

3. Land allotment was to be stopped and the revestment of Indians with land was provided for.

4. A system of agricultural and industrial credit was to be established, and the needed funds authorized (Collier 1948:157).
The immediate signing of the Act by the Flathead may indicate some concern on their part with the "uncontrolled" encroachments by the whites. In any case, the Act probably helped to "reinstate" some amount of self-identity on the part of the Flathead, which may have helped to preserve some patterns of traditional culture and ways of viewing the world.

However, the period 1934 to 1965 has witnessed, generally, the continuing death of traditional Flathead ways of life. The older generation, who still embody in their thoughts and actions some of the traditions of the past, are passing from the scene.

The "uniqueness" of Flathead patterns of acculturation is now evident, at least to the extent that, as a separate entity in the world of man and nature, the Flathead have reacted in certain specific ways to some aspects of the acculturation process. For example, their dramatic search for Christianity, their lack of overt, armed hostility toward the white man, and their being among the first American Indian tribes to sign the Indian Reorganization Act are of a unique nature. Of course, their reaction to acculturation has not been unique in all respects, since we can probably expect some similarity in the patterns or ways of life found among all hunting and gathering cultures that preclude certain reactions to acculturation processes of sufficient similarity to warrant generalization. However, the specific environment, as well as the specific nature of a culture's particular socio-cultural patterns and its world view likely preclude specific or unique reactions to some aspects of the acculturation process.
Although the Flathead Indians have traveled the road of acculturation for well over 100 years, the past has in many respects refused to die. If the acceptance of Western material culture appears to be all but complete, many of the ideas of the past are still quite evident. In view of the evidence of incomplete acculturation of the Flathead Indians, the present study developed around the general hypothesis that

1. measurable differences in the frequency distribution of all four variables would be found to exist between that part of the sample defined as Indian and that part defined as white, and, extrapolating from the theory of culture-and-personality, that

2. the biological makeup of all of the subjects could be considered as being a constant, i.e., that there are no physiological differences between that part of the sample defined as Indian and that part defined as white that may be construed as affecting personality structure.

Specific hypotheses, which will be elaborated and justified in the chapters below, were the following:

1. That among Flathead children there would be a significant increase or lack of decrease of belief in immanent justice with increasing age.

2. That there would be a significantly higher degree of belief in immanent justice with increasing age among the Indian group than among the white group.

3. That among both Flathead and white children there would be a significant decrease of belief in animism with increasing age.

4. That among Flathead children there would be a significantly higher degree of belief in animism with increasing age than among the white children.

5. That there would be significant differences between the Indian and white children in relation to some of those interests and experiences uppermost in the minds of the children.

6. That the degree and kind of acceptance of Western material culture would differ significantly between the Indian and white children; the Indian children displaying a significantly lower degree of acceptance of Western material culture than the white children.
Now, before proceeding with an evaluation of these traditions of the past, namely, the belief in immanent justice and animism, as well as those interests and experiences uppermost in the children's minds and their degree and kind of acceptance of white material culture, as compared to our white sample and within the context of the acculturation process, let us consider in more detail the subjects with whom the author worked.
The term "culture element" is defined by Linton (1940:468, 476) as "the current or potential parts of the culture" which have directly observable qualities, as well as meaning to the group. Kroeber (1936:101) associates "element" with "trait" maintaining that a trait is the "minimal definable element of culture." An example of a single cultural element would be the canoe. Of course, in any particular culture there are hundreds or even thousands of elements.

The term "cultural configuration" refers to those basic integrative forces or themes found in a culture. Such forces or themes affect each element in a culture in a distinctive manner. In relation to the work of Benedict (1934), personalities in a culture would have to be in agreement with the cultural configuration in order to function normally (cf. Mead 1939; Sapir 1949; Barnouw 1963).

It is interesting to note that nativistic movements are often closely correlated with processes of directed culture change (Linton 1940:502-503).

World view refers to the characteristic spirit or sentiment, as well as the "values and conceptions about the nature of things" held by the majority of members in a culture (Barnouw 1963:24). For a more complete analysis of the term "world view," see page 9, Note 4 of this thesis.

According to Linton (1940:483-500), culture transfer occurs as a result of contact between varying cultures and is the dynamic aspect of culture change. In other words, culture transfer comprehends those aspects actually affected by culture change including individual and group reactions as well as the changes affected in specific culture elements.

Field notes. Collected from an informant, June, 1964.

Field notes. Personal observation during the past one and one-half years the author has been frequenting the Flathead Reservation.


CHAPTER III

THE SUBJECTS

Introduction

The present study has been conducted among Indian and white children living and attending school at Arlee and Dixon on the Confederated Salish and Kutenai Reservation of Western Montana. A total of 163 subjects composed of 95 Indian and 68 white children were given one or more of a series of three psychological tests. The tests included (1) the Progressive Matrices (Raven 1938); (2) an adapted form of Piaget's Immanent Justice and Animism Test (Piaget 1948:250-251; Dennis 1943:30; Havighurst and Neugarten 1955:242); and (3) the Free Drawing Projective Technique (Havighurst and Neugarten 1955). The total number of subjects who completed each of the three tests in both groups combined varied somewhat, as did the number within each of the two groups respectively (Table 2). Both samples were more or less equally divided between male and female within two age ranges: 8 through 11 and 12 through 16. Table 3 represents the distribution by sex within the entire age range (8 through 16) and within both groups respectively (Indian and white) of those subjects who completed the Progressive Matrices. The sex distribution of those taking this test is considered as being more or less representative of the sex distribution of those completing the other two tests. Within the entire age range
TABLE 2
NUMBER OF SUBJECTS WHO COMPLETED EACH OF THE THREE TESTS

<table>
<thead>
<tr>
<th>Test</th>
<th>Combined Sample</th>
<th>Indian Sample</th>
<th>White Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progressive Matrices</td>
<td>163</td>
<td>95</td>
<td>68</td>
</tr>
<tr>
<td>Immanent Justice</td>
<td>160</td>
<td>92</td>
<td>68</td>
</tr>
<tr>
<td>Free Drawing</td>
<td>144</td>
<td>80</td>
<td>64</td>
</tr>
</tbody>
</table>

a Totals are given for the entire sample and for Indian and white samples respectively.

TABLE 3
AGE RANGE AND SEX DISTRIBUTION OF SUBJECTS COMPLETING PROGRESSIVE MATRICES

<table>
<thead>
<tr>
<th>Sex and Age Range</th>
<th>Indian</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male 8-16 . .</td>
<td>49</td>
<td>36</td>
</tr>
<tr>
<td>Female 8-16 . .</td>
<td>46</td>
<td>32</td>
</tr>
</tbody>
</table>

(8 through 16), one or more subjects came from each of the grades 2 through 11. Table 4 represents the distribution of class standings of those subjects in both groups (Indian and white), who completed the Progressive Matrices, and is considered as approximating the school grade distribution of those who completed the other two tests.

The subjects at the Arlee school were chosen by random number (Edwards 1964:93-113), while at the Dixon school the entire number of students ranging in age from 8 through 16 were tested because of the small number of such qualified subjects at this school. 1
TABLE 4
DISTRIBUTION OF SCHOOL GRADES ATTENDED BY SUBJECTS COMPLETING PROGRESSIVE MATRICES

<table>
<thead>
<tr>
<th>Subjects</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian</td>
<td>3</td>
<td>8</td>
<td>16</td>
<td>8</td>
<td>15</td>
<td>11</td>
<td>12</td>
<td>11</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>White</td>
<td>2</td>
<td>11</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>19</td>
<td>23</td>
<td>15</td>
<td>22</td>
<td>19</td>
<td>20</td>
<td>20</td>
<td>11</td>
<td>9</td>
</tr>
</tbody>
</table>

The Indian sample was defined (i.e., distinguished from the white sample) as those who possessed at least one-fourth Indian blood and were listed as tribal members on the official rolls. It should be noted, however, that no record of degree of Indian blood was available for four of the subjects at the Dixon school as they are not enrolled at the Flathead Agency. Their scores and responses to the three tests were included in this study since all are considered as being Indian by Reservation officials and school personnel.

The white sample was drawn from children living and attending school on the Reservation. These rural children it is believed, should display more factors in common with the Indian children because of their similar social, economic, and physical environment than they would with the more urban white children to whom the tests had previously been administered.

The Indian Children

To be born a Salish Indian is to enter a unique world that is a paradox of both older Indian ways and modern white American cultural
norms and traditions. Although most births take place at government hospitals one still hears that some children are "born at home" with only a midwife or some other appropriate person in attendance.

Emerging from the confines of the hospital or home, the child enters into a physical and socio-cultural world that is both a part of the good and the bad of our time. The preschool years, on the one hand, may be spent exploring the various mountain trails and fishing in the numerous streams and lakes or just playing about the family home with brothers, sisters, and neighbors. On the other hand, the infant's life may be and often is saturated with poverty and the family living quarters are often nothing more than a run-down shack. Brothers and sisters may be numerous. About 75-80% of the Indians are of Roman Catholic faith, and their religious beliefs preclude the use of any really safe birth control methods. For most individuals life is not easy.

Beginning school at about the age of 6 or 7 years, the child enters the white man's world in all of its intensity--one must be clean, one must be on time, one must do his work, one must succeed better than his neighbor--one must do all these things if he is to succeed according to the standards of the white-oriented culture. The author's field notes contain a conversation between a teacher and a young male Indian student in which the teacher concludes, "... you have to finish school or you will end up being nothing. You wouldn't want that, would you?" The student did not answer. 2

With the advent of the school years, contact with white children is greatly accelerated because a number of white students attend the schools at both Arlee and Dixon (Table 5). The effect of such contact
TABLE 5
TOTAL INDIAN AND WHITE ENROLLMENT AT ARLEE AND DIXON ELEMENTARY AND HIGH SCHOOLS<br><br>| Elementary and High School Combined | Total White Enrollment | Total Indian Enrollment |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arlee</td>
<td>166</td>
<td>190</td>
</tr>
<tr>
<td>Dixon</td>
<td>48</td>
<td>86</td>
</tr>
</tbody>
</table>

*aAdapted from Indian Education In Montana (1963-1964: 21-25)*

on the Indians' socio-cultural norms, values, and traditions, cannot be precisely ascertained. The transfer of modern white American socio-cultural norms and traditions on a greatly accelerated level, however, probably results to a great extent.

The social "atmosphere" at the two schools differs somewhat. At Dixon there appears to be less authoritativeness on the part of the superintendent, as well as on the part of the teachers. During the author's entire stay at Dixon (approximately two months) he witnessed no punishments for wrongdoings. At Arlee, however, punitive measures in the form of spoken word and corporal punishment are not infrequent. The specific offenses are not usually of a serious nature and are probably little different from those experienced in many other schools throughout the United States.

The teachers and officials at both schools, on the whole, are dedicated to their work. Their attitudes toward the Indian children are generally compassionate, but patience can wear thin, in some teachers faster than others, resulting in bursts of anger and disgust.
Although integration between Indian and white students is fairly complete, the students at Arlee displayed less "togetherness" than did the Dixon school students. For example, the author observed several play periods at both schools in which the Dixon children played together (Indian-white) in greater numbers and with much more intensity than did the students at Arlee. Furthermore, during lunch hours the students at Arlee "segregated" themselves to a greater extent in the lunch room than did the students at Dixon.

While contact with white cultural norms and traditions becomes extensive with the advent of the school years, Indian students are not entirely unaware of their being "different." For example, while conducting field work at the Arlee school the author had occasion to notice a poster on a bulletin board at the high school. It read in part, "Come to Our Next 'Indian Youth Club' Meeting. Skit will be presented; Also discussion on 'How Do You Think of Yourself As An Indian'?"³

While many do succeed according to white men's standards, others do not. High school dropouts, although below the average of many U.S. schools, are not infrequent.

The author's specific role as seen by the Indian children is extremely hard to define. However, several incidents occurred during the four and one-half months of fieldwork on the Reservation that indicate, to some extent, what that role must have been.

It is of no mean significance to note that the author's most immediate impression of these children was their surprising willingness to smile. Indeed, if the act of smiling is universal and connotes, generally, some degree of friendship, then it is certainly a useful device for establishing rapport among the Salish children.
The administration of tests, a chore which is not particularly enjoyed by many teachers and is liked even less by most white American students, became an act of great importance to the Indian children. For example, on the whole, their reaction to all three of the tests may be characterized as an almost "fanatic" desire to participate. It was not uncommon for those who had not been chosen as part of the sample to speak to the author and ask why they could not participate. And, as if there is strength in numbers, small delegations of boys and girls would come to the author and explain that they would like to be part of the study. In fact, several teachers explained that many Indian children felt left out because they had not been selected to take the tests, and that in being selected a boy or girl actually achieved some amount of social status among their respective peer groups. Furthermore, on several occasions children who had completed one or more of the tests asked the author how they had done, and expressed interest in the tests, characterizing them as "fun to take." In short, the reception by the Indian children to the author's work was one of overwhelming willingness to participate.

The analysis of such reactions in terms of motivation and social awareness is not an easy task. Analysis based on direct observation is often deceptive since what permeates the mind is very seldom apparent by observation of facial expressions. However, if the observation and recording of direct behavior indicates something about inner motivation, then the reactions of the Indian children to the author's work may be of great importance in partially explaining their psychological motivations.
Their overall willingness to participate may well indicate that they are striving for recognition as individuals and, more importantly, as Indians living in a white man's world which is often impersonal and characterized by a striving for standardization at the expense of individuality. The cultural norms and traditions of their ancestors (what few remain) must surely affect psychological makeup. Contact with the older generation is quite frequent. At the same time, traditional games such as the "stick game" are still being played, as well as "pow wows" being held during the summer months. The author has had occasion to attend several of these festivities and has always observed children in attendance. Such contacts reinforce identity with Indian cultural norms and traditions, an identity that probably conflicts with modern white American cultural norms and traditions. Thus, my appearance as an investigator of Indian culture, a fact not unknown to the children since the teachers told them I was studying their "ways," reinforced their identity as Indians for here was a white man, a stranger at that, who was interested in them not as students alone but also as Indians.

