A COMPARATIVE STUDY OF ANIMISTIC THOUGHT OF OJIBWAY
CHILDREN ON WIKWEMIKONG RESERVE
MANITOULIN ISLAND

A Thesis
Submitted to Faculty of Graduate Studies
In Partial Fulfillment of the Requirements for the
Degree of Master of Education, University of Saskatchewan
College of Education

by
Cecil King
Saskatoon, Saskatchewan
September, 1975
The author has agreed that the Library, University of Saskatchewan, shall make this thesis freely available for inspection. Moreover, the author has agreed that permission for extensive copying of this thesis for scholarly purposes may be granted by the professor or professors who supervised the thesis work recorded herein, or in their absence, by the Head of the Department or Dean of the College in which this thesis work was done. It is understood that due recognition will be given to the author of the thesis and to the University of Saskatchewan in any use of the material of this thesis. Copying or publication or any other use of the material of this thesis for financial gain without the approval of the University of Saskatchewan and the author's written permission is prohibited.

Requests for permission to copy or to make other use of material in this thesis in whole or in part should be addressed to:

Director, Indian and Northern Education Program
College of Education
University of Saskatchewan
SASKATOON, Canada
S7N 0W0
ABSTRACT

Language is the way a people see their world. Language is the way a people see reality and language is the way a people structure their world. To apply the rules which govern one structure upon a structure which has its own set of rules is a futile exercise. The educational system has been imposed on the Ojibway people from outside their frame of reference. This study resulted from concern over the inconsistent effects of education on Ojibway people.

Animism as a concept has been studied by many researchers. Its interpretation, application and effect on the development of cognitive growth has borne many conclusions. Animism was initially established as a stage in the development of thought processes in the field of psychology by Piaget who intimated its universality and general application to all peoples. Researchers have since found inconsistencies in animistic thought processes and attributed them to cultural differences.

This study of animism as a concept was applied to the Ojibway language group of Manitoulin Island in Ontario. This study was designed to interpret the concept of animism and its effect on cognitive development among the school children of Wikwemikong, Ontario. The concept of animism was studied through the use of a constructed instrument designed to detect the presence of or lack of presence of animism among a random sample of academically paired school children in three of the four Piagetian levels of animism. The animism testing instrument was administered in Ojibway-English (bilingual) and English (unilingual) to two equal groups of children, who were equally divided by sex. The data was
analyzed at the .05 level for statistical significance by an analysis of variance.

The results of the study showed the strong influence of language. The bilingual children responded to the concepts of animism within the Ojibway framework while the unilingual children responded significantly more to the Piagetian definition of animism.

Other findings indicated there was no significant difference between grade levels in either the bilingual or unilingual groups. However, females scored significantly higher than males.

The interaction between language and grade of bilingual and unilingual speakers was statistically significant. The bilingual children's concept of animism increased with age while the unilingual children's concept of animism decreased with age. This age/grade pattern coincided with the Piagetian theory.

An analysis of the reasons for subjects responses showed that the bilingual group became stronger in their concept of animism as they got older while the unilingual children conformed with the Piagetian definition of animism in which the child's animism becomes weaker with age. There was no consistency in the sequence of the levels of animism though all four levels were evident in the responses from both groups.

Since this study revealed that in the concept of animism Ojibway children mature in a uniquely Ojibway manner and that English speaking Ojibway children regressed, the education system under which the Ojibway children are made to conform should build upon the Ojibway child's own philosophical framework in order to succeed. The teachers should be native teachers or at least fluent in the native language and knowledgeable in the culture of these people.
The study recommended that the Ojibway language become the language of instruction throughout the school system and that English be taught as a second language.

The finding of no significant differences among grades implies that curricula may be more effectively organized on a non-graded basis. Perhaps the age-grade segregation of the present system needs to be modified or discontinued.

The discovery of a unique approach to animistic thought among Ojibway children suggests that curricula might be better established on a comparative format. That is, Ojibway children might view other people's values in comparison to their own.

Since the concept of animism to the Ojibway has no restricting framework and since in the Ojibway language animism is the centre of Ojibway ethno-metaphysics, a world that is a harmonious whole, the school of the Ojibway must be modified to correspond more to his world and away from the restricting structures that have existed up to this day.
ACKNOWLEDGEMENTS

This work could not have been done were it not for the children of Wikwemikong and Kaboni. This work would have no meaning were it not for the Ojibway people of Manitoulin Island. To you all, accept my proudest thanks; it was an honour to work with you. Mrs. Sara Peltier (Principal), Mrs. Marjorie Mishibinijima (Principal), Mrs. Rita Corbiere, Mrs. Julie Ominika, Mrs. Evelyn Corbiere, Mrs. Theresa Hoy, Orville, Noreen and Beatrice King, Mrs. Regina Lewis and all the teachers, for your support, a special thank you.

For the completion of this study, I am indebted to many people. For your faith, your valuable time, your kind interest, your encouragement, your scholarly advice and direction, thank you Art, Audie and Don. I was honoured that you were my committee. To the Indian and Northern Education Program, the College of Education and the University of Saskatchewan, whose invaluable services led to the finishing of this thesis, I am grateful.

Of course, this thesis had to be typed and it had to be typed again and again and again and again. To Beryl and her dogged determination to uphold Campbell and the illogic of his spacing, footnotes and bibliography, my hearty thanks.

Finally, to Cathy, who listened, proof-read and nit-picked and then to Daryl, who was very patient and made a contribution, to you both, I am truly grateful.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th></th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>THE PROBLEM</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>THE JUSTIFICATION OF THE PROBLEM</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>HYPOTHESIS TO BE TESTED</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>DELIMITATIONS</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>ASSUMPTIONS</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>DEFINITION OF TERMS</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>OVERVIEW</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>SIGNIFICANCE</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>2. REVIEW OF LITERATURE</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>EARLY STUDIES</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>PSYCHO-STATISTICAL STUDIES</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>CULTURAL AND LINGUISTIC INFLUENCES</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>SUMMARY</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>3. METHODS AND PROCEDURES</td>
<td></td>
<td>39</td>
</tr>
<tr>
<td>SAMPLE</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>DISTRIBUTION OF NATIVE STUDENTS - TABLE 1</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>CONSTRUCTED INSTRUMENT</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>PILOT STUDY</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>DATA COLLECTION</td>
<td></td>
<td>48</td>
</tr>
<tr>
<td>DATA ANALYSIS</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>SUMMARY</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td><strong>4. PRESENTATION AND DISCUSSION OF RESULTS</strong></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>ANALYSIS OF VARIANCE FOR ANIMISM SCALE – TABLE 2</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>HYPOTHESIS ONE</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>HYPOTHESIS TWO</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>HYPOTHESIS THREE</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>HYPOTHESIS FOUR</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>OTHER FINDINGS</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>LANGUAGE BY GRADE INTERACTION ON THE CONCEPT OF ANIMISM – TABLE 3</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>SUMMARY</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td><strong>5. SUMMARY AND CONCLUSIONS</strong></td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>THE STUDY</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>AN OJIBWAY VIEWS ANIMISM</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>IMPLICATIONS FOR THE STUDY</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>IMPLICATIONS FOR THE OJIBWAY PEOPLE</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>SUGGESTIONS FOR FURTHER RESEARCH</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>RECOMMENDATIONS</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>SUMMARY</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td><strong>BIBLIOGRAPHY</strong></td>
<td>77</td>
<td></td>
</tr>
</tbody>
</table>

**APPENDIXES**

| A. LIST OF FORTY ITEMS                                                 | 83   |
| B. ANIMISM TESTING INSTRUMENT                                          | 86   |
| C. RESPONSE SHEET                                                      | 88   |
| D. INVENTORY FORM                                                      | 90   |
| ENGLISH CONCEPT OF ANIMISM                                             | 92   |
| F. A.T.I. RELIABILITY                                                  | 95   |

iii
Chapter 1

INTRODUCTION

Canada is a multi-cultural country. Within its boundaries live the peoples who range the entire socialization continuum -- the very advanced of the native peoples whose ancestors originated on the continent across the sea, to the less advanced native peoples whose ancestors were the original inhabitants of this continent. The people from the other continents brought with them the achievements of years of socialization and technology. Because of sheer numbers and advanced technology, these peoples formed the dominant society and so began the natural imposition of their systems, values and philosophies on all people in this land. This has always been done in the interest of making Canada strong and all its people equal. Today, the results of this imposition would indicate an unequal result for while Western man continued to advance, the same cannot be said of Canada's original native peoples.