Interestingly enough, teachers commented on more than one occasion that specific Indian students had become very excited after taking one or more of the tests. The author recorded several of the teachers' comments: "... he was very excited and obviously proud;" "... he has not spoken much for a month or so, now he is very excited;" and "... he actually enjoyed the test!"4

These comments lend credence to the author's observation that the Indian children had found someone, as well as something (i.e., the
tests) with which to identify themselves. The particular nature of their reactions to the author's investigation was probably structured partly by the idea that modern white American educational practices are generally geared toward a policy of nonrecognition of the needs of native North American cultures. There is, in short, an attempt to standardize; to teach all of the students in the same manner. Yet the Indian children recognize that they are different. In this "recognition" they are caught in the inexorable exigencies of a dominant culture that has attempted, both consciously and unconsciously, to eradicate the culture of their ancestors. But for the children there remains a part, albeit a small part, of the ancient culture which refuses to die and they are, to some extent, caught between the values and traditions of their past culture and those of the present, and as a result are sometimes uncertain of their behavior.

The White Children

The white children living and attending school on the Reservation are, in some cases, the descendants of early pioneers who settled on Reservation land after 1910 as farmers and ranchers. Some whites are employed as sawmill workers and general laborers. Others have moved onto Reservation land as employees of the Bureau of Indian Affairs in both professional and semi-professional capacities, as well as general laborers. In the villages of Arlee and Dixon, as well as in the larger towns located on the Reservation, whites own and operate the greater proportion of businesses. In short, their economic base is much broader than that of the Indian population. However, the Confederated Salish and Kutenai Tribes own and operate two resorts and
a dam on the Reservation—Blue Bay Resort located on Flathead Lake, Hot Springs Bath House at Hot Springs, and Kerr Dam located on the Flathead River a few miles from Poulson, Montana. Economic expansion of the Reservation's natural resources is often the subject of much concern at tribal council meetings. The varying reaction of white children to the present investigation was, therefore, not totally unexpected since they are subjected to a somewhat differing set of socio-cultural factors. The specific identification of these factors is difficult at best, but the generally higher economic status of the white community and the fact that the schools are operated by whites according to white standards probably facilitates better adjustment among white than among Indian students.

In contrast to the Indian children, the whites displayed less interest in the investigation. It should be noted that this is a subjective observation based almost entirely on the fact that fewer children expressed their interest to the author, as well as on the comments made by administrators and teachers.

These apparent differences in motivation between Indian and white children toward the investigation probably result, to some extent, from the fact that the white children display a higher degree of self-identity and social integration than do the Indians. Their position in the community is, of course, one of dominance—a position that is solidified by the fact that their parents are economically superior to the Indian population as a whole.

Several factors lend credence to this observation. For example, the white children displayed a higher degree of confidence while taking
the tests, especially in relation to the Progressive Matrices Test. This judgment is based on direct observation since the average time required by the Indian and white groups respectively to complete the Matrices Test varied only slightly (Table 6). (It should be noted that

<table>
<thead>
<tr>
<th>Sample</th>
<th>Average Time to Nearest Whole Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian</td>
<td>20</td>
</tr>
<tr>
<td>White</td>
<td>23</td>
</tr>
</tbody>
</table>

all of the subjects were told that they could take as much time as they desired to complete each of the tests. The time required by each subject to complete the Progressive Matrices was discreetly noted by the author.)

Aside from taking slightly more time to complete the Matrices Test the white children displayed a higher degree of concentration on the various parts of the test. The five sets of sixty matrices become progressively harder as one nears completion of the test. Concentration, therefore, usually diminishes toward the end, a characteristic that had a higher frequency among Indian than among white children. This is not to say, however, that the Indian children displayed less interest in the test; their interest was indeed very pronounced although their span of concentration was somewhat shorter than that of the white children.
The foregoing presentation has presented several aspects pertinent to the present study, including an analysis of the acculturation process, both in general terms and as it specifically applies to the Flathead, as well as pertinent data concerning the subjects with whom the author worked. With these factors in mind, we may now proceed with our study of immanent justice, animism, and those interests and experiences uppermost in the minds of the children, and the degree and kind of acceptance of white material culture; the basic approach is to compare the Indian to the white children.
Footnote References--Chapter III

1 Although some 83 students between the ages of 8 and 16 were enrolled at Dixon Grade and High School, the highest number tested was 82. The exclusion of one student (male) became necessary because he was unavailable for testing.


3 Field notes. Collected at Arlee, Montana, April, 1965.


CHAPTER IV

THE BELIEF IN IMMANENT JUSTICE

Piaget and His Swiss Children

In 1932, Piaget (1948:250) postulated that young children pass through a stage in which their moral ideas are regulated by an implicit belief in "immanent justice." To Piaget, this concept meant that "during the early years of his life, the child must . . . affirm the existence of automatic punishments which emanate from things [acts] themselves." That is, the child affirms the "soundness and universality of expiatory punishment;" that wrongdoings are inexorably followed by punishment through a justice aside from that instituted by man (Piaget 1948:250; Thompson and Joseph 1947:92). Such beliefs were said to be strongest in younger children and decrease with increasing age. His study of Swiss children (1948:251) revealed that 86% of six-year-olds held such beliefs, and that this percentage decreased to 39% in the 11 to 12 age groups. In line with these findings he also postulated that among "primitives" such a decline in the belief in immanent justice would not be likely to occur (1948:260-261).

Piaget (1948:257-260) considered three possibilities concerning the origins of belief in immanent justice: It may be (1) inborn, (2) the direct result of parental teaching, or (3) the indirect result of adult
constraint. He rejected the first possibility as being improbable on a priori grounds. The second, which included punishments attributed to God, may "explain the majority of cases." The third, and according to Piaget the most important since he probably excluded "acts of God" as a part of immanent justice (Jahoda 1958:245), was that "the child, having acquired, thanks to adult constraint, the habit of punishment, attributes spontaneously to nature the power of applying the same punishments." Piaget recognized, however, that since the child cannot be isolated from parental teaching the last hypothesis cannot be shown to exist independently (1948:259-260).

The idea that adult constraint is the prime factor in producing the belief in immanent justice differs, according to Piaget (1948:99, 261), between "modern" and "primitive" societies. In modern societies, he maintains, adult constraint is strong in childhood but diminishes markedly with adolescence and beyond. These changes occur in a sort of simultaneity with intellectual and moral autonomy and economic independence. On the other hand, childhood in primitive societies is a period of relative freedom, the full force of moral constraint coming with initiation as a full member of the society. According to Piaget (1948:99), initiation rites thus bring the adolescent savage under moral constraints that are present among young children in modern societies. The adolescent primitive clings to these beliefs throughout the rest of his lifetime, Piaget adds, since they are a part of the very culture.

In order to determine a person's belief in immanent justice (as well as animism), Piaget (1948:250-251) utilized the guided interview approach. A series of three stories were told to one or more of the
subjects, each story designed to elicit a different response. For example, the "Stolen Apples Story" is one that other investigators have used widely and is one that has been generally accepted in modified form. The story centers around two boys who steal some apples. In the process of stealing, one of the boys is caught and punished on the spot. The other boy manages to get away, but on his way home crosses a rotten bridge and falls into the water. The subject is then asked a series of three questions which in recent times have been modified from those questions originally used by Piaget (see Dennis 1943:30, Havighurst and Neugarten 1955:242). The first two are designed to elicit responses relating to immanent justice and the third to animism. (Responses relating to animism are considered in Chapter V.)

Survey and Analysis of Studies Since Piaget's

Since Piaget's original test a number of similar studies have been conducted among adolescents or children of various cultures throughout the world. The following, by geographical area and in chronological order, is a survey and analysis of these studies.

North America

Lerner (1937:62-69, 86) administered a modified form of Piaget's "fallen bridge" story to 389 white American children. He found, as Piaget had among Swiss children, that the incidence of the belief in immanent justice was higher among young children and that it decreased with age (see Table 7).

Thompson and Joseph (1947:92) administered a series of stories modeled after those used by Piaget to 169 Hopi children (98 children
TABLE 7
AGE RANGES AND PERCENTAGES OF WHITE AMERICAN CHILDREN EXPRESSING BELIEF IN IMMANENT JUSTICE^a

<table>
<thead>
<tr>
<th>Age</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-7</td>
<td>82</td>
</tr>
<tr>
<td>8-9</td>
<td>70</td>
</tr>
<tr>
<td>10-11</td>
<td>31</td>
</tr>
</tbody>
</table>

^aAdapted from Lerner (1937:86).

from Oraibi and 71 from First Mesa). Although the results from only one story were analyzed, the incidence of belief in immanent justice remained significantly high, or as in the case of the children at Oraibi, actually increased with age among Hopi children (Table 8).

TABLE 8
AGE RANGES AND PERCENTAGES OF HOPI CHILDREN EXPRESSING BELIEF IN IMMANENT JUSTICE^a

<table>
<thead>
<tr>
<th>Age</th>
<th>First Mesa</th>
<th>Oraibi</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-8</td>
<td>43</td>
<td>77</td>
</tr>
<tr>
<td>9-11</td>
<td>79</td>
<td>88</td>
</tr>
<tr>
<td>12-18</td>
<td>84</td>
<td>90</td>
</tr>
</tbody>
</table>

^aAdapted from Thompson and Joseph (1947:146).

The lack of decrease (and actual increase among Oraibi children) in the belief in immanent justice in contrast to Piaget's (1948) and Lerner's (1937) findings among Swiss and American children was
attributed principally to cultural differences (1947:106-107). The authors point out that if Hopi children expressed a belief in immanent justice about as often as white children at various age levels, then it could be reasonably ascertained that similar psychological factors are at the base of this attitude. Among both Indian and white children such beliefs would result from childhood egocentrism. Furthermore, the Hopi belief would be augmented by beliefs centering around rewarding and punishing deities. By the same token the white belief would be enhanced by the idea of the ever-present, all-seeing, Creator. However, since belief in immanent justice does not decrease among Hopi children and in at least one case showed a positive increase, then other factors must be considered. The authors see cultural differences as being of prime significance. They state (Thompson and Joseph 1947:107):

... in Hopi culture... we find the conviction that not only "bad" actions, but also "bad" thoughts may fatally harm the individual's life and alter the course of the whole universe... Thus the individual's thoughts may have a certain bearing on the prosperity or misfortune of the whole community. Within this context the concept of immanent justice would lose its infantile egocentric qualities and would express in older hopi children a conscience of group-bound responsibility on the religious level, which in turn would be related to the insecurity of the actual group situation.

Thompson (1948:200-215) postulated, partly on the basis of an earlier study (Thompson and Joseph 1947), as well as on the results from tests administered by personnel of the Indian Education and Administration Research staff to Pine Ridge and Kyle Sioux, Northern Ojibwa, Navaho, Hopi, Papago, Zuni, and Zia Indians that the belief in immanent justice survives the acculturation process. This
postulation was based on the fact that "in no Indian community studied, regardless of degree of acculturation, was there a statistically significant decrease in the number of responses indicating such belief. Indeed, the findings indicate that belief in immanent justice increases significantly with age in several of the communities studied" (1948: 200). According to Thompson (1948:212) the belief in immanent justice can be legitimately associated with such deepseated beliefs as a culture's basic orientations regarding the nature of the universe and man's relation to it, beliefs which are said to persist through millennia in spite of overall changes in a culture's ecology, economy, sociology, and ritual expressions. Thompson (1948:212) thus concludes:

Whatever their historic origin, the evidence leads to the assumption that once such basic attitude patterns become fairly entrenched in the tribal culture (probably in the symbol system) and in the communal personality structure, their inner morphology tends to endure despite changes in content and emphasis.

Havighurst and Neugarten (1955) conducted another large-scale study of Hopi Indian children in an effort to test Piaget's hypothesis that the incidence of immanent justice should not be expected to decline in primitive societies. They found, as Thompson and Joseph (1947) and Thompson (1948) had previously that there was either no change or a statistically significant rise in the incidence of responses indicating a belief in immanent justice with increasing age (Table 9).

The authors concluded ". . . it is clear that Piaget's theory of belief in immanent justice in a primitive society is borne out by these data" (1955:150).
### TABLE 9

**AGE RANGES AND PERCENTAGES OF HOPI CHILDREN EXPRESSING BELIEF IN IMMANENT JUSTICE**

<table>
<thead>
<tr>
<th>Ages</th>
<th>Third Mesa</th>
<th>First Mesa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Question A</td>
<td>Question A</td>
</tr>
<tr>
<td>6-11</td>
<td>69</td>
<td>45</td>
</tr>
<tr>
<td>12-18</td>
<td>90</td>
<td>66</td>
</tr>
</tbody>
</table>

^a Adapted from Havighurst and Neugarten (1955:150).

^b Statistically reliable increase with age.

**Africa**

Jahoda (1958) administered a modified form of Piaget's "Stolen Apples Story" to 120 school children (culture unspecified) in Accra, Ghana. His expressed purpose was to check the findings of Havighurst and Neugarten (1955). Contrary to previous studies he devised a different procedure of obtaining and scoring responses. The examiner was not to be content with simple "yes" or "no" answers but was instructed to "probe in a strictly neutral fashion until the children expressed their ideas at greater length" (1958:243). Each child's set of responses was then considered as a whole and classified in one or more of five categories, including (1) Pure Immanence, (2) Act of God, (3) Inconsistent, (4) Magical Causation, and (5) Naturalistic. As previously noted (page 48) Jahoda (1958:245) postulates that Piaget probably excluded "acts of God" as being diagnostic of immanent justice. Since patterns of adult constraint--the principal cause of
immanent justice according to Piaget--cannot be isolated from parental teaching, then it would seem that a good case for admitting "acts of God" is evident. If "acts of God" are included, then the picture changes; the incidence of immanent justice is much higher among young children, and the decrease among older ones much less marked. Jahoda found, however, that responses indicating belief in "Pure Immanence" decreased significantly with age among the African children being tested. Table 10 is a reproduction of his findings. The designations "primary one to five" and "primary six to middle four" represent approximate ages ranging from 6 to 12 and 12 to 18 respectively (Jahoda 1958:242).

The statistical evidence represented by Table 10 shows, at least among those students tested by Jahoda, that there is a decrease in the belief in "pure immanence" among the older group. Under the category "Acts of God" there is an indicated but not statistically significant increase among older children. "Magical causation," a response hitherto not evident in any previous studies, remains virtually the same in both age groups. "Naturalistic" responses show a significant increase in the older age group. In relation to responses indicating belief in immanent justice, Jahoda's findings are in contradiction to those of previous studies conducted among primitive societies (cf. Thompson and Joseph 1947; Thompson 1948; Havighurst and Neugarten 1955). According to Jahoda (1958:246), Havighurst and Neugarten (1955) utilized unrealistic models of modern and primitive societies. He maintains that such an objection can be overcome only by rating various cultures and subcultures as to the degree of moral constraint
TABLE 10

PERCENTAGE DISTRIBUTION OF AFRICAN SCHOOL CHILDREN IN ACCRA ANALYZED IN TERMS OF THEIR TOTAL RESPONSE PATTERNS\(^{a}\)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Primary One to Five</th>
<th>Primary Six to Middle Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pure Immanence(^{b})</td>
<td>45</td>
<td>8</td>
</tr>
<tr>
<td>2. Act of God</td>
<td>33</td>
<td>47</td>
</tr>
<tr>
<td>3. Inconsistent</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>4. Magical Causation</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>5. Naturalistic(^{c})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Causal Guilt</td>
<td>---</td>
<td>10</td>
</tr>
<tr>
<td>b. Pure Accident</td>
<td>---</td>
<td>10</td>
</tr>
<tr>
<td>All Categories</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

\(^{a}\) Adapted from Jahoda (1958:244).

\(^{b}\) Significant decrease in the higher age group (\(P < 0.001\)).

\(^{c}\) Significant increase in the higher age group (\(P < 0.001\)).

imposed at different phases in the life cycle by each of their respective members. Within this framework, then, the majority of American Indians, as well as urban Africans, are not primitive societies in Piaget's sense of the word. Indeed, the acculturation process among both groups presents a picture of conflicting pressures brought about by the imposition of Western moral norms on traditional attitudes. The acceptance of certain norms and overt and covert rejection of others creates a sense of uncertainty and insecurity. According to Jahoda (1958:246), these factors are evidenced by the occurrence of responses pertaining to magical causation; a type of response that has not been previously noted in studies of immanent justice among American Indians.

The methodology employed by Havighurst and Neugarten (1955:}
144-149) in their study is also criticized by Jahoda (1958:246-247), who maintains that an adequate classification of a subject's responses can only be made on the basis of his total response pattern, a procedure not employed by Havighurst and Neugarten. Jahoda (1958:246) states:

By treating the answer to each question separately, Havighurst and Neugarten—not merely lost a great deal of information, but also introduced a bias in the direction of immanent justice, a bias which becomes increasingly severe with the older subjects. This was largely the consequence of being satisfied with simple "yes" or "no" replies, particularly with reference to Question C1 which is essential for understanding the children's ideas. An illustration may help to clarify this. In the scoring rules (Havighurst and Neugarten 1955:146) it is stated that the response "He was thinking about what he had done and was careless" would be scored negative for animism. Although there can be no quarrel with this as regards the issue of animism, it appears likely that the answers to the two earlier questions A and B were in such cases of the immanent justice type. If so, it follows that by adherence to mechanical scoring rules applied to atomistic units these earlier answers must have been wrongly classified as immanent justice ones. The probability of such mis-classification is greatest with responses of the "causal guilt" type, which become more frequent with increasing age.

Jahoda (1958:247) attempts to illustrate these points of criticism by analyzing his African data on the basis of Havighurst and Neugarten's scoring system (Table 11).

The impression now, according to Jahoda (1958:247), is that there is little change with advancing age, an impression which is in direct contradiction with Table 10 (p. 55 of this thesis). Havighurst and Neugarten's evidence, he maintains, "must therefore be largely discounted" (1958:247).

From this brief survey of past studies in the area of immanent justice several pertinent factors have become evident: (1) The concept of immanent justice among children has been shown to exist, in
TABLE 11
PERCENTAGES OF IMMANENT JUSTICE RESPONSES AMONG AFRICAN CHILDREN ACCORDING TO HAVIGHURST AND NEUGARTEN'S SCORING SYSTEMa

<table>
<thead>
<tr>
<th>Questions</th>
<th>Primary one to five</th>
<th>Primary six to middle four</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>93</td>
<td>100</td>
<td>80</td>
</tr>
</tbody>
</table>

aAdapted from Jahoda (1958:247).

Varying degrees, in all of those cultures studied. (2) Several studies among non-Western cultures have reported an increase and/or significant lack of decrease of belief in immanent justice with increasing age (cf. Thompson and Joseph 1947; Thompson 1948; Havighurst and Neugarten 1955) in contrast to the findings of Piaget (1948) and Lerner (1937). However, at least one author (Jahoda 1958) reports evidence indicating that there is no increase in the belief in immanent justice among older children living in a non-Western culture. (3) Comparison of the findings among American Indian groups with those among white American and Swiss children indicate that Indian children generally possess a significantly higher degree of belief in immanent justice with increasing age than do white children regardless of whether or not there has been a significant rise or lack of decrease in the frequency of such a belief among Indian children. (4) The specific reasons for these differences have been attributed to (a) differences in cultural and social backgrounds of those cultures studied...
(cf. Thompson and Joseph 1947; Thompson 1948; Havighurst and Neugarten 1955), and (b) unrealistic methods of approach and faulty scoring systems employed by those working in this area of study (Jahoda 1958).

The criticisms directed against Havighurst and Neugarten (1955) by Jahoda (1958) concerning their models of "modern" and "primitive" societies as well as their scoring system are of crucial importance here. In short, Jahoda's criticism, at least in relation to their use of the terms "modern" and "primitive," appears to be of demonstrated value. Such an objection, according to Jahoda (1958:246), can be overcome only by rating various cultures and subcultures as to degree of moral constraint imposed at different phases of the life cycle by each of their respective members. Furthermore, Jahoda maintains that the acculturation process has greatly complicated this matter, since the existence of such a process presents a picture of conflicting pressures brought about by the imposition of Western moral norms on traditional attitudes. The categorization of cultures into models of modern or primitive respectively, then, creates grave difficulties. The simple fact of the matter is that the so-called non-Western cultures are neither modern nor primitive. At best, it can only be said that they are in the process of acculturation. Unfortunately, this problem is not considered by Havighurst and Neugarten in their study.

Jahoda's criticism of Havighurst and Neugarten's scoring system is, however, somewhat overdrawn. It will be recalled (pp. 55-56 of this thesis) that Jahoda (1958:246-247) maintains that a subject's
"whole" response must be considered in relation to his belief in immanent justice. Simple "yes" or "no" answers on the part of the subject are of little value. The examiner must "probe in a strictly neutral fashion" until the child expresses his ideas clearly (Jahoda 1958:243). While there may be some value in probing in a strictly neutral fashion in order to better determine a subject's "true" response, the particular nature of Jahoda's "whole response" approach presents several difficulties. For example, in order for a subject to be scored as believing in immanent justice he would also have to show a belief in animism (see pp. 62-63 of this thesis). At the same time, those subjects whose responses indicate a belief in immanent justice in relation to the first two questions, but not a belief in animism in relation to the last question are scored as "Inconsistent" (see pp. 62-63 of this thesis). This leaves Jahoda's scoring procedure open to question since this author can find no evidence in Jahoda's writings that indicates that he has defined the terms immanent justice and animism in a manner different from Piaget; yet his scoring procedure necessarily implies that the two terms are closely related, at least to the extent that a subject must show positive responses in relation to both immanent justice and animism in order to be scored as believing in "Pure Immanence" (i.e., immanent justice). In reality, however, the belief in immanent justice need not necessarily be associated with the belief in animism. Thus, a child may exhibit belief in immanent justice but not in animism, and vice versa. The validity of this observation seems to be supported in that the definitions as well as the diagnostic features of immanent justice and animism are
different (see Piaget 1929, 1948, as well as pp. 47 and 73 of this thesis).

Notwithstanding Jahoda's criticisms, past studies among American Indian groups indicate, in contrast to the findings of Piaget (1948) and Lerner (1937) among Swiss and white American children, that a rise, and/or significant lack of decrease of belief in immanent justice with increasing age should be expected to occur among American Indian groups. Furthermore, comparison of Indian with white children (e.g. Piaget 1948; Lerner 1937) indicates that the former generally possess a significantly higher degree of belief in immanent justice with increasing age regardless of whether or not there has been a significant rise or lack of decrease in such a belief.

It is therefore hypothesized:

1. That among Flathead children there would be a significant increase or lack of decrease of belief in immanent justice with increasing age.

2. That there would be a significantly higher degree of belief in immanent justice with increasing age among the Indian group than among the white group.

The Present Study

Procedures. -- The form of the story and the questions used in the present study are as follows:

I am going to tell you a story and then I am going to ask you some questions about it. This is a story about two boys. These two boys named Paul and Jim, were out walking and they came to a place where a man had some apples for sale. Each of them stole an apple and ran away with it. But the man saw them and ran after them. He caught Jim and punished him, but Paul got away. The same afternoon Paul was chopping some wood, and the axe slipped and he cut his foot.
A. Why do you think Paul's foot was cut?
B. If Paul did not steal the apple, would he cut his foot?
C. Did the axe know that he stole the apple?

The answers to the three questions were scored according to the techniques developed by (1) Havighurst and Neugarten (1955), and (2) Jahoda (1958). Two separate methods of scoring were deemed necessary in view of the criticisms leveled against Havighurst and Neugarten by Jahoda (1958) as well as for purposes of comparison.

The Havighurst and Neugarten method (1955:146) is as follows:

**Question A:** "Why do you think Paul's foot was cut?" Answers, such as "because he stole the apple," "it was his punishment," were scored as positive for immanent justice. Naturalistic answers, as "the axe slipped," "he was careless," and answers such as "I don't know" were scored negative for immanent justice.

**Question B:** "If Paul did not steal the apple, would he cut his foot?" "No" answers were scored positive for immanent justice and "yes" answers were scored negative. Answers such as "I don't know" were scored as uncertain. Since there is a conditional clause in Question B--"If he did not steal the apple, would he cut his foot?"--a further question was asked in order to make sure the subject had not been confused by the clause. The additional question varied according to the subject's answer, but was usually "Why not," or simply "Why."

**Question C:** "Did the axe know that he stole the apple?" "Yes" answers were scored positive for animism. Few qualifications were given in answering this question, the usual answer being a simple "Yes" or "No." When subjects voluntarily failed to qualify their answer they were asked "Why not?" The last question, although not included
in Havighurst and Neugarten's technique, was deemed necessary in determining "why" the subjects did or did not feel the axe knew he stole the apple. The question of animism will be discussed in Chapter IV of this thesis.

Jahoda's method is somewhat more complicated, and, as previously noted, considers the subject's "whole" response to all three questions. His method (modified to fit the test employed by the author) is as follows (Jahoda 1958:243-244):

1. Pure Immanence. Paul's injury is viewed as a direct consequence of the wrongdoing, without the intervention of any external agency, or any naturalistic explanation begin offered.
   A. Because he sinned.
   B. He would not cut his foot if he did not sin.
   C. Yes, the axe knew . . .

Jim was punished he was not.

2. Act of God. This is self-explanatory.
   A. Because he stole the apple from the man God had punished him, i.e., "God had found him guilty."
   C. The axe did not know, but God saw Paul when he stole the apple so he made the axe cut him.

3. Inconsistent. Partly immanent and partly naturalistic.
   A. Because he stole the apple.
   B. Paul would not have cut his foot if he had not stolen the apple.
   C. The axe did not know that he had stolen the apple. Paul's foot was cut because he did not know how to handle an axe.
   A. Because he was careless when he was chopping wood that
afternoon.
B. He would not have cut his foot if he had not stolen.
C. It did not know, but Paul was cut because of wrong he did.

4. Magical Causation. The consequence of being cursed.
C. The axe did not know that he had stolen the apple. Because the man could not get hold of Paul to punish him he cursed him, and that was why the axe cut his foot.

5. Naturalistic. This can be further subdivided into two classes:
Causal guilt, which is of particular interest as the sequence crime-injury is conceived as a causal one, but mediated by a natural process;
A. Because he was a thief.
B. He could not have cut his foot if he had not stolen the apple.
C. The axe did not know: but Paul, having a guilty conscience, was so nervous that he could not control the axe and that was why it cut him.

and Pure Accident:
A. It was accidental--he was careless while cutting the wood.
B. He would have cut himself whether he stole or not.
C. It did not know. Paul did not hold the axe firmly, that was why it cut him.

Results. -- The results obtained from the Indian and white samples (scored on the basis of the Havighurst and Neugarten method) indicate that the belief in immanent justice is present in both groups. Table 12 represents the age ranges and percentages of such responses among the Indian and white children from both schools combined.
TABLE 12

AGE RANGES AND PERCENTAGES OF RESPONSES INDICATING BELIEF IN IMMANENT JUSTICE AMONG INDIAN AND WHITE SAMPLES

<table>
<thead>
<tr>
<th>Sample</th>
<th>Ages 8-11</th>
<th></th>
<th>Ages 12-16</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Responding</td>
<td>Yes Responses QA No.</td>
<td>%</td>
<td>Yes Responses QB No.</td>
</tr>
<tr>
<td>Salish</td>
<td>39</td>
<td>17</td>
<td>43</td>
<td>28</td>
</tr>
<tr>
<td>White</td>
<td>32</td>
<td>16</td>
<td>50</td>
<td>17</td>
</tr>
</tbody>
</table>

a No decrease with age.
b Statistically reliable decrease with age (P less than .02).
c Statistically reliable decrease with age (P less than .001).
d Statistically reliable difference in rate of decrease between Indian and white samples with age (P less than .05).
e Statistically reliable difference in rate of decrease between Indian and white samples with age (P less than .01).

These percentages indicate that there is no statistically significant difference in the belief in immanent justice in relation to Question A within the age range 8-11 in either of the two groups. In relation to Question B the Indian percentage of positive responses is cumulatively, but not significantly higher within the age range 8-11. More importantly, there is no decrease of positive responses indicating belief in immanent justice with increasing age (i.e., 12-16) among the Indian children in relation to Question A. However, in relation to Question B there is a statistically significant decrease of positive responses with increasing age among the Indian group. On the other hand, the
white children's percentages indicate a statistically significant decrease with increasing age in relation to both Questions A and B.

Furthermore, the degree of belief in immanent justice with increasing age remains significantly higher among the Indian children than among the white children in relation to both Questions A and B. Figure 1 graphically illustrates the differences between the Indian and white children at the higher age range in relation to (1) Question A, and (2) Question B.

![Figure 1](image_url)

**Fig. 1.** Grouped column chart indicating differences between Indian and white children at the higher age range in relation to the belief in immanent justice.

* [Indian](image_url)  [White](image_url)

The percentage distribution of responses indicating belief in
immanent justice among the Indian and white samples within the context of the two age ranges--8-11 and 12-16--and at each of the two schools is represented in Table 13. It should be noted, however, that in relation to this table no attempt has been made to compute statistical significance between the number of positive responses listed, since they are so small as to render reliable significance levels next to impossible. The table is included merely for illustrative purposes.