The educational processes applied equally to all peoples have not had equal results for all. Why do the educational processes not have the same results for all? Could it be that the thought processes between cultural groups are not the same? Could it be that Western man thinks in a different way from the Canadian native? Do Canadian natives belong to that scholarly categorization of primitiveness which mitigates against the possibility of ever learning? Although Radin holds that

---

primitive man is as logical and sophisticated in his ways of thought as Western man, there is a contrary view that primitive man is "different" in his methods of mental operations.

McLuhan maintains that,

...the combination of the phonetic alphabet and the development of printing, the two most important developments in the western world...organized experiences into a linear sequential line....The effect has been to make Western man to expect the world to act in a linear or rational manner.2

McLuhan suggests that this way of thinking is what differentiates Eastern from Western man. Furthermore, Goody and Watt3 contended that a consideration of the consequences of literacy throws light upon the intellectual differences between simple and complex societies. Perhaps it as well differentiates Indians from Western man. There is a need for deeper understanding of the thought processes of the Indian child if we are to understand the possible sources of difficulty in the school system which is based on the Western intellectual, traditional experience.

Linguists and Anthropologists have pointed out that Indian languages are structured in such a way as to reflect animistic thought. Animistic thought is the tendency to attribute life to all things.

Schoolcraft has stated:

The Chippewa has the peculiarity of making every inanimate object at the will of the speaker, animate. By this process, trees, rocks, in short every feature of the country is invested with hearing, sight and animation. Wilds and forests no longer


remain desolate and lonesome, when every object, around, above and below, is a person.4

Furthermore, Tylor has more specifically stated,

The distinction between an animate and an inanimate gender appears with especial import in a family of North American Indian languages, the Algonquin.5

The Ojibways are a prominent group of the Algonquin family. Since thought processes are reflected in the language, it is amply evident that in the Ojibway language a dichotomy exists and it is this, for the purpose of this study, which will be referred to as animistic thought. Animistic thought in the Ojibway language is the process of attributing the so-called gender of "alive" and "non-alive" to all things. The term "wenesh maba?" (Lit. Who is this?) and "wenesh manda?" (Lit. What is this?) simply shows this thought process. Maba (this) is the pronoun for all animate things while manda (this) is the pronoun for the inanimate. This thought process is likewise reflected in all verb affixes as well as all numerical designations and syntactic constructions. To elaborate further at this point would become a voluminous task; therefore, suffice it to say that if thought processes are reflected in the language, the thought processes of the Ojibway are animistic. If the Ojibway thought processes are animistic, and these thought processes reflect intellect, then all learning is affected within this thought process.

One of the generally accepted beliefs about thought processes is


that animistic thought exists in all people.

The literature on animism displays two features which are particularly salient: one is the presence of animistic thought among populations of all age ranges and of great cultural differences. The percentages reported and the interpretations offered for these figures vary widely, but the research clearly indicates almost without exception, that in each group at least some people give some responses which appear to be animistic.6

However little research has been undertaken into the effects of animistic thought on thought processes.

A problem with much of the research that has been undertaken is that it is locked within the framework of its own concepts, such concepts as formal hypotheses testing, behavioral hierarchies and statistical measurement. As a result researchers studying the universality of animistic thought, although identifying certain incongruencies which they attribute to cultural factors termed "cultural interferences", are reticent to reject their theoretical framework. If the cultural factors cannot be structured, sequentialized, arranged in links of simple causal relationship or measured, most researchers have tended to ignore them. It is within this limited frame of reference that a great deal of research on animism has been conducted.

The Problem

This thesis is a study of the animistic thought processes among school children of Canadian native ancestry. The purpose of the study is to investigate the concept of animism in children of the Ojibway language background. The problem is to investigate the degree of presence

---

of the concept of animism which exists in Indian children as reflected in their native language.

To research this phenomenon, the following major questions were established to set parameters for the hypotheses to be tested.

**Question one.** Is there a difference in animistic thought between Indian children who are: (1) at different developmental stages, (2) bilingual or unilingual?, (3) male or female?

**Question two.** What reasons do children have for using "maba" and "manda" in describing objects?

The Justification of the Problem

Since animism is so prevalent in Indian languages, there is a need for a deeper insight into the concept of animism among Indian children and its effect on their learning process. Does this represent a level of understanding that the Indian child acquires that affects his mode of thinking? Is there any change when he learns English? Is there any change when he goes to school? Does his prevalence of animism present difficulties in his attempt to think in the way expected within the English framework of the school system? A deeper understanding of animism may be what is required to create an educational process that would work for the Indian child.

Hypotheses to be Tested

The following null hypotheses were tested in the study.

**Hypothesis one.** There is no significant difference at the .05 level in scores on the Animism Test Instrument (A.T.I.) between bilingual and unilingual Ojibway subjects.
Hypothesis two. There is no significant difference at the .05 level in scores on the A.T.I. between subjects in different developmental stages.

Hypothesis three. There is no significant difference at the .05 level in scores on the A.T.I. between male and female.

Hypothesis four. There is no difference in the reasons given by bilingual and unilingual subjects in kindergarten, grade four and grade six for animistic and non-animistic qualities in objects, using "maba" and "manda" as determiners.

Delimitations

Findings and conclusions were considered in light of the following delimitations:

1. This thesis is not a definitive study of animism or even of animism among Ojibway speakers. It is, rather, an attempt to enrich the theory of the presence of another level of thought (referred to as "animism" in this study) among Ojibway speakers.

2. Subjects were limited to Ojibway.

3. The instrument utilized was limited to 20 concepts selected by the investigator.

4. The instrument was administered in the Ojibway language during individual interview situations with subjects.

5. The sample was limited to 120 Ojibway children in kindergarten, grade four and grade six from selected schools on Manitoulin Island, Wikwemikong Indian Reserve in Ontario.

Assumptions

This study is based on the following assumptions:
1. Animism is universal among human beings.
2. The presence of animism is revealed through the language of a people.
3. The animistic thought of Ojibway speakers is evident through the Ojibway language.
4. To test animistic thought among people, the language of the people must be utilized.
5. The Animism Test Instrument developed for this study will reveal animism among Ojibway subjects.
6. Verbal responses of subjects during interviews will be indicative of their understanding of the concepts.
7. The concepts of the testing instrument will be familiar to all subjects.
8. The degree of familiarity with the concepts during the interview is not crucial to the children's ability to respond.
9. The subject's biases and the investigator's biases will be constant throughout the interviews.
10. The clarity of communication should be equally effective in both the Ojibway and English languages.

Definition of Terms

Animism: the belief that natural phenomena and objects such as rocks, trees, wind, etc. are alive and have souls.

Inanimate: the state of objects which are not alive and have no souls.

Animistic thought: thought that is affected (influenced) by animism.
Soul: essence, power, life, living.

A.T.I.: Animism Test Instrument

Bilingual: Ojibway-English speakers.

Unilingual: Ojibways who speak English only.

Maba: "This" (Ojibway for animate objects).

Manda: "This" (Ojibway for inanimate objects).

Wenesh Maba?: Who is this? (animate)

Wenesh Manda?: What is this? (inanimate)

Levels of Animism: The levels of animism defined by Piaget are:

Level 1 - Everything is alive (4 to 6 year olds)
Level 2 - Everything that moves is alive (6 to 7 year olds)
Level 3 - Everything that moves by itself (8 to 10 year olds)
Level 4 - Only plants and animals are alive (adult)

Supernatural: existing outside the normal experience or knowledge of man and attributed to hypothetical forces beyond nature.

Nature: constitution or quality of a being

Ethno-Metaphysics: the philosophy that human beings, of whatever culture, are provided with a cognitive orientation in a cosmos of order and reason, or harmony.

Tri-Generational Experiential Model: the process of learning through the interaction of children, parents and grandparents.

Tchicak: soul (Ojibway)

Ethno-Linguistic: a cultural factor evident through the language.

Ethnoseme: a cultural word -- i.e. maba, manda.

Linguiseme: a cultural phoneme -- i.e. affixes "ons."
Avian: pertaining to birds.
Ursine: pertaining to bears.
Metamorphosis: power to change from one self to another.
Bearwalk: medicine society, usually evil, where members can assume ursine or avian attributes.

Overview
This study is reported in five chapters. Chapter one introduces the study and defines the problem for the study. It provides a justification for the problem and lists hypotheses, delimitations and assumptions. The definition of terms is also included in chapter one.
Chapter two reviews studies related to animistic thought.
Chapter three describes the procedure and method of investigation. The population and sample are also described. Development of the instrument is noted.
Chapter four presents and discusses the findings.
Chapter five summarizes the study as well as stating conclusions and implications.

Significance
This study contributes to educational thought for the following reasons:
1. It provides a basis for further empirical studies related to thought processes in children.
2. It provides empirical data on differences and/or similarities in children of Indian ancestry with different language backgrounds.
3. It investigates the influence of language on the develop-
mental concepts related to "life" and "living."