Scoring the Indian responses according to Jahoda's method produced completely different statistical results (Table 13). The percentages indicating belief in immanent justice are now much lower than when the scoring system is patterned after Havighurst and Neugarten's (1955) method; there is also no statistically significant decrease with increasing age. As a matter of fact, the greater proportion of responses (66 and 62% respectively) fall under the classification "Inconsistent." It should also be noted that no responses indicating "Magical Causation" were elicited from the Indian children (the same holds true for the white children). Furthermore, responses indicating "Naturalistic" causes are extremely low in both age ranges (no statistically significant difference), especially in relation to the extremely high percentages exhibited under the classification "Inconsistent."

Summary Results of Test. -- The results obtained in the present study (when scored according to the Havighurst and Neugarten method) in relation to the hypotheses set forth on p.60 of this thesis indicate that there is a significant lack of decrease in the belief in immanent justice with increasing age in relation to Question A among the Indian children. However, in relation to Question B, there is a significant
TABLE 13

PERCENTAGE OF RESPONSES INDICATING BELIEF IN IMMANENT JUSTICE AMONG INDIAN AND WHITE CHILDREN, BY GEOGRAPHICAL AREA

<table>
<thead>
<tr>
<th>Sample</th>
<th>Ages 8-11</th>
<th></th>
<th></th>
<th>Ages 12-16</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dixon</td>
<td>16</td>
<td>8 50</td>
<td>13 81</td>
<td>29</td>
<td>14 48</td>
<td>6 20</td>
</tr>
<tr>
<td>Arlee</td>
<td>23</td>
<td>9 39</td>
<td>15 65</td>
<td>24</td>
<td>11 45</td>
<td>8 33</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dixon</td>
<td>17</td>
<td>7 41</td>
<td>8 47</td>
<td>19</td>
<td>3 15</td>
<td>2 10</td>
</tr>
<tr>
<td>Arlee</td>
<td>15</td>
<td>9 60</td>
<td>9 60</td>
<td>17</td>
<td>5 29</td>
<td>0 0</td>
</tr>
</tbody>
</table>

decrease of such belief with increasing age among the children of this group. The hypothe­cated that there would be a significant increase or lack of decrease of belief in immanent justice with increasing age among Flathead children is therefore said to have been proven in relation to Question A, but not in relation to Question B.

Furthermore, the results indicate that the degree of belief in immanent justice with increasing age remains significantly higher among the Indian than among the white children in relation to both Questions A and B. The hypothe­cated that there would be a significantly higher degree of belief in immanent justice with increasing age among the Indian than among the white group is therefore said to have been proven.

These findings are in accordance with past studies (excluding
Jahoda's) conducted among so-called non-Western cultures, at least to the extent that the percentage of decrease in the belief in immanent justice with increasing age is significantly lower among Indian than among white children (cf. Thompson and Joseph 1947; Thompson 1948; Havighurst and Neugarten 1955; Piaget 1948; Lerner 1937). However, the results of the present study differ from some past studies in that there is no statistically significant increase of belief in immanent justice with increasing age among the Indian sample (cf. Thompson and Joseph 1947; Havighurst and Neugarten 1955).

Among the white sample the percentage of decrease in relation to immanent justice responses is in accordance with past studies (cf. Piaget 1948; Lerner 1937).

The differences encountered in the frequency of responses
indicating belief in immanent justice when the Indian responses are scored according to Jahoda's method probably result from the deficiencies inherent in the method. For example, the small percentage of immanent justice responses in proportion to the extremely high percentage of "Inconsistent" responses tends to indicate that one or the other of these two responses, as represented in Table 14, is not representative of the actual situation. The major difficulty (as previously noted on pages 59-60 of this thesis), is that according to Jahoda's method the subject must not only show a belief in immanent justice but also in animism before he can be scored as believing positively in immanent justice. This leaves Jahoda's method of scoring open to question, since the belief in immanent justice need not necessarily be associated with the belief in animism, especially in view of the fact that the definitions as well as the diagnostic features of both types of belief differ considerably (cf. Piaget 1929, 1948).

The major difference, then, between the present study and those conducted among other Indian groups in the United States (cf. Thompson and Joseph 1947; Thompson 1948; Havighurst and Neugarten 1955) is that the present results show no increase in the belief in immanent justice with increasing age, although the Flathead, as previously shown, possessed a high degree of belief in immanent justice in aboriginal times. Such a difference might be attributed to differences in patterns of acculturation. For example, the Hopi pattern of acculturation surely differs from that found among the Flathead. The real crux of the matter probably is that the Flathead children are and have been subjected—in the process of acculturation—to different patterns of moral and religious
values than the Southwestern Indians. At the same time, the specific nature of Flathead culture (or what little there is left of it) probably determines, to some extent, psychological patterns that differ from those of other cultures now experiencing processes of acculturation. These specific patterns of psychological makeup are the result of certain specific factors that are unique only to Flathead processes of acculturation:

1. The Flathead were a hunting and gathering people who therefore possessed a world view different from those entrenched agriculturists of the Southwestern United States (see pp. 23-26 of this thesis).

2. The Flathead sought the Christian religion and became more or less willing converts.

3. The Flathead have lived for sixty-five years in close association with white neighbors--their reservation is so dominated by whites that they are but a small minority who live in the heartland of their former domain.

In summary, then, the present findings have shown that among Flathead children there is a significant lack of decrease of belief in immanent justice with increasing age in relation to Question A, while a significant decrease was noted in relation to Question B. Thus, the hypothesis that there would be a significant increase or lack of decrease of belief in immanent justice with increasing age among Flathead children has been proven in relation to Question A, but not Question B.

Furthermore, it has been shown that the degree of belief in immanent justice remains significantly higher with increasing age among Flathead than among white children in relation to both Questions A and B. Thus, the hypothesis that the degree of belief in immanent justice with increasing age would remain significantly higher among Flathead than among white children has been proven. The differing results of the
present study in relation to past studies have been partly attributed to past and present processes of Flathead acculturation, as well as to the specific nature of Flathead socio-cultural patterns--the latter probably still affecting their psychological makeup to some extent--among both the adults and the children.
Footnote References--Chapter IV

1 Question C is designed to elicit responses pertaining to belief in animism. The question reads, "Did the axe know that he stole the apple?"

2 The test of statistical significance used in the present study in relation to the Immanent Justice and Animism Test, and the Free Drawing Projective Technique, is $X^2$ (chi square). It is defined by the following formula:

$$X^2 = \sum \frac{(fo-ft)^2}{ft}$$

It should also be noted that in the present study the table of $X^2$ was entered at ldf, and that only the .05 level of significance or greater was taken as indicating statistical significance (see Dornbusch and Schmid 1955:207-208).
CHAPTER V

THE BELIEF IN ANIMISM

Piaget's Study of Swiss Children

In The Child's Conception of the World (1929), Piaget postulated that children pass through a stage in which their view of the physical world is characterized by a belief in "animism." To Piaget (1929:17), the concept of animism meant the tendency to regard inanimate objects "as living and endowed with will" (i.e., as being capable of thinking, feeling, and acting [Thompson and Joseph 1947:92]).

Piaget distinguished two different types of animism. The first is diffuse animism, lasting until about the age of four or five. In this stage "The child's thought begins with a lack of differentiation between living and inert bodies since it possesses no criterion by which to make the distinction" (Piaget 1929:229). Beyond the age of about five, ideas of animism tend to crystallize into a set of more clearly defined beliefs. Piaget terms this stage systematic animism. Such ideas now no longer exhibit an all-pervasive character, but are spontaneous and appear only when "chance phenomena which the child cannot understand by reason of their unexpectedness" are experienced (Piaget 1929:213). Systematic animism is generally accounted for by invoking the principle of introjection. This principle is characterized as a process
in which there is a tendency "to situate in others or things the reciprocal feelings to those we experience from their contact" (Piaget 1929: 242). The principle of introjection, furthermore, is deeply rooted in the egocentric belief that all things are relative to the self.

Piaget (1929:173-190) found, generally speaking, that belief in animism is higher among younger children and that the incidence of such belief usually decreases with increasing age. However, in contradistinction to the incidence of belief in immanent justice (see Chapter IV of this thesis), belief in animism exhibits a lack of consistency within the context of specific age ranges. At least, this was the case among Piaget's subjects. Thus, a group of young children may exhibit little or no belief in animism (1929:178), while an older group may exhibit a higher incidence of such belief (1929:218). Responses indicating belief in animism may also lack pervasiveness and uniformity. The child may indicate that an object "knows," and yet that same object may be incapable of "feeling" (Piaget 1929:172). Furthermore, the child may at one moment indicate that an object possesses consciousness only to deny this a few moments later (Piaget 1929:189). As in the case of immanent justice no such decline in the belief in animism should be expected to occur in primitive societies, especially in societies where adults believe that certain inanimate objects possess life (Piaget 1929: 385-387).

In order to determine a person's belief in animism, Piaget (1948: 250-251) utilized the guided interview approach. The approach, in modified form (see Dennis 1943:30; Havighurst and Neugarten 1955:242) is the same as that used to elicit responses indicating belief in immanent
Survey and Analysis of Studies Since Piaget's

Since Piaget's original test a number of similar studies have been conducted among children and adolescents of various cultures throughout the world. Huang (1943) and Jahoda (1958) have provided a complete cross-cultural survey and analysis of all past studies. The following, by geographical area, is a survey and analysis of the most important of these studies.

North America

Lerner (1937:62-69, 86) administered a modified form of Piaget's "fallen bridge" story to 389 white American children. Although this study is mainly concerned with the overall problem of "moral realism" among children, several of the questions were so designed as to yield answers relating directly to animism. Table 15 represents the percentage of animism responses among children of (1) lower income groups, and (2) higher income groups.

Lerner's findings indicate that belief in animism decreases with increasing age among children from both lower income groups. However, the incidence of such belief is higher at all age ranges among the lower income group than it is among the higher income group.

Dennis (1943) administered two different forms of animism tests to 98 Hopi children between the ages of 12 and 18 years residing at both First and Third Mesa. In the first test the subjects were shown a number of items, such as a knife, mirror, comb, dog, and tree, etc.,
and questioned as to whether or not these objects were capable of possessing life (Dennis 1943:24-25). The second test was patterned after Piaget's "fallen bridge" story and was administered to 98 of the subjects (Dennis 1943:30-31). The results of the two tests are illustrated in Table 16.

TABLE 16

AGE RANGES AND PERCENTAGES OF HOPI CHILDREN EXPRESSING BELIEF IN ANIMISM AT FIRST AND THIRD MESA COMBINED

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Questions Concerning Objects</th>
<th>Bridge Story</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-13</td>
<td>46</td>
<td>64</td>
</tr>
<tr>
<td>14-15</td>
<td>56</td>
<td>47</td>
</tr>
<tr>
<td>16-17</td>
<td>36</td>
<td>9</td>
</tr>
</tbody>
</table>

\[a^a\] Adapted from Dennis (1943:27, 31).

\[b\] Number of subjects: 95.

\[c\] Number of subjects: 98.
The results of Dennis' study indicate that the incidence of belief in animism among Hopi children decreases with increasing age, a situation which correlates with the findings of Lerner (1937) among white American children. Dennis (1943:35) concludes, however, that the Hopi subjects he tested generally express a higher degree of animistic responses than do white American children of comparable ages. He attributes this to differences in a variety of cultural factors found between the two groups (Hopi and white American), but adds that these factors cannot at this time be separated from the general cultural milieu of either group. Dennis (1943:35) concludes, furthermore, that the incidence of belief in animism, as well as all of the earliest ideas of children, are fairly uniform in all societies since these ideas are "the product of universal child experiences and of mental immaturity." Thus, the idea that belief in animism is culturally determined, an idea first advocated by Mead (1932) is, according to Lerner (1943:32-35), based on incomplete evidence.

Thompson and Joseph (1947) administered a series of stories modeled after those used by Piaget to 169 Hopi children (98 children from Oraibi and 71 from First Mesa). Although the results from only one story were analyzed, the incidence of belief in animism remained significantly high among the children at Oraibi, and showed less decrease among First Mesa children than had been previously noted among children of comparable ages (Lerner 1937; Dennis 1943). Table 17 presents the results of Thompson and Joseph's study.

According to Thompson and Joseph (1947:106-107), the incidence of belief in animism among Hopi children, as in the case of belief in
TABLE 17

AGE RANGES AND PERCENTAGES OF HOPI CHILDREN EXPRESSING BELIEF IN ANIMISMa

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Oraibi</th>
<th>First Mesa</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-8</td>
<td>67</td>
<td>76</td>
</tr>
<tr>
<td>9-11</td>
<td>76</td>
<td>47</td>
</tr>
<tr>
<td>12-18</td>
<td>66</td>
<td>30</td>
</tr>
</tbody>
</table>

aAdapted from Thompson and Joseph (1947:146).

immanent justice, differs from those findings among white American children because of cultural differences. Hopi religious beliefs and patterns of behavior relating to Hopi concepts of "good" and "bad" actions and thoughts are among those cultural factors which distinguish Hopi from white American children.

Havighurst and Neugarten (1955) administered a modified form of Piaget's story and question technique to 714 American Indian children from ten different cultures including, among others, the Papago, Hopi, Zuni, Zia, Navaho, and Sioux. The results of their study may be summarized as follows (Havighurst and Neugarten 1955:155-159):

1. The incidence of belief in animism decreased with increasing age in nine out of the ten tribes studied. Thus, 70% of 6-11 year olds expressed belief in animism with a range from 53-90%; the figures for 12-18 year olds were 53% with a range 25-82%.

2. One group--the Zia Indians--showed an increase in belief in animism with increasing age from 68% in the 6-11 age range, to 82% in the 12-18 age range.

3. The authors conclude that their results are in fair agreement with those obtained by Dennis and Russell (1939-1942) and Russell (1940) among Hopi and Zuni children, and indicate that responses relating to belief in animism are generally
higher among American Indian groups than among white children of comparable ages.

4. Piaget's postulate, that a decline in the belief in animism should not be expected to occur in primitive societies with increasing age, is questioned by the authors on the grounds that their findings did not show 100% animism at earlier ages.

China

Huang and Lee (1945) questioned forty children between the ages of 3.5 and 8.7 in relation to whether a series of objects including a dog and a tree possessed life. They found that a considerable proportion of individual responses indicated belief in animism (1945:66, 69-74); however, since repeated inconsistencies occurred in these responses, no conclusions relative to the incidence of belief in animism among children were drawn. The authors conclude by arguing that children's answers cannot be taken as evidence for the belief in animism. Rather, such answers reflect poor linguistic understanding and faulty differentiation within the child's mind.

New Guinea

Mead (1932:62, 173-190), in the course of a broader study of Manus culture, recorded the spontaneous responses of a group of Manus children in an attempt to determine their degree of belief in animism. Responses indicating belief in animism were recorded in relation to the children's reactions to (1) an empty, drifting canoe; (2) Chinese glass chimes tinkling in the breeze; (3) a dancing doll operated by a string; (4) the "badness" of a pencil which a child had used to draw what he considered to be a bad picture; (5) the workings of her typewriter; and (6) Japanese paper flowers which opened when placed in water.
According to Mead these different approaches provided no positive evidence for the occurrence of belief in animism among Manus children. At the same time, Manus adults are said to possess many animistic beliefs. Mead concludes, then, that the incidence of animistic thought is wholly culturally determined, since Manus children are undoubtedly taught to think in animistic terms and such beliefs are maintained into adulthood.

The studies presented in the foregoing brief survey illustrate several difficulties. For example, the belief in animism may exhibit inconsistency in its frequency among children within various age ranges (Piaget 1929:178, 218). Responses indicating belief in animism may also lack pervasiveness and uniformity (Piaget 1929:172). Furthermore, the child may at one moment indicate that an object possesses consciousness only to deny this a few moments later (Piaget 1929:189). In any case, the incidence of belief in immanent justice is usually said to be higher among young children and to decrease with increasing age. Such a decrease should not, however, be expected to be as great among primitive cultures (Piaget 1929:385-387).

Notwithstanding the above problems, several studies have indeed indicated that the belief in animism, aside from being present in most cultures, usually decreases less with increasing age among so-called "primitive" cultures than among modern cultures (cf. Piaget 1929; Lerner 1937; Dennis 1937; Thompson and Joseph 1944).

The authors of at least two of the studies (Dennis 1943; Thompson and Joseph 1947) maintain that cultural differences, aside from the universality of such belief among children, are responsible for the lower
rate of decrease in the belief in animism among non-Western oriented cultures. For instance, Thompson and Joseph (1947:106-107) regard Hopi religious beliefs and patterns of behavior relating to Hopi concepts of "good" and "bad" actions and thoughts as some of the causal factors responsible for their findings among these people.

Mead (1932:62, 173-190), however, has questioned the idea that animistic responses are universal among children on the basis of her study of Manus culture. An objection to Mead's findings would be that her method of determining such responses was unorthodox, at least in relation to the procedures developed by Piaget (i.e., the guided interview approach) and Dennis (i.e., the use of specific objects such as a dog or cloud).

In view of the obvious contradictions exhibited in the studies reviewed above, one is probably safe in concluding only that (1) the incidence of belief in animism, especially in relation to children, should be expected to occur in most cultures, and (2) that the frequency of such beliefs should be expected to decrease with increasing age. However, in two of the studies reviewed above (Dennis 1943; Thompson and Joseph 1947) the incidence of decrease of belief in animism with increasing age was generally less among children from non-Western oriented cultures (i.e., North American Indian cultures) than among white American children.

In the present study it is therefore hypothesized:

1. That among both Flathead and white children there would be a significant decrease of belief in animism with increasing age.

2. That among Flathead children there would be a significantly higher degree of belief in animism with increasing age than among white children.
The Present Study

Procedures

The procedures used to determine the frequency of animistic responses in the present study center around the analysis of Question C of the Immanent Justice and Animism Test, i.e., "Did the axe know that he stole the apple?" (see Chapter IV, pp. 47-72 of this thesis). The method of scoring animistic responses was adapted after Havighurst and Neugarten (1955:146).

Results

Table 18 represents the results of the animism test among the Indian and white groups at both schools combined. The percentages illustrated in Table 18 indicate that there is not a statistically significant decrease in the belief in animism with increasing age among either the Indian or the white children. However, it should be noted

<table>
<thead>
<tr>
<th></th>
<th>Ages 8-11</th>
<th>Ages 12-16</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Responding</td>
<td>No. of Yes Responses</td>
<td>QC</td>
<td>No. Responding</td>
</tr>
<tr>
<td>Salish Children</td>
<td>39</td>
<td>6</td>
<td>15%</td>
<td>53</td>
</tr>
<tr>
<td>White Children</td>
<td>32</td>
<td>5</td>
<td>15%</td>
<td>36</td>
</tr>
</tbody>
</table>

^a No statistically reliable decrease with age (P less than .10).

^b No statistically reliable difference in rate of decrease between Indian and white samples with age.
(assuming 1 df, i.e., one degree of freedom) that the values obtained for $X^2$ (chi square) equaled 3.61 for the Indian and 3.08 for the white children. Although the values 3.61 and 3.08 fall into the range of $P$ less than .10 (not considered statistically significant in the present study), they do, however, approach the .05 level of significance which is obtained when the value of $X^2$ is equal to or greater than 3.84. Thus, with a larger sample, and assuming that the number of positive responses indicating belief in animism would increase, a statistically significant decrease with increasing age might well be expected to occur among both Indian and white children.

The percentages in Table 18 also indicate that there is no significant difference in the degree of belief in animism with increasing age between the Indian and white children. Of no less importance is the fact that the percentage of animism responses among both groups is extremely low (cf. Lerner 1937; Dennis 1937; Thompson and Joseph 1947; Havighurst and Neugarten 1955). Figure 2 graphically illustrates the differences between the Indian and white children in relation to the belief in animism within the two age ranges, 8-11 and 12-16.

These rather startling similarities between both groups change somewhat when the results are viewed in terms of the responses elicited from the Indian and white children at each of the two schools (Table 19). It should be noted, however, that no attempt has been made to arrive at significance levels between the number of positive responses listed, since the extremely small number of subjects responding renders the computation of reliable significance levels next to impossible. The table is included merely for illustrative purposes.
Fig. 2.--Grouped column chart indicating differences between Indian and white children* in Relation to the belief in animism.

*■ Indian □ White

TABLE 19

PERCENTAGES OF RESPONSES INDICATING BELIEF IN ANIMISM AMONG INDIAN AND WHITE CHILDREN BY GEOGRAPHICAL AREA

<table>
<thead>
<tr>
<th>Sample</th>
<th>No. Responding</th>
<th>No. of Yes Responses</th>
<th>QC</th>
<th>No. Responding</th>
<th>No. of Yes Responses</th>
<th>QC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dixon</td>
<td>16</td>
<td>1</td>
<td>6%</td>
<td>29</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Arlee</td>
<td>23</td>
<td>5</td>
<td>21%</td>
<td>24</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dixon</td>
<td>17</td>
<td>2</td>
<td>11%</td>
<td>19</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Arlee</td>
<td>15</td>
<td>3</td>
<td>20%</td>
<td>17</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Summary Results of Test

The results obtained in the present study indicate that among both Flathead and white children there is no significant decrease of belief in animism with increasing age. The hypothesis set forth earlier (p. 81) to the effect that there would be a significant decrease of belief in animism with increasing age among both Flathead and white children is therefore not proven. However, as previously noted (pp. 82-83), the values obtained for $X^2$ approached the .05 level of significance, a fact which tends to indicate that with a larger sample a statistically significant decrease with increasing age might well be expected to occur among both the Indian and white children.

The results, furthermore, indicate no significant difference in the degree of belief in animism with increasing age between the Indian and white children. Thus, the hypothesis (p. 81) that there would be a significantly higher degree of belief in animism with increasing age among Flathead than among white children is also not proven.

The findings of the present study are not, therefore, in accordance with the results obtained by other researchers (cf. Piaget 1929; Lerner 1937; Dennis 1937; Thompson and Joseph 1947; Havighurst and Neugarten 1955). For example, the decrease among the Indian children is much greater than was previously encountered in those studies conducted by Dennis (1937), Thompson and Joseph (1947), and Havighurst and Neugarten (1955). Furthermore, the percentage of animistic responses in the lower age range for both Indian and white children is considerably below those averages listed in past studies (Piaget et al.).

The differing nature of the current results, at least in relation to
the Flathead children, might possibly be explained on the basis of the acculturation process as it is found among these people. For example, the infusion of modern white cultural norms and traditions, especially those related to religious practices, has probably militated against responses pertaining to animism. In any case, the overall percentages of animistic responses among the Flathead children indicates that they possess a very small degree of belief in animism.

The low percentage of animistic responses among the white children in the lower age range is difficult to explain. One possible explanation might be that since Lerner's study in 1937 American cultural norms have changed to the extent that the percentage of animistic responses is now generally lower among American white children. It should be kept in mind, though, that this is only a suggestion, since the white children tested in the present study cannot be construed as representing American white children in general. Regional differences in psychological outlook and behavioral norms probably also affect results somewhat. It may be stated, however, that the white children tested during the course of the present study show a proportionately lower percentage of animistic responses than do the white children tested in previous studies.

In summary, the present results show that there is no significant decrease of belief in animism with increasing age among the Flathead or white children tested. The results further indicate no significant difference in the degree of belief in animism with increasing age between the Indian and white children. Thus, the two hypotheses set forth (p. 81) are not proven. The contrast of the present findings with those of past
researchers has been attributed to (1) the specific nature of Flathead patterns of acculturation, and (2) changes in white American cultural norms, a factor which might possibly affect the incidence of belief in animism among white children.
CHAPTER VI

THE FREE DRAWINGS

Introduction

The analysis of the drawings of children and adults is generally recognized as being a fruitful area of research by many psychologists as well as anthropologists (cf. Haddon 1904, Anastasi and Foley 1938; DuBois 1944; Elkisch 1945; Belo 1955; Havighurst and Neugarten 1955; Hammer 1958; Barnouw 1963). Underlying the analysis of drawings is the basic postulate that the subject, in the act of drawing, projects some of his own personality as well as some of the characteristics of his culture into the drawing.

To this end various techniques and methods of approach have been developed for obtaining and analyzing drawings. The techniques may be roughly classified under the following headings: (1) drawings obtained from subjects who are told to draw specific objects, and (2) drawings obtained from subjects who are instructed to choose the subject matter of their drawings themselves. In the first technique, which has come into vogue especially in the last twenty-five years (Barnouw 1963:276), the subject may be asked to draw a human figure (i.e., the Draw-a-Person technique [cf. Goodenough 1926; Machover 1949]), or a combination of three objects consisting of a human figure, a house, and a tree (i.e., the House-Tree-Person technique [cf. Buck 1948]).
The second technique differs from the first in that no limits are set as to what the subjects may draw (i.e., the Free Drawing Technique [cf. DuBois 1944; Belo 1955; Havighurst and Neugarten 1955; Barnouw 1963]).

At least three methods of analysis of the drawings of children and adults have been utilized: (1) Analysis of the content of drawings, which is based on the proposition that the interests and experiences uppermost in the subject's mind will be expressed in the content of the drawing. (2) Analysis of the artistic qualities of drawings in an effort to establish developmental stages of artistic ability on the basis of age, sex, and cultural differences. (3) Analysis of the personality structure of those who make the drawings both on an intra-cultural as well as cross-cultural basis (Havighurst and Neugarten 1955:160).

However, several criticisms have been lodged against the analysis of drawings on a cross-cultural, comparative basis. For example, a subject's drawings may reflect specific cultural factors, particular art styles, and unique mannerisms. The studies conducted by DuBois (1944) and Belo (1955:52-69) well illustrate the basis for such criticisms. In DuBois' study of Alorese children it was quite evident that the children were unfamiliar with pencils and paper, and had apparently never drawn anything before. Their drawings, therefore, appeared to be very childish. Belo discovered the same thing among the Balinese children she studied. The results of these two studies differed, however, in that the Balinese children's drawings were extremely complex, while the Alorese children drew weak, ineffectual pictures. According to Barnouw (1963:277), the probable reasons for such contrast between
the drawings by Alorese and Balinese children is that Bali exhibits a rich art tradition, whereas Alor does not. In any case, the question of qualitative ability to reproduce animate and inanimate objects in drawings, at least in relation to Alorese and Balinese children, cannot be reasonably subjected to value judgments, since such abilities are not in fact stressed in one of these two cultures (among the Alorese).

The contents of drawings may, however, indicate several pertinent factors concerning a subject's personality structure as well as particular characteristics of his culture. Thus, among DuBois' Alorese children, plants were drawn more often than any other items, while human figures were drawn comparatively infrequently (DuBois 1944: 567-568). On the other hand, Griffiths (1935) found that the favorite subject in English children's drawings is the human figure (from Barnouw 1963:278). The differences between the Alorese and English children's drawings, according to Schmidl-Waehner (in DuBois 1944: 584-585), might indicate a feeling of "aloneness" on the part of the former. At least, the quantitative lack of human figures in their drawings suggests differences between their personality structure and that of English children.

Havighurst and Neugarten (1955), in their large-scale study of eleven Indian communities, found that boys produced more drawings pertaining to war and patriotism than did girls; the latter group drew more pictures of houses as well as of "school appurtenances." The children's drawings, however, differed from community to community; thus one group might exhibit a higher degree of Western material items in their drawings than another group. The degree of acceptance of
Western material culture was then calculated on this basis for each of the communities studied (Havighurst and Neugarten 1955:169-179).

In the course of the present study a series of 288 free drawings were obtained from 144 Indian and white children in an effort to draw meaningful inferences concerning two variables: (1) some of those interests uppermost in the minds of the children as well as some of the experiences that appear to be most familiar and most meaningful to them, and (2) the probable degree and kind of acceptance of white material culture on the part of the Indian children in comparison to the white children.

The formulation of specific hypotheses concerning these two variables is, however, extremely difficult, especially in view of the fact that the author had little contact with children on the Flathead reservation prior to beginning the present study. Thus, direct observation of the children over an extended period of time, a procedure which might well have led to the formulation of quite definite ideas concerning those interests and experiences uppermost in the minds of the children, as well as the degree and kind of acceptance of Western material culture on the part of the Indian children, was not forthcoming. Therefore, the formulation of specific hypotheses concerning these two variables was next to impossible. However, on the basis of what little contact the author had had previously with these children, as well as with the idea in mind that the formulation of hypotheses, even though of a general nature, would be of value, the following hypotheses were formulated:

1. That there would be significant differences between the
Indian and white children in relation to some of those interests and experiences uppermost in the minds of the children.