4. It relates the theory of animism to the perceptions of Indian children.

5. Since the present educational system is obviously failing the Indian child, since present educators are searching for ways to make the present educational system more relevant and since all research collectively admits further research is needed, surely the significance of this study should be obvious.
Chapter 2

REVIEW OF LITERATURE

Early Studies

This chapter reviews the related literature in terms of early studies, psycho-statistical studies, and linguistic and cultural influences.

The tendency of human beings towards animistic thought has been observed, interpreted and measured by various researchers throughout history. The first mention was made by Zenophanes, an early Greek thinker, who commented in 540 B.C. that "if horses and oxen thought in the human manner they would imagine gods in the forms of horses and oxen." 7

This line of inquiry, however, was not pursued until 1787 when Tiedemann 8 initiated the study of a child's development with detailed observations. His was the first written study of child animism based on his observations of his own son. Following in this tradition (of observing behavior, recording it in detail and deducing the thought processes associated with it), the nineteenth century produced many studies of animism. For example, Maine de Biran in The Influence of Habitat on the Faculty of Thinking, 1803, concluded,

As the child, misled by rough resemblances in form, clothes,

8 Ibid., p. 259.
etc., applies to the stranger the tender name of father, so the man — still a child — extends his ego over the whole of nature, attributes his will, his own activity, to all that sustains with him the general relation to mobility, animates with his soul the stars, the clouds, the rivers, the planets, and peoples with genii, with active powers, the sky and the earth.\(^9\)

He believed that the generalization and extension of the ego existed from cradle to grave. Taine\(^10\) in 1975, Preyer\(^11\) in 1882, and Froebel\(^12\) in 1887 all concluded similarly and described child animism as the imagining of the child that each thing is imputed with the same faculties of life, feeling, speech, hearing and activity as the child's own experiences. These researchers equated animism with personification, and refined the biographical technique in the study of child development.

Similar studies were published by Brown\(^13\) and Whiting\(^14\) in 1892. Both independently determined that children personify numerals as well as all other things in their environment. Herrick\(^15\), 1895, from his notes on child experience, resolved that child thought was dependent on imagery which was eidetic in its character.

---

\(^9\) Ibid.

\(^10\) Ibid., p. 261.

\(^11\) Ibid., p. 262.

\(^12\) Ibid., p. 260.

\(^13\) Ibid., p. 264.

\(^14\) Ibid.

\(^15\) Ibid.
There were over fifty biographies, according to Dennis, where he found comments on animism. Piaget only made use of Sully and Rasmussen.

The descriptive methodology continued to dominate up until 1922. In the early years of the twentieth century Slaughter\textsuperscript{16} and Ellis\textsuperscript{17} wrote lengthy in depth reports on child animism. Rasmussen\textsuperscript{18} attempted to continue the observational methods of studying thought development among children and applying animistic tendencies to behavior but by the time of the publication of his book \textit{The Soul Life of a Child in its First Four Years} in 1922, the times had changed and his methodology had fallen into disfavour among researchers.

Methodologies had begun to change as early as 1883 when Hall\textsuperscript{19} initiated the first survey questionnaire in child psychology. His publication, \textit{The Contents of Children's Minds}, foreshadowed in methodology and design Piaget's clinical approach. Hall encountered some of the methodological problems later recognized by Piaget, 1) if children did not know the answers they would guess or give answers at random, 2) some children romanticize and will invent responses, 3) some respond to clues in the question itself, voice and mien of the researcher.

Hall, however, insisted that much could be learned with accuracy of the tendencies in child thought through his questioning approach.

\begin{quote}
\textsuperscript{16}Ibid.
\textsuperscript{17}Ibid.
\textsuperscript{18}Ibid., p. 262.
\textsuperscript{19}Ibid.
\end{quote}
He did believe that certain concepts such as animism were consistent in the child's system of interpreting the universe and had a certain systematic coherence.

Sully, in 1896, agreed with Hall's study. He chose to distinguish between the romancing and serious moods of the child. However, he stated:

Of these, the most important is the impulse to think of what is far off, whether in space or time and so unobservable as like what is near and observed. Along with this tendency, is (the tendency) to vivify nature, to personify things and so to assimilate their behavior to the child's own.\textsuperscript{20}

He further concluded that there was no doubt that children, by reflecting on what they see or otherwise experience and by reflecting on what they are told by others, fashion their own ideas of natural phenomena; and further, that while these ideas are not a logical whole, certain general tendencies run through them.

Sully further maintained that children attribute life to inanimate objects if there were merely movement or sound analogous to themselves.\textsuperscript{21} During this whole era, the concept of animism related to personification and as some alluded in their study titles, the concept of soul hovered near. The concept of animism was very vague and undifferentiated.

\textbf{Psycho-Statistical Studies}

By 1920, the testing movement had begun in psychology and

\textsuperscript{20} Ibid., p. 262.

\textsuperscript{21} Ibid., p. 262.
references to thought tendencies became important only in the realm of their measurability. Piaget attempted to redefine animistic thought in testable terms. Piaget referred to animism as "the tendency among children to consider things as living and conscious." Piaget's main concern lay in the concept of life or living as the main indicator of animistic thought. His testing instrument for this consisted of questions asking the child whether something was alive or not. As the child grew older, Piaget noted, he tended to attribute life to inanimate objects less and less until he reached a mature cognitive state in which the concept of life was applied to only things that are "alive", namely plants and animals.

Animism was in Piaget's theory one stage in the child's three developmental stages -- realism, animism and artificialism -- which he elaborated on in *The Child's Concept of the World*. Further, Piaget established four developmental stages of animism and expressed these as universal to all children even with the "superficial coating of education." The four stages are 1) everything is alive (4-6 years), 2) everything that moves is alive (6-7 year olds), 3) everything that moves by itself is alive (8-10 year olds), and 4) only plants and animals are alive (adult). The degree of animistic thought corresponded significantly with age or with maturity and it was more evident and stronger at ages 4 to 6 than at ages 11 and over.

Piaget agreed with Sully asserting that although it cannot be said that children have a philosophy in their unconnected and incoherent

---

spontaneous remarks concerning the phenomena of nature, there are some constant tendencies which reappear in subsequent reflections.\textsuperscript{23}

Piaget attempted to provide precise data to determine the essence of child animism. He named a number of objects to the children: a table, a dog, the sun, a stone, the wind, clouds, rivers, etc. asking if each one were living, if the object knew what it was doing or if the object could feel a prick, etc.\textsuperscript{24}

Piaget noticed significant changes in a developmental pattern ranging from a generality of animistic tendencies attributing life to everything by 4-6 year olds characterized by a confusion of responses to a specialized adult interpretation of the concept "alive" at eleven and over.

Piaget stated that child animism presented no problem for the child who outgrows his initial animism.

Piaget never standardized his testing procedure for animism since he was not convinced that the problem was best attacked by that method. However, publication of his book, The Child's Conception of the World, in 1929 sparked the interest of American psychologists in animism.

By 1938, Russell and Dennis\textsuperscript{25} had devised a standardized procedure. Similar questions were asked of the children as those used by


\textsuperscript{24}Piaget, pp. 537-538.

Piaget; however, the researchers attempted to clarify the child's concept of "alive" by saying, "You know what living means? If an auto runs over your cat, is it alive?" (I am somewhat confused as to which Russell and Dennis meant was alive -- the car or the cat)

This concept of "alive" was then applied to the standardized list of 20 objects chosen for their universality and originally confirmed by Piaget.

In 1940, Dennis and his collaborators reported on research comparing white children with Zuni children using his standardized testing procedure. Their results coincided significantly with the answer types of Piaget in both cultural groups. However, Dennis and Russell found all four developmental stages at each age level.

Dennis and Russell (1940) investigated the life concept in Indian children. This study indicated a high degree of animistic thought, but brought into focus the language factor. Distortion of meaning could occur in the coarse translation. Dennis and Russell examined the Indian terms referring to concepts such as "life," "alive," and "living." They concluded that in the animistic usage of the language, the Indian usage was similar to the English usage.

Thinking independently of Dennis and Russell, Myrtle Bruce tested the animistic tendencies of white and negro children in the rural south. His findings confined the four stages of animism among white and negro children.


negro children. Bruce attempted to begin his interview by having the children try to formulate a concept of "alive." He felt this had an advantage in that it immediately displayed the child's degree of clarity of the concept. Thus, Bruce defined the process as the evolution of the child's concept of "alive." As a result, the interpretation of animism became even more restricted for measurability.