2. That the degree and kind of acceptance of Western material culture would differ significantly between the Indian and white children, the Indian children displaying a significantly lower degree of acceptance of Western material culture than the white children.

The Present Study

Procedures

The administration of the free drawing technique was conducted on a group basis at each of the two schools. The children were not, however, separated as to Indian and white respectively; the entire sample at Arlee concluded the free drawings on a group basis in the same room at the same time, while the Dixon subjects concluded their drawings on a "group" basis within their respective classrooms, with all subjects working on their drawings at the same time.

The materials utilized in the free drawing technique consisted of two different sizes of white paper (8-1/2 by 11 inches and 8-1/2 by 5-1/2 inches), soft lead pencils, and crayons. Two different sizes of paper, as well as pencils and crayons, were made available to the children, since it was felt that they would feel more at ease while completing the drawings if given some choice of the size of paper and media that could be used for the drawings.

Instructions concerning the procedures for completing the drawings were made as simple as possible and were given to the children on a verbal basis by the author. The children were instructed to choose either one large and one small or two large or two small pieces of paper. The choice of media (pencils or crayons or both) was left
entirely to the student. Furthermore, the children were told they could
draw anything they wanted to, and that they could take all the time they
desired to complete each drawing. They were, however, instructed to
number their drawings in the order of their completion (i.e., drawing
No. 1 and drawing No. 2) and to write their names on the back of each
of the two pieces of paper. Two drawings were obtained from each
subject in order to (1) obtain a rather large number of drawings from
the subjects, and (2) compare the contents of each of the drawings
according to the two control groups—an Indian child's first picture to
be compared with a white child's first drawing, the second drawings to
be similarly examined.

The methods of analysis were based on the fact that the individual
picture, and not the individual child, was used as the basic unit of an­
alysis. Two basic procedures of analysis were employed. In the first,
which pertained directly to the interests and experiences uppermost in
the children's minds, fourteen basic categories were devised. The
items thus appearing in the pictures were classed under one or more of
these categories (after Havighurst and Neugarten 1955:163-164). The
fourteen categories are:

1. Human
2. Landscape (including plants)
3. Dwellings (including house
   furnishings and equipment)
4. Other structures
5. Animals and birds
6. Transportation
7. War and patriotism
8. School appurtenances
9. Ceremonials
10. White religion
11. Native religion
12. Native items (tipis, head-
    dresses, war clubs, etc.)
13. Miscellaneous
    Indian, Indian vs. white.

The second part of the analysis deals with the probable degree
and kind of acceptance of white material culture by the Indian child, as
well as an examination of the white child's drawings to see his reaction to his environment. To secure this information, all of the items in the pictures were divided into four categories:

1. Those items that characterized the old culture (bows and arrows; horses—if ridden by Indians—tipis, drums, shields, headdresses, war clubs, etc.)

2. Those items that had been introduced years ago by the white culture or secured through indirect contact including cars, houses, fences, school appurtenances, and any other items of white material culture that could conceivably fall under the above category.

3. Those recent innovations from the dominant culture including space ships, television sets, playthings, and any of obviously recent origin.

4. Those landscape items that have remained unchanged, such as mountains, trees, boulders, or anything that shows no cultural changes such as the addition of fences.

The computation of the percentage of appearances of items under each of the categories listed in both types of procedures (i.e., fourteen categories in the first and four in the second) was figured separately from the drawings of the Indian children and from those of the white children. From this comparison, expressed in percentages, a picture is evolved to indicate those interests and experiences uppermost in the minds of the children, and the degree and kind of acceptance of Western material culture by the Indian in comparison to the white children.

It should be noted, however, that there is a certain amount of subjectivism involved in the analysis of free drawings on the basis of predetermined categories in which various items are to be placed. For example, the number of categories, as well as those items which are supposed to represent any particular category are, ultimately, based on the judgment of the investigator. Of course, the particular nature
of the problem under study may well "predetermine," or at least lend itself, to the formulation of categories which are supposedly more pertinent than some other categories. Thus, in the present study the fourteen categories and items of analysis therein used to determine those interests and experiences uppermost in the minds of the children were devised with the idea in mind that all of the categories and their contents pertained to interests and experiences that could conceivably affect all Flathead and white children. In other words, an attempt was made to include those interests and experiences which were probably within the realm of everyday life on the reservation. In this manner, then, an individual's picture, in all probability, would contain items listed in one or more of the fourteen categories. This is not to say, however, that all possible interests and experiences were covered in the fourteen categories. Indeed, the possible number as well as contents of categories is infinite; but in the present study the fourteen categories and their contents were felt to be of sufficient variety and pertinence to elicit the desired information.

The four categories and items therein used to determine the degree and kind of acceptance of Western material culture by the Indian children were devised on a basis similar to that used to devise the fourteen categories. That is, the four categories and their contents were felt to be of sufficient variety and pertinence to cover the more obvious realms of experience within the acculturation process in relation to the acceptance of Western material items of culture among Flathead children. In short, the four categories and their contents were felt to be of sufficient nature to elicit the information desired.
The analysis of two of those drawings obtained from Flathead and white children (Figs. 3 and 4, pp. 98-99) is given below. It should be noted, however, that neither of these two pictures are necessarily representative of all of the pictures obtained from the children; they are included here only for purposes of illustrating the two methods of analysis.

Data on Figures 3 and 4

The numbers inserted in Figures 3 and 4 represent the items counted in these two pictures. The open numbers correspond to the fourteen categories listed on p. 93, while those numbers in parentheses correspond to the four categories listed on p. 94.

Figure 3

Category (one or more of fourteen)

2. Landscape--one bush and one stream
3. One dwelling
4. One yard light and one cement sidewalk
13. One miscellaneous--lightning

Category (one or more of four)

(2) One dwelling, one outside lamp and one cement sidewalk
(4) One bush and one stream, also one for the lighting

Figure 4

Category (one or more of fourteen)

1. Four human figures
2. Landscape--mountains, etc.
5. Animals--two horses
12. Native items (counted as one) bows, arrows, and lance
14. Indian war--Indian vs. white (counted as one)

Category (one or more of four)

(1) One count for the two Indians and one count for the Indian arrows, bows, and lance
(2) One count for the two horses which are obviously owned by the white cavalry, one count for the weapons carried by the whites, and one count for the white cavalrymen.

(4) One count for the landscape in the background.

Results:

The results of the free drawings in relation to those interests and experiences uppermost in the children's minds are listed in Tables 20 and 21. The figures in Table 20 represent the numbers of each of the items found in Figure 3, as well as the average percentage of such responses among each of the two groups at the two schools. Table 21 shows the numbers of each of the items found in Figure 4, as well as the average percentages of such responses among the Indian and white children at each of the two schools.

The percentages in Tables 20 and 21 indicate that there is a significant difference between the Arlee Indian and Dixon white children in relation to both Figures 3 and 4 in Category 1 (i.e., the Arlee Indian children drew significantly more human figures than did the Dixon white children). However, among the Arlee Indian and white children there was no significant difference between the number of human figures drawn by these two groups in either Figures 1 or 2.

In relation to Category 2 (Landscape) the Dixon Indian children drew significantly more landscapes in both Figures 3 and 4 than did the white children at Arlee. Furthermore, the Arlee Indian children drew significantly more landscapes than did the white children at Arlee. There were not, however, any significant differences between the Indian and white children in relation to the remaining twelve categories.

Tables 22 and 23 represent the differences between the two groups.
Fig. 3. -- Picture drawn by a white child
Fig. 4. -- Picture drawn by an Indian child
TABLE 20
RESULTS OF FREE DRAWINGS RELATED TO INTEREST AND EXPERIENCES--PICTURE 1

<table>
<thead>
<tr>
<th>Category</th>
<th>Arlee</th>
<th>Dixon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indian (N = 43)</td>
<td>White (N = 28)</td>
</tr>
<tr>
<td>Human</td>
<td>10 23.3</td>
<td>6 21.4</td>
</tr>
<tr>
<td>Landscape</td>
<td>21 48.8</td>
<td>4 14.2(^a)</td>
</tr>
<tr>
<td>Dwellings</td>
<td>7 16.3</td>
<td>6 21.4</td>
</tr>
<tr>
<td>Other structures</td>
<td>4 9.3</td>
<td>3 10.7</td>
</tr>
<tr>
<td>Animals and birds</td>
<td>11 25.6</td>
<td>4 14.3</td>
</tr>
<tr>
<td>Transportation</td>
<td>6 13.9</td>
<td>5 17.8</td>
</tr>
<tr>
<td>War and Patriotism</td>
<td>1 2.3</td>
<td>1 3.6</td>
</tr>
<tr>
<td>School appurtenances</td>
<td>1 2.3</td>
<td>0 0.0</td>
</tr>
<tr>
<td>Ceremonials</td>
<td>0 0.0</td>
<td>0 0.0</td>
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<td>White religion</td>
<td>1 2.3</td>
<td>0 0.0</td>
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<td>Miscellaneous</td>
<td>2 4.6</td>
<td>3 10.6</td>
</tr>
<tr>
<td>Indian war</td>
<td>2 4.6</td>
<td>0 0.0</td>
</tr>
</tbody>
</table>

\(^a\)Statistically reliable difference between Indian and white children at Arlee (P less than .01).

\(^b\)Statistically reliable difference between Arlee white and Dixon Indian children (P less than .001).

\(^c\)Statistically reliable difference between Arlee Indian and Dixon white children (P less than .05).
TABLE 21
RESULTS OF FREE DRAWINGS RELATED TO INTERESTS AND EXPERIENCES--PICTURE 2

<table>
<thead>
<tr>
<th>Category</th>
<th>Arlee Indian (N = 43)</th>
<th>%</th>
<th>White (N = 28)</th>
<th>%</th>
<th>Arlee Indian (N = 37)</th>
<th>%</th>
<th>White (N = 36)</th>
<th>%</th>
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<tbody>
<tr>
<td>Human</td>
<td>16 37.2</td>
<td>10</td>
<td>35.6</td>
<td>4</td>
<td>3.5</td>
<td>2</td>
<td>5.5</td>
<td>a</td>
</tr>
<tr>
<td>Landscape</td>
<td>13 30.2</td>
<td>7</td>
<td>25.0</td>
<td>20</td>
<td>54.5</td>
<td>b</td>
<td>13</td>
<td>36.1</td>
</tr>
<tr>
<td>Dwellings</td>
<td>8 18.6</td>
<td>5</td>
<td>17.8</td>
<td>10</td>
<td>27.0</td>
<td></td>
<td>5</td>
<td>13.9</td>
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<tr>
<td>Other structures</td>
<td>7 16.2</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>5.4</td>
<td>3</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>Animals and birds</td>
<td>5 11.6</td>
<td>5</td>
<td>17.8</td>
<td>8</td>
<td>21.6</td>
<td></td>
<td>9</td>
<td>25.0</td>
</tr>
<tr>
<td>Transportation</td>
<td>5 11.6</td>
<td>6</td>
<td>21.4</td>
<td>4</td>
<td>10.8</td>
<td>4</td>
<td>11.1</td>
<td></td>
</tr>
<tr>
<td>War and patriotism</td>
<td>1 2.3</td>
<td>2</td>
<td>7.1</td>
<td>4</td>
<td>10.8</td>
<td>2</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>School appurtenances</td>
<td>3 7.9</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Ceremonials</td>
<td>0 0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>White religion</td>
<td>1 2.3</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>2.7</td>
<td>1</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Native religion</td>
<td>0 0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Native items</td>
<td>2 4.6</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>8.1</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>3 6.9</td>
<td>3</td>
<td>10.6</td>
<td>1</td>
<td>2.7</td>
<td>3</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>Indian war</td>
<td>0 0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

aStatistically reliable difference between Arlee Indian and Dixon white (P less than .001).

bStatistically reliable difference between Arlee white and Dixon Indian (P less than .05).
in relation to the degree and kind of acceptance of white material culture on the part of the Indians as compared to the white children.

TABLE 22
RESULTS OF FREE DRAWINGS IN RELATION TO PROBABLE DEGREE AND KIND OF ACCEPTANCE OF WHITE MATERIAL CULTURE--PICTURE 1

<table>
<thead>
<tr>
<th>Category</th>
<th>Arlee Indian (N = 43) %</th>
<th>Arlee White (N = 28) %</th>
<th>Dixon Indian (N = 37) %</th>
<th>Dixon White (N = 36) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native cultural items</td>
<td>5</td>
<td>11.6</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>White cultural items</td>
<td>27</td>
<td>62.8</td>
<td>21</td>
<td>75.0</td>
</tr>
<tr>
<td>Recent innovations from white culture</td>
<td>3</td>
<td>6.9</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Neutral landscapes</td>
<td>12</td>
<td>27.9</td>
<td>4</td>
<td>14.2</td>
</tr>
</tbody>
</table>

*Statistically reliable difference between Dixon Indian and Arlee white children (P less than .01).

The percentages from Figure 2 (Table 23) indicate that there is a significant difference between the Arlee Indian and Dixon white children in relation to Category 2 (White cultural items); surprisingly, the Indian children drew significantly more white cultural items than did the white children. The results further indicate that the Dixon Indian children drew significantly more landscapes in Figure 1 (Table 22, "Neutral landscapes") than did the Arlee white children; the Arlee Indian
TABLE 23
RESULTS OF FREE DRAWINGS IN RELATION TO PROBABLE DEGREE AND KIND OF ACCEPTANCE OF WHITE MATERIAL CULTURE--PICTURE 2

<table>
<thead>
<tr>
<th>Category</th>
<th>Arlee Indian (N=43)</th>
<th>%</th>
<th>Arlee White (N=28)</th>
<th>%</th>
<th>Dixon Indian (N=37)</th>
<th>%</th>
<th>Dixon White (N=36)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native cultural items</td>
<td>3 7.9</td>
<td>1 3.6</td>
<td>10 27.0</td>
<td>2 5.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White cultural items</td>
<td>35 81.1</td>
<td>20 71.4</td>
<td>23 62.1</td>
<td>20 55.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent innovations from white culture</td>
<td>2 4.6</td>
<td>1 3.6</td>
<td>0 0.0</td>
<td>0 0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral landscapes</td>
<td>5 11.6</td>
<td>5 17.8</td>
<td>14 37.8</td>
<td>13 36.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aStatistically reliable difference between Arlee Indian and Dixon white children (P less than .02).
bStatistically reliable difference between Arlee Indian and Dixon white children (P less than .02).

children also drew significantly more landscapes than did the white children at Dixon (Figure 2, Table 23). Aside from these two categories (White cultural items and Neutral landscapes), there were no other significant differences discovered between the Indian and white children on the free drawing technique test.