With increased studies, the controversies concerning the methodology, terminology and underlying presuppositions proceeded at the same pace. Between the 1930 English publication of Piaget's work and 1943, there had been 20 studies based on Piaget's basis. By 1943, Russell had attempted to give quantitative substantiation to Piaget's theory by applying Dennis's procedure to Northern and Southern, rural, urban and suburban samples of children and found that these subjects could be classified into Piaget's stages but pointed out that the age limits were not as strict as Piaget implied. Russell concluded that certain evidence suggested the concept could be considered universal since he had studied American rural, urban and suburban children and Piaget has tested French children. American Indian children showed similar trends (Dennis). Furthermore, there had been no difference found between male or female. Russell, Dennis and Ash demonstrated the same stages within those children termed "feeble-minded."

Despite this apparent support for Piaget's theory, many

---


researchers were unconvinced. I. Huang\textsuperscript{30} surveyed the literature on ani-
mism and was highly critical of the Piagetian school. He suggested that the investigators were attempting to assign an elaborate philosophical approach towards life to children when in fact such a system may not exist and is in reality a neutral, undetermined state. The child develops an animate-inanimate dichotomy and gradually moves towards a differentiated state. Until perfect differentiation is attained, the child makes many errors in judgement and displays confusion in labelling specific items animate or inanimate.

Huang, further, criticized the ability of investigators to pin down a very young child in interviews. He claimed that a young child becomes bewildered, and is very open to suggestion from adults. Huang uses the example that a child is like a bird looking at a scarecrow in that he reacts to the anthropomorphic traits alone.

In addition, Huang suggested that possibly it is wrong to use the term "living" to denote animism. He also stressed that the term "dead", in Dennis' example of the cat being run over by a car, is not synonymous with inanimate. He concluded that the whole technique of equating "living" with animism results in forcing the child to organize his observations into structures as he has not done before.

Huang opened the question of cross-cultural application by stating in a footnote that there would be some difficulty in translating Piagetian questions into Chinese since the Chinese word for animal, tong-wu, means literally "moving things."\textsuperscript{31}

\textsuperscript{30}Huang, pp. 71-121.

\textsuperscript{31}Huang, p. 105.
Although the Piagetian theory assumed universality, Russell\textsuperscript{32}, in studying the allied concepts of animism -- i.e. the "consciousness attributed to things" -- found that his study lacked the strict correspondence to the concept of animism that Piaget had established in his sample. Each individual was asked questions related to the "knowing" and "feeling" of 20 objects instead of their "living" or "dead" characteristics. His study exhibited the same stages of concepts as suggested by Piaget. However, it is interesting to note that in his explanation of the differences in his results and those of Piaget, he questioned whether or not the difference represented a difference between his English-speaking students and Piaget's French-speaking subjects.\textsuperscript{33}

In 1942 Dennis, in his study Animism and Related Tendencies in Hopi Children, stated that up to that date all tests were in Indo-European languages. Questions as to the extent that thought tendencies of the child were the result of a particular culture and language and the extent that this is universal to all languages were considered in this study. Dennis found a wider knowledge of the language (Hopi) was needed to interpret more precisely the gathered data. For more intensive study on the development of the concepts pertaining to animism, a knowledge of Hopi would be a prerequisite.

Further looking at the cultural and linguistic influences,


\textsuperscript{33}Russell, Concepts Allied to Animism, p. 91.
Dennis attempted to replicate his studies in a Hopi community. He showed considerable concern initially for the possibility of linguistic interference and to avoid the interference he used adult Hopi informants to do the questioning regarding the concept of animism. Because he concluded that adult Hopis displayed considerably more animistic tendencies than the adult English-speaking people, he made adaptations to the test items to allow for the difference.

Despite the fact that Hopi was the mother tongue of the children to be tested, that the language in the home and community was Hopi and that the children had not heard English until they entered school at the age of six, Dennis decided to administer the test in English. His conviction was that had the test been done in Hopi, the same results would have been obtained. He assumed that Hopi children thought in Hopi and even when questioned in English, they would translate the question into Hopi, answer it in the Hopi framework, then translate the response back into English. His results showed that all Hopi children fell into the four stages but they were retarded (at a lower level at a later chronological age) when compared to Russell's study of white children. He concluded that there was widespread animism among Hopi children. Since the same trait had been found among feeble-minded, Dennis tried to explain the retardation in terms of lower intelligence among the Hopi children but found that this was not true. He offered a number of different possible solutions within the cultural domain. He contrasted the Hopi's simple life to the American mechanical one, the Hopi's magical and

---

supernatural responses to American naturalistic ones, and the Hopi's bilingualism to the American monolingualism. He even went so far as to intimate that the wider animism of the Hopis taught the child wrong answers which Dennis then was unable to recognize.

Despite all these questions left unanswered with regard to cultural influences and the inability of Dennis to account for the Hopi differences in contrast to the white sample except to state that "white children give up childish ideas at a faster rate than do the Hopi," Dennis proceeded to conclude that there is probably worldwide adherence to Piagetian ideas due to the universality of experiences in childhood! However, he still leaves much to be answered as to the question he began with "What is the effect of particular cultural and linguistic influences?"

Concerned about the discrepancies which they identified in the studies based on Piaget's research, I. Huang and H. W. Lee attempted to make an experimental analysis of child animism using forty Chinese subjects. Their results were contrary to those of Piaget. They demonstrated that only a few children gave animistic qualities to inanimate objects. Furthermore, even when the incorrect response was made, only occasionally was it endowed with anthropomorphic traits. Their data substantiated Huang's thesis that the child has different meanings for "living" and "having life" and that rather than having a philosophy moving from universal animism to physicalism, the child moves towards a state of greater differentiation as he becomes more familiar with the

ideas of life and inanimation.

Anselm Strauss\textsuperscript{36} reviewed the Huang-Lee study and suggested that it was really unclear whether the data did in fact contradict Piaget's work. One significant inference drawn by Strauss was the conflict shown by Huang and Lee with the usage of the terms "living" and "having life" may have in fact been caused by the language spoken by the Chinese children.\textsuperscript{37}

Ignoring the cultural questions, Dennis and Russell continued to search for evidence of the universality of Piaget's concepts. In 1942 Roger Russell\textsuperscript{38} tested older children. He altered his approach only by administering written questions. His results corresponded with Piaget's conclusions.

Since Piaget had assumed the adult population all fit into Stage IV but had not tested this assumption, Dennis and Mallinger\textsuperscript{39} tested animism among senior citizens. Among the 70, 80 and 90 year-olds that they surveyed, they found all four stages of animism. They concluded that in keeping with the idea that older people become child-like, their answers were similar to children. They attempted to explain the differences within the group as due to differential cultural and educational

\footnotesize


\textsuperscript{37}Strauss, p. 107.


environments of the subjects in their youth, and various levels of neurological damage in their old age.

Other researchers were still not satisfied with the approach used by Piaget, Dennis, Russell, et. al. In an attempt to settle the semantic questions, in 1953, Klingensmith attempted to discover "What the child means by 'alive'?" He claimed that Piaget was too vague in his references to "characteristics of life." He wanted to know "Is it alive?", "Does it feel pain?", "Hear?", "Grow?", "Breathe?", "Think?", "See?", "Know it moves?", "Make a wish?", "Is it alive?" With these questions he was unable to substantiate Piaget's results. He wondered, however, if the difference was due to his questions or his sequencing? Nonetheless, he was led to conclude that the child's statement that something is alive is inadequate to measure animism.

In an attempt to further substantiate Piaget's conclusions among the adult population, Dennis, in 1953, considered the problem of animistic thinking among college and university students. Much to the amazement of the researcher, one-third of the answers given were animistic within a sample of education graduate students and first-year psychology students. In an effort to explain these results, he tested science students and found that only twelve per cent were animistic responses. He was forced to conclude that anthropomorphism was not limited to children and in his words, "backward or primitive people." In the

---


41 Wayne Dennis, "Animistic Thinking Among College and University Students," The Scientific Monthly, 76 (1953), 247-249.
absence of instruction, educated persons in modern societies possess many conceptions of the world that are identified with those of the child and uneducated.

Following up this investigation, several professors of scientific disciplines administered the test to their students in an attempt to show that Dennis' results were a reflection of the poor teaching of the concept of life. Crannell developed and distributed a multiple-choice test but his results corresponded to Dennis. He concluded that animism among adults was a function of the knowledge of the concepts of "living" and "non-living." Lowrie correlated Crannell's multiple choice test results with Dennis' test and confirmed that the results were contingent on knowing the characteristics of "living" and "non-living" and not on animism per se.