Summary Results of Free Drawing Technique

The data obtained from the free drawings, in relation to those interests and experiences uppermost in the children's minds, indicate
that the Indian children, generally speaking, drew significantly more human figures and landscapes than did the white children. Thus, the hypothesis that there would be significant differences between the Indian and white children in relation to some of those interests and experiences uppermost in the minds of the children has been proven correct, at least in relation to Categories 1 (Human), and 2 (Landscape).

The significantly higher incidence, generally speaking, of human figures in the Indian children's drawings might possibly indicate that there is more concern with humans on their part (possibly with their own self identity). In any case, the author's own observation tends to indicate that the Indian children's own interests and unique ways of life, as Indians, are smothered in the rush to standardize procedures for handling all the children's problems (both Indian and white). At the same time, the significantly higher percentage of landscapes in the Indian children's drawings might indicate a conscious and/or subconscious desire to escape from the apparent attempt on the part of the dominant culture to eradicate their identity as Indians. That is, the high incidence of landscapes may be an expression of aesthetic interest in nature, a factor which does not militate against the idea that the higher incidence of human figures and landscapes is suggestive of (1) a concern with humans (possibly their own self identity), and (2) a desire to escape from the realities of everyday life on a reservation.

On the other hand, the apparent likenesses, generally speaking, between the Indian and white children in relation to Categories 3-14 might well suggest that the Indian children are, to some extent, little different (culturally) from the white children.
The data obtained from the free drawings, in relation to degree and kind of acceptance of white material culture, indicate that there is a significant difference between the Arlee Indian and Dixon white children in reference to Category 2 (White Cultural Items); surprisingly, the Arlee Indian children drew more white cultural items than did the white children at Dixon. However, there were no other significant differences between the Indian and white children in Category 2 in either Figures 3 or 4. Thus, the hypothesis that the Indian children would display a significantly lower degree of acceptance of Western material culture than the white children is not proven. In short, the percentages in Category 2 indicate that children in the Indian group have accepted or at least recognize white material culture to a high degree.

The data further indicate that the Dixon Indian children drew significantly more neutral landscapes (Category 4) than the Arlee white children (see Figure 3); and the Arlee Indian children drew significantly more than the white children at Dixon (see Figure 4). These findings are in line with those obtained from Category 2 (Landscape) in relation to those interests and experiences uppermost in the minds of the children (see Tables 20 and 21).

In summary, then, the free drawings have indicated significant differences between the Indian and white children in reference to the number of human figures and landscapes drawn by the two groups (the Indian children, generally, drew significantly more human figures and landscapes). However, the data related to degree and kind of acceptance of Western material culture indicate that the Indian children have
accepted, or at least recognize to a high degree, the white man's material culture.
CHAPTER VII

CONCLUSIONS

Within the broader context of the acculturation process the specific aim of the present study has been to investigate some of the culture-and-personality traits of a selected group of Flathead and white children. The specific areas of interest studied were: (1) belief in immanent justice; (2) belief in animism; (3) those interests and experiences uppermost in the children's minds as exhibited through analysis of their "free drawings"; and (4) the degree and kind of acceptance of white material culture among the Indian children in comparison to the white children, also to be determined by analysis of their free drawings. A nonverbal intelligence test was also administered to the subjects, the results of which may be found in the Appendix.

The basic theoretical orientation was that social and cultural factors are the prime determinants of personality structure; and that, among the Indian and white children tested, each group respectively is subjected to somewhat differing socio-cultural factors. From this it was generally hypothesized:

That measurable differences in the frequency distribution of all four variables would be found to exist between that part of the sample defined as Indian and that part defined as white.

Underlying this hypothesis was the basic assumption:
That the biological makeup of all of the subjects could be
considered as being a constant, i.e., that there are no physiological differences between that part of the sample defined as Indian and that part defined as white that may be construed as affecting personality structure.

In conjunction with the general hypothesis, specific hypotheses were formulated for each of the four variables of personality studied. In relation to the belief in immanent justice, it was hypothesized:

That among Flathead children there would be a significant increase or lack of decrease of such belief with increasing age.

That there would be a significantly higher degree of such belief with increasing age among the Indian than among the white children.

The data obtained from the study indicated that there was no significant increase of belief in immanent justice with increasing age; there was a significant decrease in relation to Question B. There was, however, no significant decrease with age in relation to Question A. The data also indicated that the degree of belief in immanent justice with increasing age remained significantly higher among the Indian than among the white children in relation to both Questions A and B. The first hypothesis was, therefore, said to have been proven in relation to Question A, but not Question B, while the second hypothesis was shown to be correct in reference to both Questions A and B.

The hypotheses formulated in relation to the belief in animism were:

That among both Flathead and white children there would be a significant decrease of belief in animism with increasing age.

That among Flathead children there would be a significantly higher degree of belief in animism with increasing age than among the white children.

The data obtained from the children indicated that there was no significant decrease with age, nor was there a significantly higher degree of
belief in animism with increasing age among the Indian children. Thus, both hypotheses were disproven.

In relation to those interests and experiences uppermost in the minds of the children, as exhibited through analysis of their free drawings, it was hypothesized that there would be some significant differences between the Indian and white children. The data indicated significant differences in two instances: the Indian children drew significantly more human figures and landscapes than did the white children. The hypothesis was, therefore, correct, at least in reference to these two factors.

The data from the free drawings further indicated that the Indian children have accepted or at least recognize Western material culture to a high degree, thus disproving the hypothesis that they would display a significantly lower degree of acceptance of Western material culture than the white children.

In summary, then, the data from the present study indicate that the Indian children differ significantly from the white children in relation to two of the variables. These two variables are (1) belief in immanent justice, and (2) those interests and experiences related to humans and landscapes. However, there were no measurable differences between the Indian and white children in relation to the belief in animism, or the degree and kind of acceptance of white material culture. The general hypothesis that there would be significant differences in the frequency distribution of all four variables between the Indian and white children has, therefore, been disproven.

Those differences which were found are probably attributable to
social and cultural differences between the two groups. For example, the belief in immanent justice, which remains significantly higher among the Indian than among the white children with increasing age, has been assumed to have existed to a high degree among the aboriginal Flathead. Thus, since the children’s social contact with the older generation is quite frequent—and it is assumed that the belief in immanent justice is a part of the beliefs of the older generation—then the incidence of such belief among the children may be partly attributed to present-day social factors that have aboriginal cultural connotations. However, the incidence of belief in immanent justice and the decrease of such belief with increasing age among both the Indian and white children tested in the present study, differed from the findings of some past investigators (cf. Lerner 1937; Thompson and Joseph 1947; Thompson 1948; Havighurst and Neugarten 1955). The differences found in relation to the belief in immanent justice, at least among the Indian children, probably result from the fact that the Flathead children are and have been subjected—in the process of acculturation—to different patterns of moral and religious values than many of those American Indians tested in other studies. Their unique position in relation to other native North American tribes results, then, from their particular way of viewing the world, as well as from the nature of their contact with the dominant culture.

The differences encountered between Indian and white children, in relation to those interests and experiences uppermost in the children's minds, are also attributable, to some extent, to past traditions and current social factors, such as contact with the older generation as...
well as to reactions against present-day attempts by the dominant culture to standardize their ways of thinking and behaving according to white standards. On the other hand, acceptance of white material culture appears to be all but complete among the Indian children.

The virtually identical as well as low percentages of responses indicating belief in animism among Indian and white children recorded in the present study are probably attributable to the following factors: (1) The Flatheads have had a long association with white cultural norms and traditions, especially of a religious nature, which militates somewhat against the belief in animism. (2) Of no less importance is the fact that both the Indian and white children possess a rather "practical" view of the world in which they live. (3) The small percentage of animistic responses on the part of the white children might be attributable also to changing American social and cultural patterns (cf. Lerner 1937; Dennis 1943; Thompson and Joseph 1947; Thompson 1948; Havighurst and Neugarten 1955).

From the data collected in the present study there now emerges a picture, although somewhat vague at best, of how the "typical" Flathead and white child displays himself in the world of his culture, and in the world of man and nature.

The "typical" Flathead child is friendly, industrious, and highly intelligent. However, he often lacks a sense of identity which probably results from the conflict encountered between his "feelings for the past," and the exigencies of living under the auspices of a dominant culture that makes every attempt to standardize all things at the expense of individuality. Yet the Flathead child realizes that he is different
and seeks recognition of this fact by those of the dominant culture; herein lies the crux of the mental conflict he is now experiencing. Indeed, we must imagine that the "typical" Flathead child often asks himself, "Who am I, and what will the past do for me now?"

The "typical" white child is also friendly, industrious, and highly intelligent. But unlike his Indian neighbor, he possesses more confidence in himself as well as in his cultural norms and traditions. In short, he does not have to be concerned with adjusting to the ways of another culture. The white child is in the enviable position of having been born into the dominant culture--and he is well aware of this.

The above pictures of "typical" Flathead and white children are, of course, by no means complete. However, within the context of the few problems studied in the present endeavor it has been shown that Flathead children react somewhat differently to various aspects of their present-day environment than do their white counterparts. The degree and characteristics of these differing reactions by the Flathead are a part of their unique psychological, social, and cultural makeup--an uniqueness that is a curious blend of the past and the present.
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APPENDIX
The following is an analysis of data obtained from the Progressive Matrices, a nonverbal intelligence test. The test, as previously noted (see Chapters II and III of this thesis), was administered to a number of Indian and white children by the author.

The results obtained from the test are included here as a "supplementary" to the data presented above. However, the word "supplementary" should not be taken literally. In effect, the data presented below are for the benefit of those interested in this particular area of cross-cultural study; the data are not meant to be indicative of personality structure among either of the two groups studied.

Description

Anastasi (1961:261) describes the Progressive Matrices (Raven 1938) as a test designed

... as a measure of Spearman's g factor. 1 Requiring chiefly
the education of relations among abstract items. . . . It consists
of 60 matrices, or designs, from each of which a part has been
removed. The subject chooses the missing insert from six or
eight given alternatives. The items are grouped into five series,
each containing 12 matrices of increasing difficulty but similar
in principle. The earlier series require accuracy of discrimi-
nation; the later, more difficult series involve analogies, per-
mutation and alteration of pattern, and other logical relations.

Specifically, the five series of matrices, in chronological order,
develop the following "themes": (a) continuous patterns, (b) figure
analogies, (c) progressive alteration of patterns, (d) permutations of figures, and (e) resolution of figures into constituent parts (Wechsler 1949:338). The test is designed for an age range of 6 to 65, and may be administered either on an individual or group basis, and is either timed or untimed.

Norms are based on the test scores from 1,407 British children, 3,665 service men, and 2,192 civilian adults. The norms are expressed in terms of percentiles, including norms for the test as a whole, for each of the five series or subtests, and for individual in distinction to the group form of the test (Raven 1960:13-16). Retest reliability varies with age, ranging from 0.83 to 0.93. The test correlates 0.86 with Terman-Merrill scale, and has a g saturation of 0.82 (Raven 1960:2). However, Anastasi (1961:262) states that retest reliability among older children and adults of fairly similar age ranges (approximately) between .70 and .90. Reliability among younger children, who usually achieve lower scores, is considerably less than these values. In relation to both verbal and performance tests of intelligence, correlations range between .40 and .75, tending to be somewhat higher with performance than with verbal tests.

According to Wechsler (1949:259) the limitations to the test are:

(1) The test attempts to measure general intelligence "through a single modality of performance." (2) The test has a low ceiling; the mean score for each age group (age 12 and above) shows little or no increase, thus the average adult score is very nearly the same as that of the 14-year-old age group. (3) There is a "rapid decline of scores on the test with ages beginning with adulthood" a factor which may
result from the possibility "that the identical scores obtained for average adults and the 14-year-olds are due to the fact that the adult group included a considerable number of subjects whose scores already showed this age decline." (4) There is a lack of information on reliability and none at all on validity in the Progressive Matrices manual.

In 1947, Raven produced a variation of the 1938 form of the test called the Colored Progressive Matrices which is specifically designed for children ranging in age from 5 to 11 years old and for feebleminded adults (Anastasi 1961:263). Furthermore, this test was designed to obtain a wider distribution of scores among the lower age ranges than could be obtained by the 1938 form (Turner and Penfold 1952:33). It contains three sets of 12 matrices each (Sets A, Ab, and B) and "progresses" from simple problems in completing continuous patterns or designs to logical relationships and figure analogies (Norman and Midkiff 1955:130). As in the case of the 1938 form, the Colored Progressive Matrices can be administered to individuals or groups and may be either timed or untimed.

Cross-cultural Applicability

The Progressive Matrices--1938 and the Colored Progressive Matrices of 1947--are both reputed to have a high degree of cross-cultural applicability since their content is supposedly "culture-free" (Anastasi 1961; Shipley 1949; Wechsler 1949). In this relation both forms of the test have been closely identified with Cattell's (1950-1959) IPAT Culture Free Intelligence Test (Anastasi et al.).

Commenting on their cross-cultural applicability, Shipley (1949:338) states that since their content is restricted to highly abstract
material which is somewhat foreign either to the classroom or to everyday experience, what is probably being tested relates more to "native" abstract intelligence and less to educational or cultural background, than is the case with many other tests of general intelligence. Anastasi (1961:263) also recognizes that "current culture-free tests depend more heavily upon abstract reasoning and less on spatial aptitudes than is true of available well-standardized non-language tests."

Notwithstanding these favorable comments, the so-called "culture-free" tests have been subjected to some amount of criticism, both justified and unjustified (Notcutt 1949:68-70; Norman and Midkiff 1955:129-136). The specific nature of some of these criticisms will become apparent in the following section, where an analysis of past studies utilizing the Progressive Matrices--1938 and Colored Progressive Matrices of 1947--will be undertaken.

Analysis of Past Studies

It is unfortunate that although several studies utilizing both forms of the Progressive Matrices have been conducted among non-European cultures (Zulus of Africa, Navahos of North America, Caradoc Reserve Indians of Canada are examples) several studies have not been translated into English (see Raven 1960:17-26). Of those studies published in English, two deal with the 1938 form of the test and two with the Colored Progressive Matrices. The following, in chronological order and by geographical area, is an analysis of these studies.