Bell and Voeks also examined the problem and Dennis sought further evidence in testing animism in college and high school students of the Near East. Dennis assumed that more animistic answers would be evident in the Near East since the educational level was lower there. The test was given in English to college students and in Arabic to high school students. The animistic responses were as high as from 74-95 per cent. Piaget's assumption that animism was limited to children was


incorrect. Dennis concluded that cultural factors were probably involved in the Near East but did not proceed to establish how they were involved. The question of language was never considered and cultural factors were ranked less significant than educational handicaps.

Crowell and Dole\(^\text{45}\) found that approximately 70 per cent of all responses of all psychology students tested showed some animistic tendency. He reinforced the denial of Piaget's assumption of adult thinking.

Klingberg\(^\text{46}\) attempted to examine the two questions looked at by Huang and Lee: (1) Do children attribute life to non-living things?, and (2) Can it be assumed, as Piaget does, that this attributing of life to non-living things is caused by the animistic tendency of the primitive mind? Using Huang and Lee's questions on Swedish children, he observed:

1. Yes, children do attribute life to non-living things, but not all.

2. No, Piaget's theory is based on the outmoded anthropological theory of Levy-Bruhl.

His results were consistent with Huang and Lee and he postulated that the phenomenon is more accurately described as a growth from ignorance to better knowledge. He stated that the problems children exhibit


\(^{46}\)Gote Klingberg, "The Distinction Between Living and Non-Living Among 7-10 Year Old Children, With Some Remarks Concerning the Animism Controversy," *Journal of Genetic Psychology*, 90 (1957), 227-238.
reflect difficulties in the child's true understanding of the physical world. If this is the case, cultural and linguistic factors would be fundamental in this understanding.

Havighurst and Neugarten studied American Indians (children from 10 groups) and, as in Dennis and Russell's (1940) study, they found a greater evidence of animistic thought among Indian children. However, Havighurst and Neugarten found that in the younger age groups, animistic thought was not consistently strong and therefore, questioned Piaget's stage one conclusions.

In 1957 Gustav Jahoda was the first to do a critical survey of the research of animism from a cross-cultural perspective. After studying all the work to that time, he asserted that "...there is no reason to assume that the incidence of animism in different cultures should be uniform." He stressed the importance of language as a factor. He stated "given the likelihood that linguistic factors do enter into animism, it would seem to be safer that children should be questioned in their mother tongue." He categorically denied the universality concept by saying that cross-cultural standardization of tests of animism is likely to be no more successful than that found for intelligence tests.


Jahoda did research on West African school children for animistic thought. He devoted a section to cultural variables considering the possible effects of the children's religious beliefs and the intricacies of the African language used in the test. The over-all incidence of animism was low in comparison to other results. There was a progressive decline in animistic responses with increased age as Piaget would show. This study was important in that the investigation was cognizant of values outside the Indo-European context.

The last study of animism was done by William Looft in 1973 who reviewed the literature and looked at the methodological approaches and theoretical questions of the studies. He attempted to look at new methods through which to reveal the child's concept of life which he states is central to a child's development. Looft's technique was non-verbal in an attempt to counteract the effect of questioning in the individual-interview technique. The responses were naturalistic and no significant differences were found between groups pre-instructed and those not instructed in responses in understanding the concept of life.

Cultural and Linguistic Influences

It seems that throughout the study of animism by Piaget, his supporters or detractors, linguistic and cultural questions have been

---


alluded to but never satisfactorily examined. Piaget's studies are based on the assumption that the development stages of animism are universal. Thus, all children will pass through the same stages in their advance towards viewing life in an adult way.

Piaget based his ideas on Levy-Bruhl's\(^{52}\) theory that primitive people are prelogical and mystical and that children of all cultures begin in this primitive way of looking at the world but as cultures go through stages of development towards greater heights, so does a child.

The question arises, "Are all childhood experiences the same and can it be assumed that children from all cultures will evolve their concepts towards life in the same way?"

Take for example the effects of the languaging process. Linguists such as Sapir, Whorf, and Korzyhski have shown that each language including both its structure and lexicon represents a unique way of perceiving reality. B. L. Whorf has stated,

> We cut nature up, organize its concepts, and ascribe significance as we do largely because we are parties to an agreement to organize it in this way — an agreement that holds throughout our speech community and is codified in the patterns of our language.\(^{53}\)

Years before the linguists had formulated their hypothesis, J. Dewey had examined the same question and come to the same conclusions. Quoting Dewey, Postman and Weingartner noted that:

> Naming selects, discriminates, identifies, locates, orders, arranges, and systematizes. Such activities as these are attributed by older forms of expression, but they are much more

---


properly attributed to language where language is seen as the living behaviour of men.54

Putting it in more modern terms, McLuhan said "The medium is the message."

There is then in the learning of language, the learning of a culture's structuring of reality. Within the language itself is an array of unconscious assumptions about the universe and the world and the child's place within it. The long forgotten history of thought itself is passed through the languaging process. For, as Alan Watts contends, the child has to be taught not only what words are to stand for what things, but also the way in which his culture has tacitly agreed to divide things from each other, to mark out the boundaries within daily experience.55

Kluckhohn, quoted in Postman and Weingartner's text stated:

One sees and hears what the grammatical system of one's language has made one sensitive to, has trained one to look for in experience.56

Thus, considering the complex relationship between language and culture, it would seem to follow that to study any concept towards life, it must be studied through the subject's mother tongue.

Since language is a method of codifying reality, the way a society classifies reality into animate and inanimate should be reflected


56 Postman and Weingartner, p. 125.
through that society's language system. It would seem imperative in proving or disproving the universality of Piaget's concept of animism to examine it within various cultural groups through the medium of their languages.

Linguists have pointed out that within certain North American Indian groups there is a grammatical structure which they denote as animistic and non-animistic thought. It is felt that this grammatical significance must reflect a conceptual significance. For, it has been purported that language is man's primary vehicle for thinking.\textsuperscript{57} Or in other words, "what we abstract, how we abstract it, see it, or think about it are inseparable from how we talk of it."\textsuperscript{58}

It is impractical to contest these rationalizations for the linguistic researchers probably do presuppose these basic premises. However, the greatest drawback in the study of peoples of other cultures, especially those prelabelled as "primitive people", is the difficulty if not the impossibility of obtaining an inside view of that culture from their own lips and by their own initiative. A native informant is at best interested merely in satisfying the demands of the researcher. The limitations imposed, especially as regards to the nature and extent of the data furnished, are further increased by the circumstances under which the data is gleaned, circumstances of a nature tending to destroy practically all subjective values associated with the particular concept or what not, that is being researched. Perhaps to obviate these defects

\textsuperscript{57}Ibid., p. 126.

\textsuperscript{58}Ibid., p. 107.
a researcher could become a member of the tribe. But this to most researchers is out of the question because who is ready to spend a major portion of one's life in a primitive community -- even when funds could be available for this purpose? A few more conscientious researchers have in fact spent large portions of their lives living among aboriginal tribes, in primitive communities. One such researcher was Margaret Mead, who in 1928-29 spent six months of her life living among the Manus people on one of the Admiralty Islands of New Guinea. Mead's research entitled "An Investigation of the Thought of Primitive Children, with Special Reference to Animism" was the result of the parallelism brought about by Levy-Bruhl's assumption that the savage was pre-logical and Piaget's assumption that the thought of the young child differed not only in degree but in kind from the thought of the adult and was thereby more closely related to the thought of the savage than to the thought of the civilized man. Anthropologists had described the observed spontaneous thought of young children as animism and findings of Rasmussen, Sully, and more especially Piaget (although his two volumes had not appeared in 1928), all previously referred to in this account, suggested strongly the import of this parallel phenomena. Mead's study of animism of primitive children was independent of other researchers of her time (i.e. Piaget, 1928). However, Mead recognized the cultural aspect and designed her procedures with this in mind. Mead established a rapport among the Manus people by living among them and even permitting them to have the run of her house, which they built for her, as she observed their behavior. Furthermore, Mead immediately set about to master the language which she claimed was a facile task since
the Manus vocabulary was not extensive; in fact, the Manus language
seemed too limited in scope to clearly or definitely relate certain con­
cepts. Inspite of Mead's mastery of the language, her methods of study
were largely non-verbal and generally depended totally on the observa­
tion of group interaction in differing circumstances. Other stimuli
such as crayons, pencils and paper being strategically placed around for
the Manus children to have ready access to resulted in numerous sponta­
neous drawings which Mead collected and categorized. Interpretation of
ink blots and definite questions about certain stimuli designed to pro­
voke animistic responses were likewise implemented and recorded. The
observation of behaviors, the result of drawings, the interpretation of
ink blots and the direct question technique about definite stimuli, the
results of all these various lines of research showed no spontaneous
animistic thought by the Manus children. Mead, however, became aware
that spontaneous animistic thought did increase among the Manus adults
indicating more that it was less or even non-existent in the Manus child.
This result is a direct contradiction of the findings pertaining to our
own society in which the children, supposedly, traditionally are more
animistic than are their elders. Surely, when such a reversal is found
in two contrasting societies, the explanation must obviously be sought
in terms of the culture. What cultural determinants could be offered
in the light of this Manus evidence? One contention could be that the
tendency to spontaneous animistic thought is a reflection of immature
mental development. Of course, such a contention would just have to be
dismissed since it is the civilized world that extends the presence of
animistic thought. It could even be argued that the human mind has a
tendency toward animistic thought and also a tendency toward non-animistic practical observations of cause and effect relationships.

This argument would then imply that civilized society's method of education tends to discourage animistic tendencies in the human mind while the Manus method of education tended to discourage the non-animistic thought processes so that the growing individual tended to progressively become more animistic in thought processes. A further explanation could also be taken that animistic thought is an idiosyncrasy of some human minds only. This, however, would contradict the contention that the human mind had a universal tendency toward animistic thought. Basically, did Mead in actual fact base her evidence from a true knowledge or understanding of the Manus culture? Could Mead's six month stint to master the Manus language and the application of four European stereotype data collecting devices be sufficient criteria to conclude that Manus children have no animistic thought and that their culture is too simple to measure? Piaget et. al. have discredited Mead's evidence solely on the basis that she did not utilize the methods similar to the ones they had by then supposedly perfected, even in the light of the fact that Mead's independent study took place prior to their studies. However, Mead's emphasis on the importance of understanding the culture and her conscientious attempt to actually master it are indeed to her credit for it wasn't till almost three decades later that Jahoda, in his article of 1957 entitled "Child Animism: A Critical Survey of Cross-Cultural Research," reacted to the "tangle of inconsistent findings" and reiterated the fact that children of other cultures should be questioned in their mother tongue. Perhaps it should be noted as well that Dennis,
in 1942, in his study "Animism and Related Tendencies in Hopi" did express a passing concern for the possibility of the presence of cultural influence. This he magnanimously termed "linguistic interference" but proceeded with the analyzing of his data, rationalizing that the cultural aspect would not affect his anticipated results. Dennis, however, did conclude that a knowledge of the Hopi language could have been helpful.

Havighurst and Neugarten and Jahoda carefully analyzed what they considered the crucial cultural variables. However, they summarily discounted the language variable as the significant determining factor. Using Dennis' rationale of 1942 that responses given in English reflect Indian thought patterns, Havighurst, Neugarten and Jahoda attempted to reveal animistic thought out of such responses. The methodology these researchers employed involved the relating of a story, such as the following:

This is a story about two boys. These two boys named Jack and Paul were out walking and they came to a melon field. Each of them stole a melon and ran off to eat it. But the owner of the field saw them and ran after them. He caught Jack and punished him, but Paul got away. The same afternoon, Paul was cutting some wood and the ax slipped and cut his foot.

Then the following questions were asked:

1. Why do you think Paul's foot was cut?
2. If Paul did not steal the melon, would he cut his foot?

59 Havighurst and Neugarten.
61 Havighurst and Neugarten, p. 145
3. Did the ax know that he stole the melon?

The cultural considerations of the researchers to elements of the story involved the assumption that stealing melons would have about the same moral significance to children of all the Indian tribes; that it would be a fairly common event in the lives of young people, yet one that is definitely disapproved by adults and one that causes adults a good deal of concern since melons are highly valued and not very plentiful. Furthermore, that chopping wood is a common experience and the danger that the ax may slip and cut one's foot is a familiar one.

Therefore, out of responses to questions based on these assumptions, the researchers concluded the incidence or lack of it, of animistic thought. Linguistic considerations of the structure of the story were not considered. However, if for example this methodology were used for Ojibway children, animistic tendencies could not be proven. For ax, in Ojibway, is inanimate as in English. Therefore, the questions pertaining to the attributing of animistic qualities to the ax would be untranslatable or at least grammatically absurd and would at best confuse the children. More detailed discussions on the language itself are needed before one could conclude that these results have any validity at all.

Franz Boas stated that a theoretical study of Indian languages is no less important than practical knowledge of them; that the purely linguistic inquiry is part and parcel of a thorough investigation of psychology of the peoples of the world.  

---

linguists, Bishop Frederic Baraga (1797-1868)\textsuperscript{63}, Reverend Albert Lacombe (1878-1880)\textsuperscript{64}, William Jones (1917, 1919)\textsuperscript{65} and Leonard Bloomfield\textsuperscript{66}, recognized a basic dichotomy in Indian languages between animate and inanimate objects reflected in the grammatical structure.

**Summary**

Early studies prior to 1920 were based largely on a biographical approach and were closely linked to a religious philosophy. The quest to understand the universe and man's desire for the hereafter had a significant effect to motivate the study of man and rationalize his behavior.

The emergence of the psycho-statistical era was brought about after 1920 by Piaget, when the trend swung to the study of behavior on the grounds of its measurability. This era was more devastating to those subjected to the study since the methods could not accept the variables of culture. These studies, therefore, tended to classify cultural groups outside the dominant realm as either primitive or mentally immature. Numerous studies were conducted in this field with results usually as the researchers anticipated from "subordinate" cultures.


A further review of the literature on animism showed that psychologists investigating this phenomenon among Native North Americans ignored a linguistic approach to research. Although linguistics and anthropologists recognized cultural factors in the study of man, they lacked credibility since they were unable to measure their findings in quantitative terms. Linguists were aware of dichotomies in the thought processes of native people. These dichotomies were labelled as animism. Recent views appear to imply that future research into animism among Indian people must be done by those qualified not only in the field of psychology and equipped with a smattering of Indian words but also by those who are thoroughly knowledgeable in the field of linguistics and are completely fluent in that Indian language.
This chapter describes the research design, sample, constructed instrument, pilot study, data collection, and data analysis.

Research Design

This is a descriptive study. The research design of this study is an attempt to incorporate the exploratory Anthropological approaches of earlier studies and the more structured approaches of later quantitative studies. The linguistic component of the design is representative of the anthropological recognition of the paramount importance of culture in the study of animism. Quantitative studies tended to ignore the cultural variable. The quantitative aspect of this design incorporates the methodological approach of more current studies.

The 2 x 2 x 3 Analysis of Variance research design is schematically diagrammed below.
The ANOVA analyzed the A variable (language), the B variable (grade), the C variable (sex), the A x B interaction (language and grade), the C x A interaction (sex and language), the C x B interaction (sex and grade), and the C x B x A interaction (sex, grade, and language).

The independent variables in the design were grade, sex and language. The dependent variable is represented by the achievement scores achieved by subjects on the research questionnaire.

The rationale for the language variable was based on the assumption that language is an expression of one's culture, and can not be divorced from it. Sex was included as a variable to investigate male-female differences related to animism.

The grade levels which were selected corresponded with Piaget's stages of animism. Kindergarten (ages four to six) corresponded with Piaget's first stage of animism where everything is alive, has a function, is in good condition, or is not broken. Grade four (ages eight to ten) corresponded with Piaget's third stage of animism which is spontaneous movement as criterion for life, or movement imposed by an outside agent. Grade six (ages eleven and over) corresponded with Piaget's fourth stage of animism. This was termed adult level in which only plants and animals have life or are alive.

Piaget's second stage of animism, ages six to eight, was deemed not necessary as its differentiation from stage one is too minimal. Stage two of animism is defined as anything that moves is animate.

Sample

The sample consisted of forty Indian children in each of kindergarten, grade four and grade six in the three Wikwemikong elementary
schools on Manitoulin Indian Reservation, Ontario. There were twenty children in each grade who spoke English only and twenty subjects in each grade who spoke Ojibway and English. Equal numbers of males and females were selected.

Table 1

Distribution of Native Students in the Sample

<table>
<thead>
<tr>
<th></th>
<th>Ojibway Speakers</th>
<th>English Speakers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Grade Four</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Grade Six</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Students were identified by resident Native teaching personnel (principals, teachers and teacher-aides) in categories of English speakers and English-Ojibway speakers. From these groups the sample for the study was randomly selected.

The cultural background of the subjects was similar. Wikwemikong is a large reserve located on an island which has a long history of acculturation. Wikwemikong is the Ojibway name for the village. The name may be literally interpreted as meaning "Beaver Bay" though there has been contention from the elders of this village as to the precise meaning of the word. Manitoulin Island is interpreted from Ojibway as meaning "Isle of Manito," therefore Beaver Bay on the Island of God sets a tone
of mystism as well as the depth of the historical tradition of this area. Traditionally Manitoulin Island has always been the home of the Indians and its history spans deep into the mythological past. The Creation legends of Nanabush which have been handed down through the generations imply that here the Maker, the Great Manito, began life. This mystical tradition has set a tone of reverence and mystery that Indians of today still respect.