Africa

Notcutt (1949:68-70) administered the 1938 test to 762 Zulu
primary school children who ranged in age from 11 to 15. The primary concern was to standardize the test for Zulus living under both urban and pre-urban conditions. Zulu scores and those scores obtained by Raven (1960:13-16) from English school children were compared. Notcutt found that, as in Raven's sample, the distribution of scores was both positively and negatively skewed. However, the distributions at certain age ranges in the Zulu sample were skewed in the opposite direction. Thus, while Raven's English sample exhibits a marked negative skewing, the Zulu sample exhibits a pronounced positive skewing (1949:68).

Comparison of the Zulu median scores with those of Raven's sample indicated that Zulu 11-1/2-year-olds equalled the English sample 8-year-olds; Zulu 12-1/2 equalled English 8-1/2; Zulu 13-1/2 equalled English 9; and Zulu 14-1/2 was close to English 9-1/2 (1948:68). From the data obtained in this study Notcutt concluded that the 1938 form was not "suitable for making inferences about the 'true' distribution or the 'real' rate of growth of intelligence" (1949:70).

**North America**

Turner and Penfold (1952:31-44) utilized, along with other tests, the colored Progressive Matrices and conducted their study among Canadian Oneida, Chippewa, and Muncey Indians, as well as white school children residing in the immediate area of the Caradoc Reserve, Muncey, Ontario. Two hundred and five Indian and 215 white pupils ranging in age from 6 to 13 years took the test. Results of the study indicated that white children performed somewhat better than Indian children, at least within the age range 9-12 inclusive. The differences
in mean scores between Indian and white children increased with chronological age up to ten, and decreased with age to age 13. It should be noted, however, that "... no significant differences in the means between Indian and white children were obtained for any grade, there was an obtained difference at all grade levels, except grade 1, in favour of the white children" (Turner and Penfold 1952:37).

The lower median scores of the Indian school children were attributed to environmental factors, such as language, socio-economic status, and traditional attitudes. No conclusions appear in this study to show the validity of the Colored Progressive Matrices.

Norman and Midkiff (1955:129-136) administered the Colored Progressive Matrices to 96 Navaho school children who were classified as Beginner, Primary, and Intermediate rather than by age. The Goodenough Draw-a-Man Scale, another so-called (and widely used) "culture-free" test, was administered to the children also. Both tests were compared in an effort to determine the "adequacy of the Progressive Matrices Test as a 'culture-free' measure among a group of children stemming from a culture which was different from that of the children on which the test was originally standardized" (1955:130-131). The mean (estimated) IQ on the Progressive Matrices was 64.94, while the mean IQ on the Goodenough was 99.26.

Raven, in a personal communication with one of the authors of this study, commented in part:

Your findings are, I fancy, in accordance with other anthropological studies... I have not yet any exact knowledge, but I have recently had rather similar information from France. They have made an extensive anthropological study of native African children in the French African colonies. In general they find that native children who have received no education
"do not think" as Europeans think. They enjoy making patterns, but do not think logically or even, as we tend to do, more or less lineally. They find, however, that these children can acquire what might be regarded as European ways of thinking, and when they do, they begin to perform the Matrices test in the same way that we would do it. In other words, the score increases with the amount of European schooling, rather than with the amount of European knowledge, such as ability to speak European languages, etc. . . . I may add that the test is being used in India and China as well as with African and New Zealand natives. As far as I know at present, Indians and Chinese do the test much as we do them, in contrast to the way they are performed by Africans and Maoris (1955: 135).

Raven's communication suggests that scores among "native" populations increase proportionately to the amount of European schooling to which they have been subjected. The authors, however, found no evidence for this fact. At least, among Navaho children the IQ scores on the Matrices were almost identical among Beginner, Primary, and Intermediate groups.

Furthermore, the authors had anticipated that Navaho children would probably perform the Matrices test quite well since design making among Navahos is very advanced, which suggests that the patterns or designs on the Matrices "might have some ideational connection with Navaho designs. . . ." (Norman and Midkiff 1955:136). There was no conclusive evidence to show any correlation of hypothesis. Navaho subjects often chose bizarre responses at least from the standpoint of the examiner. At the conclusion of the Navaho study the authors concluded that the Progressive Matrices is inadequate as a cross-cultural device for estimating intellectual capacity among non-European cultures.

The foregoing presentation of studies utilizing both the Progressive Matrices--1938 and Colored Progressive Matrices tests among non-European cultures--indicates that further investigation is
imperative since these studies, on the whole, leave many questions concerning the tests' cross-cultural applicability unanswered, as well as present evidence that the studies were inadequate in some respects.

For example, in all of the studies cited above very little, if any, ethnographic data are given concerning the subjects being tested. The lack of such data, especially in view of the fact that all of those cultures studied are in varying degrees of acculturation, leaves proper evaluation of the Matrices test as a culture-free, cross-culturally applicable test quite difficult. That is, such data are of importance since if the test is indeed not culture-free then it is important to ascertain what cultural factors are responsible for its nonapplicability. Score distributions and mean scores do not, in themselves, conclusively answer this question, since samples may be poorly chosen and may give a skewed distribution. Furthermore, it is no mean significance to note that some cultures fare better than others in adjusting to the processes of acculturation. That is, the processes involved in acculturation may so affect a culture's overall socio-psychological makeup as to render its members unfit to respond to a "white man's test" in a manner that would render representative responses indicating that culture's "true" intellectual capacity. Test resistance, not of a cultural origin, but arising as a result of animosity, poor living conditions, physical incapacities, and a host of other socio-psychological factors, could conceivably affect test scores.

Turner and Penfold (1952:31-44) do consider some of these factors and maintain in part that the lower scores of the Caradoc Reserve Indian children in comparison to those of white students living near the Reserve are the result of environmental factors such as language, socio-economic
status, traditional attitudes, lack of confidence, lack of tradition of education, and lack of test motivation. Details concerning these are lacking, however, which makes evaluation of their real significance next to impossible.

Norman and Midkiff in their study (1955:129-136) concluded that the Matrices test was not cross-culturally applicable. They based their evaluation on the comparison between mean estimated IQ scores obtained on the Colored Matrices Test and the Goodenough Draw-a-Man Scale. The mean IQ scores were considerably higher on the Goodenough test (e.g., 64.94 to 99.26 respectively). While the evaluation of one psychological test by comparison with another test of indicated like or unlike nature is not beyond the realm of scientific procedure, it is highly questionable that the Matrices test and the Goodenough test can be legitimately compared. This idea of being not comparable may be apparent if one considers that each test proceeds to make inferences about intellectual capacity on the basis of different modalities. The Matrices test, as previously stated, requires "chiefly the education of relations among abstract items" (Anastasi 1961:261), while the Goodenough Draw-a-Man Scale requires the subject to draw a picture of a man to the best of his ability. The picture is then scored on the basis of several salient features and the subject's IQ is determined from this evaluation (Anastasi 1961:264-266). This test has come under much criticism, since the quality of the drawn figure may well depend on the subject's artistic ability. Another important point is that some cultures simply do not stress ability to reproduce the human figure by drawing (Anastasi 1961:264-266; Barnouw 1963:287-288).
The data from the Navaho study concerning the fact that there were no significant increases in mean estimated IQ scores on the Matrices in proportion to "amount of European schooling" (Norman and Midkiff 1955: 135-136), as well as the fact that Navaho children often picked "bizarre responses" (1955:136), may indeed indicate that the test is "culture-free" to some extent and therefore cross-culturally applicable to a higher degree than was previously thought. Norman and Midkiff present no discussion in connection with this possibility.

From this brief analysis of previous studies it becomes readily apparent that many questions concerning the cross-cultural applicability of both forms of the Matrices test remain to be answered. In the present study the 1938 form of the Progressive Matrices was chosen in contradistinction to the Colored Progressive Matrices for the following reasons: (1) Indian children of the Flathead Indian Reservation may well have reached a stage of acculturation where the simpler form of the Matrices test would not be particularly useful in ascertaining their intellectual capacity. (2) The simpler form of the Matrices test would not be sufficient for ascertaining the intellectual capacity of older children (above 11 years of age) since it is specifically designed for an age range of 5 to 11. (3) The highly questionable results of some previous studies plus the fact that few such studies have been conducted among North American "native" populations warranted further application and analysis of the test.

The Present Study

Procedures

The Progressive Matrices test was administered on an individual
basis by the author to all of the 163 children who completed the test.

Instructions for taking the test were given on an oral basis, by the
author, and all of the children were told that they could take as much
time as they desired to complete the test. (See p. 38 of this thesis for
a breakdown of the time required by each of the two groups to complete
the Progressive Matrices.)

Results

The frequency distribution of scores for both troup--Indian and
white--indicate more or less rectangular distributions (Figs. 5 and 6).
The mode, or the observation which occurs most frequently (Edwards
1964:47-48), is 38 for the Indian scores. On the other hand, the white
frequency distribution is bimodal. The mean scores for the Indian and
white groups respectively are noted in Table 24.

<table>
<thead>
<tr>
<th>TABLE 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAN SCORES FOR INDIAN AND WHITE GROUPS</td>
</tr>
<tr>
<td>Group</td>
</tr>
<tr>
<td>Indian, 8-16</td>
</tr>
<tr>
<td>White, 8-16</td>
</tr>
</tbody>
</table>

These results indicate that there is no statistically significant dif-
fERENCE in intelligence quotient between the Indian and white children,
although the mean score for the white group is some 5.72 points higher. 3

Table 25 is a more detailed breakdown of the mean scores of both
the Indian and white groups in relation to (1) geographical area, (2) the
two age ranges in each group, and (3) the differences between the sexes.
Fig. 5.—Frequency distribution of all Indian scores
Fig. 6. -- Frequency distribution of all white scores
TABLE 25
DETAILED BREAKDOWN OF THE MEAN SCORES
OF INDIAN AND WHITE CHILDREN

<table>
<thead>
<tr>
<th>Group</th>
<th>Number Subjects</th>
<th>All Ages</th>
<th>Female All Ages</th>
<th>Male All Ages</th>
<th>Ages 8-11</th>
<th>Ages 12-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Dixon</td>
<td>46</td>
<td>30.61</td>
<td>32.41</td>
<td>28.96</td>
<td>25.28</td>
<td>34.04</td>
</tr>
<tr>
<td>Arlee</td>
<td>49</td>
<td>30.04</td>
<td>29.21</td>
<td>30.84</td>
<td>25.00</td>
<td>34.88</td>
</tr>
<tr>
<td>Combined</td>
<td>95</td>
<td>30.32</td>
<td>30.74</td>
<td>29.92</td>
<td>25.12</td>
<td>34.43</td>
</tr>
<tr>
<td>White Dixon</td>
<td>36</td>
<td>37.44</td>
<td>37.82</td>
<td>37.10</td>
<td>31.35</td>
<td>42.89</td>
</tr>
<tr>
<td>Arlee</td>
<td>32</td>
<td>34.47</td>
<td>32.67</td>
<td>36.06</td>
<td>30.40</td>
<td>38.06</td>
</tr>
<tr>
<td>Combined</td>
<td>68</td>
<td>36.04</td>
<td>35.41</td>
<td>36.61</td>
<td>30.91</td>
<td>40.61</td>
</tr>
</tbody>
</table>

The differences between the Indian and white scores in reference to each of the two schools as well as between the two age ranges and sexes are higher for the white children in all categories. However, the white children at Dixon scored higher (on the average) than did the white children at Arlee. The mean scores for the Indian children (within the categories listed above) are quite similar, excepting the mean scores listed for males and females at both Arlee and Dixon.

Furthermore, the results indicate an increase in the mean scores in both groups—Indian and white—with increasing age. In relation to the Indian children combined, the increase is from 25.12 in the 8-11 age range to 34.43 in the 12-16 age range. The white increase, ranging from 30.91 in the younger age range to 40.61 in the older age range, is only .39 greater than that of the Indian group. The increase in mean scores with increasing age, then, is virtually the same among both groups.
Summary Results of Test

The data from the Progressive Matrices test indicate that there is no statistically significant difference in intelligence quotient between the Indian and white children. In relation to the increase of mean scores from age range 8-11 to 12-16, the results are virtually the same for both groups.

The frequency distributions of scores in both groups are in line with the findings of most past studies in that they are not the same as the distributions in the white groups where the test was standardized. (See Figures 5 and 6, pp. 131 and 132 of this thesis.) (cf. Notcutt 1949; Norman and Midkiff 1955.) This problem may be related either to the representativeness of the sample tested, or to the Progressive Matrices itself, or both. Since it is felt that both samples—Indian and white—were chosen with a minimum of bias, the latter alternative must be considered as being the prime determinant behind the abnormal frequency distributions in the present study. The findings of Notcutt (1949) and Norman and Midkiff (1955) correlate with this observation; they too assumed that their samples were representative and attributed abnormal frequency distributions to the test itself.

Notwithstanding the problem of abnormal frequency distributions, the data obtained in the present study may indicate one or the other or both of the following: (1) that the Progressive Matrices is, to some extent, cross-culturally applicable, or (2) that Flathead children are culturally similar to the white children tested. If the latter possibility is, in fact, the case, and there is much evidence to suggest that it is, then the question of whether or not (or to what degree) the Progressive
Matrices is cross-culturally applicable, in reference to the present study, remains unanswered. That is, Flathead children have had rather extensive contact with Western schooling, which leads one to ask, "Can the cross-cultural applicability of a test be determined by comparing the results obtained from two cultures that have experienced continuous first-hand contact over an extended period of time?" The author is of the opinion that a test's cross-cultural applicability cannot be determined in this manner. Thus, the present study, as well as those studies conducted by Notcutt (1949), Turner and Penfold (1952), and Norman and Midkiff (1955) do not conclusively indicate the degree to which the Progressive Matrices is cross-culturally applicable; at best, these studies indicate only that (1) the Progressive Matrices usually gives skewed distributions, and (2) the scores obtained from so-called non-Western cultures who have experienced continuous first-hand contact with Western schooling are little different (on the average) from the scores of modern western cultures. The conclusion, then, is that if the cross-cultural applicability of the Progressive Matrices is to be determined, a carefully controlled study must be conducted among peoples that have never had continuous first-hand contact with a Western oriented culture.
Footnote References--Appendix

1. The theory behind this concept is "that all intellectual activities share a single common factor, called 'general factor,' or g... the theory... also... postulated numerous specific or s factors, each being strictly specific to a single activity... The more highly the two functions were 'saturated' with g, the higher would be the correlation between them" (Anastasi 1961:343-344). (See also Spearman 1904, 1927.)

2. See footnote 1 above.

3. The Mann-Whitney U Test was used on the Progressive Matrices material. (See Siegel 1956:116-127.)