Generations of time later children are told of the Three Fire Confederacy, a league of organized governments denoting great populations, who united for the general welfare of all the island's inhabitants. This confederacy was the unification of the descendants of three brothers, Ojibway, Odawa, and Pottawatomi. Historians and Anthropologists of this age tended to rationalize the presence of three separate tribes called after the names of the brothers. Further data was collected a decade ago by archaeologists from the University of Toronto who worked one site in the center of Manitoulin Island and discovered five different eras of civilization dating back to the Egyptian-Babylonian era. This signified that generations existed on Manitoulin when other civilizations were just beginning on the other side of the world. The children of Manitoulin Island are descendants of a culture and history which is centuries old.

The onslaught of civilization from the Western world after the discovery of America was early in coming to Manitoulin. The same year that the first colonials of France established a beachhead at Hochelaga and Stadacona, the first missionaries arrived at the village of Wikwemikong. The new-comers were made welcome and their stay became immediately permanent. The relentless march of colonialism commenced and
all the processes of Western civilization seeped in. The whispering tranquility, the simple skyline of native dwellings and the harmony of co-existence was for the first time battered with the raucous noise of building. The skyline now became dominated by a huge edifice dedicated to the worship of a new God and the harmony of living together now was one of competitiveness and self gain. First the church was established, then the schools and then the commercial enterprises. The zeal of missionaries gradually undermined the sacred traditions of the native people. The school introduced the educational system which undermined the pride and dignity of the people. The economic system set natives competing against each other and as these processes became more entrenched, the native resolve drained. Relentlessly the processes of religion, of education, and of the struggle for socio-economic status became the by-words of a new era.

Yet as successful as these acculturation processes were and as definite and strong as was that one goal "Stamp the Indianness out of the Indian", the natives of Manitoulin Island never quite faltered because contained in their culture was one resolve -- the language was a gift from the Maker of all things, and out of it strength came. The language, therefore, held the key to native resolve.

Cultural changes are evident when one sees the trend among the young people to converse in their native tongue and the general interest of young people in placing more emphasis on learning their culture. The educational system of Manitoulin is under one superintendent and the schools in Wikwemikong work closely together in the development of curricula materials, as well as the sharing of the different staff members' expertise. There are a large number of native people on the staffs.
Their influence has served to provide common cultural experiences for the children selected in this study.

**Constructed Instrument**

After a review of the literature, the Russell-Dennis scale of 1938 was modified by the investigator. The constructed instrument is included in Appendix B. This instrument was labelled the Animism Testing Instrument (A.T.I.).

A list of forty items was developed (See Appendix A). These items, normally viewed as inanimate within the English language, could be viewed as animate within the Ojibway language. An example of this is "pipe" (maba powagan). Conversely, an object may be viewed as animate within the English language but inanimate within the Ojibway language. An example of this is flower (manda wawaskoneh). These parameters served as guidelines in selecting the forty items. Twenty items were considered animate and twenty items were considered inanimate in the context of the Ojibway language. This list was then reduced to ten animate and ten inanimate items by random selection. The items were listed randomly in the A.T.I.

In the Ojibway language, items on the list can be designated as either animate or inanimate using the demonstrative pronouns "maba" and "manda" respectively. "Maba" denotes animate objects and "manda" denotes inanimate objects.

Ojibway is part of the Algonquin linguistic family. "The distinction between an animate and an inanimate gender appears with special
import in a family of North American Indian languages, the Algonquin. 67

The terms animate and inanimate as a form of gender, as defined by Tylor, were the interpretations used to uphold the test. For example, in Ojibway, "Wenesh Maba?" means "Who is this?" and "Wenesh Manda?" means "What is this?"

"Maba" (this) is applied by natural thought in the Ojibway language to everything in the animate world. However, Maba (this) may be applied to inanimate objects as well. This results in the view that all inanimate objects may be regarded as animate. Similarly, Manda (this) is applied to everything in the inanimate world. Further, the literal translation for "Alive is this?" is "Mahdizi na maba?" or "mahdizimgatna manda?"

In Ojibway maba and manda are further determined by the verb affixes making it grammatically incorrect to switch the demonstrative pronouns maba and manda. However, the factor that still remains is that when an animate object is obviously not "alive" it does not cease to be animate. Inanimate objects are addressed in an animate form in Ojibway. This approximates gender in the French language. It is evident in English as well, where there is the tendency to refer to such objects as "ships" as female.

The difficulty in translation between Ojibway and English was considered in the development of the instrument. There is no spontaneous grammatical structure in Ojibway equivalent to the English question "Is it alive?" when something is obviously an inanimate object. For example,

"Akun" means "bone" which is inanimate. If the question "Is a bone alive?" were asked, two translations would have to be considered. These would be "Akun mahdizina" (Bone is it alive?) or "Akun mahdizimgatna" (Bone is it alive?).

In either form, the noun "bone" is inanimate while the verb, in attempting to use the animate or the inanimate form, makes the entire expression syntactically impossible. Grammatically, the latter form should be correct but because of morphological syntax, since bone is not alive, one would not ask if it is.

However, using the noun "pipe" which is obviously not alive but is directly addressed in the animate form, presents the same problem. One would not ask if "Pipe is alive?" for the same reason that one would not ask if "Bone is alive?" However, the classification that one noun is animate while the other is inanimate is absolutely clear in the Ojibway language.

Objects were constructed from the list of items. They were made from assorted colours of felt and cut into a one dimensional form. The words "maba" and "manda" were also constructed in individual lettering from felt. A flannel board cloth for easy transporting completed the instrument.

Pilot Study

The constructed instrument was administered to a pilot sample at Sturgeon Lake Reserve in Saskatchewan. The subjects of this pilot study were a class of ten Cree kindergarten students. The students were asked to classify the objects within the Cree language, which is another of the Algonquin languages, by attempting to attach a prefix which in Cree is
equivalent to Maba-Manda.

The pilot study was conducted to determine:

1. if the children could differentiate the list of objects on the basis of living and non-living.
2. the amount of time required to administer this instrument.
3. procedures for recording subject's responses, and
4. to familiarize the researcher in clinical interviewing techniques.

From the results of the pilot study the indication was that the objects selected for this scale presented no major difficulties for the children. (Objects listed in Appendix A) It was further determined that the time required did not exceed a reasonable attention span for the child (approximately 15 minutes). No problems were found in recording the subject's responses. A response sheet was developed for the child's statement and is included in Appendix C.

The following extraneous observations during the pilot study assisted in the administration of the instrument to subjects in the study.

1. The children responded readily to encouraged stimuli.
2. The researcher could only assume that each child understood the concepts.
3. The children appeared to be influenced by shapes and colours of objects and tended to organize by this influence. As a result, shapes and colours were standardized in the final form of the instrument.
4. The kindergarten children had a proneness for conditioned response. They tended to repeat initial accepted responses. In the final instrument, subjects were not overtly praised for "correct"
responses.

5. Kindergarten children require maximum initial rapport. This was done during the data collection.

6. Kindergarten children tended to search for clues outside the task setting, in order to make a response. In the study, the researcher acted in a neutral manner and avoided clues such as facial expressions.

Data Collection

The researcher spent an initial day in the classroom and became involved in different activities with the students. The instrument was administered during the next five days.

These procedures were followed in collecting the data.

1. Further rapport was established with the individual subjects through asking the subject his name, age, where he lived and what he did this winter. This informal visiting was in Ojibway or a mixture of English and Ojibway.

2. The following statements were made to introduce the A.T.I.: "You must know what all these things are" or "nanda, kina zhanda ehtegin, kinago gikendahna digenan." Do you remember what we said in the classroom about the two words "maba" and "manda?" Let's go over them again. When we say, this....

<table>
<thead>
<tr>
<th>man</th>
<th>We Use</th>
<th>box</th>
<th>We Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>dog</td>
<td>&quot;Maba&quot;</td>
<td>hammer</td>
<td>&quot;Manda&quot;</td>
</tr>
<tr>
<td>plant</td>
<td>for</td>
<td>cup</td>
<td>for</td>
</tr>
<tr>
<td>boy</td>
<td>Living Things</td>
<td>bread</td>
<td>Non-Living Things</td>
</tr>
<tr>
<td>insect</td>
<td></td>
<td>shoe</td>
<td></td>
</tr>
</tbody>
</table>

Now we have all these things here, I want you to help me sort
them out into two piles by placing those that go with "maba" on this side and those that go with "manda" on the other side. Be careful and take your time because I am going to ask if you can tell me why or how you chose the side for your object.

Let's start and I will write your answer down. The first object is "pipe" or "powagan". Do we say "maba powagan" or "manda powagan?"

Selection was made by the child and the response was recorded. The next question followed -- Aneesh we kidowin "maba" enji nokazoyin zhiwi? (Literal translation) Why that word "this" (animate) are you using it there? The response was recorded in terms of the subject's response. The interview continued in this manner.

Data Analysis

Correct responses from each subject's interview sheet were summed. These scores were analyzed in an Analysis of Variance by the Heally-Packard computer at the University of Saskatchewan. Null hypotheses one, two and three were tested in this manner.

To test hypothesis four, subjects' responses were classified into the four developmental stages of animism as defined by Piaget.

Summary

Chapter 3 described basic methods and procedures of the study. The research design was developed. Findings from the pilot study were noted. Procedures in the development of the constructed instrument were described. Data collection and data analysis procedures were included in the chapter as well.
Chapter 4

PRESENTATION AND DISCUSSION OF RESULTS

Chapter 4 is devoted to the presentation of the analysis and discussion of the results.

Findings are presented according to the hypotheses stated in Chapter 1. The .05 level was set as the level of significance. A higher level of significance such as .01 may result in the rejection of a significant difference when, in fact, the difference does exist. A low level of significance such as .10 could result in the acceptance of a significant difference when no such difference may actually exist.68

Any references to other studies or authorities is based on those included in the related literature of Chapter 2.

The analysis of the study was computed by use of an analysis of variance. The results are shown in Table 2.

---

Table 2

Analysis of Variance for Animism Scale

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Sq.</th>
<th>d.f.</th>
<th>Mean Sq.</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>313.63</td>
<td>1</td>
<td>313.63</td>
<td>**73.97</td>
</tr>
<tr>
<td>Grade</td>
<td>22.32</td>
<td>2</td>
<td>11.16</td>
<td>* 2.63</td>
</tr>
<tr>
<td>Language and Grade</td>
<td>58.22</td>
<td>2</td>
<td>29.11</td>
<td>** 6.87</td>
</tr>
<tr>
<td>Sex</td>
<td>17.63</td>
<td>1</td>
<td>17.63</td>
<td>* 4.16</td>
</tr>
<tr>
<td>Language and Sex</td>
<td>2.71</td>
<td>1</td>
<td>2.71</td>
<td>.639</td>
</tr>
<tr>
<td>Sex and Grades</td>
<td>9.52</td>
<td>2</td>
<td>4.76</td>
<td>1.121</td>
</tr>
<tr>
<td>Language and Grade and Sex</td>
<td>1.94</td>
<td>2</td>
<td>.97</td>
<td>.230</td>
</tr>
<tr>
<td>Error</td>
<td>458.4</td>
<td>108</td>
<td>4.24</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>884.37</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p .05 ≥ .394 with 1 d.f.
*p .05 ≥ .309 with 2 d.f.
**p .01 ≥ 6.90 with 1 d.f.
**p .01 ≥ 4.82 with 2 d.f.

The critical value of the F ratio was determined by the F table in Ferguson, Statistical Analysis in Psychology and Education.69

Hypothesis 1

Null hypothesis 1 stated that there is no significant difference

69 Ibid., p. 455.
at the .05 level in scores on the A.T.I. between bilingual and unilingual Ojibway subjects.

The results from the analysis of variance between the language groups on the A.T.I. indicated an F ratio of 73.97 and is significant at the .01 level. This does not support null hypothesis one and therefore null hypothesis one was rejected.

Language demonstrated a significant variance as indicated in Table 2. The students whose dominant language was Ojibway related to the concept of animism on the A.T.I. in an Ojibway cultural manner more efficiently than those Ojibway students whose dominant language was English.

This result gives evidence to support Jahoda, Wang and Klingensmith's conclusion that a knowledge of the native language might have had a significant influence on their results. Further, it discounts the reasoning of researchers such as Russell and Dennis that testing in English would in fact reveal the native concept of animism since even a bilingual child would translate the test mentally into his native language, respond mentally in his native language and then translate the response back into English. This gave the researchers the conclusion that whatever answers native subjects gave was an indication of their native thought patterns. In this study, the native children responded in their own language whether it was English or Ojibway. The Ojibway speakers more easily related to the concept of animism using the Ojibway language. The English speaking Ojibway children responded in a typically English definition of animism. For example, on the A.T.I., drum, feather, kettle, pail, tobacco, picture, cross, plant, sun, and moon in Ojibway were classified by the animate demonstrative term "maba."
However since all these items except "plant" were designated an inanimate in English, those children whose dominant language was English responded accordingly. For the children with Ojibway dominance, there was no problem in designating the above list as animate.

The remainder of the test items on the A.T.I. (dress, axe, bone, canoe, pencil, knife, ruler, frying pan, window and door) were items which were generally accepted as inanimate in both languages and were also so signified by the Ojibway demonstrative term "manda." These items presented no problem to the English speaking children since they were obviously inanimate in their English frame of reference. This was also true in the Ojibway language and in the Ojibway frame of reference.

Some discrepancies occurred in responses of the Ojibway dominant speakers when they attributed some inanimate objects with animate classification. "Frying pan" was a typical item in question. In the children's mind there seemed to be some confusion as to the classification of frying pan. Since there is little question of the animate traits of a kettle, the children tended to attribute animate traits to the frying pan. Perhaps they associated the two utensils in the same manner that some children may associate sun and moon.

In Ojibway, at certain times, any English language referenced inanimate object may be referred to in an animate sense. For example, when one child was asked why he stated that frying pan was animate he explained, "Geeshipin gwediwenahn apeesh zassgokwan n'dahkwtago 'maba kosha'." This translates to, "If I asked where is the frying pan, I would be answered 'here it is, damn it!'" In this case, the animate "maba" is the correct grammatical form because the sense implies animistic
characteristics. Frying pan is an inanimate object but in questioning its whereabouts, the question seems to carry the overtone that the object is obscuring itself from you. As a result, the answering person automatically replied in a retort that denoted animism. Therefore the child classified frying pan animate when generally it is considered to be inanimate.

This gives rise to the fact that in Ojibway all things at some time are animate. This differs markedly from the English concept of animism which is explicit in including only human beings, animals and plants within the definition of animism. Children with English speaking dominance answered fully within the English definition of animism according to their developmental level. That is to say, for the older English speaking students in the grade four and sex levels, only plant was animate. All other items on the A.T.I. were considered inanimate. At the kindergarten level there was no consistent pattern of responses.

The children with Ojibway speaking dominance responded within the Ojibway linguistic terms of reference. Although their developmental levels did not correspond with Piaget's levels of animism, they did mature in the Ojibway speaking concept of animism. That is to say the older Ojibway speaking children classified the ten animate items of the A.T.I. with the term "maba" and the ten inanimate items with the terms "manda."

These results tended to affirm that in the study of animism the testing should be done in the language of those being tested for language appears to be a significant variable. Such a significance was hinted by Havighurst and Neugarten and Jahoda but these researchers did not firmly
test the hypotheses within the language of their subjects. This study, which tested subjects in their native language, found language to be a significant factor in the study of animism.

Hypothesis 2

Null hypothesis two stated that there is no significant difference at the .05 level in scores on the A.T.I. between subjects in different developmental levels.

Table 2 indicates that the analysis of variance between subjects in different developmental levels resulted in a score below the F critical ratio required for statistical significance. This implies that native children in kindergarten, grade four and grade six are similar in their animistic thought processes.

The apparent lack of differences within developmental levels may suggest that animistic thought processes are less related to factors such as age and intelligence. These factors may be, therefore, cultural factors or experiences which aren't evident in the developmental levels as denoted by school grades. That is to say an Ojibway child in kindergarten may be able to differentiate animism using "maba" and "manda" readily while another Ojibway child in grade six, for example, who has not had the same experience in linguistic growth and conceptual development within an Ojibway frame of reference, may not be at the same level of development. A point in fact in the community, where this study was conducted, a certain adult (now deceased) was raised from infancy by a relatively well-to-do family of Ojibway. This man was from a different native group entirely, while the predominant language in the home may have been English. This man spent his entire lifetime associated with
Ojibway speaking people. His wife was Ojibway, with Ojibway language dominance. The language in his home was therefore Ojibway. Yet, this man never quite mastered the Ojibway concept of animism, using maba and manda as differentiators. Using this one glaring example, it is evident that factors other than age influence the development of the Ojibway concept of animism.

Hypothesis 3

Hypothesis three stated that there was no significant difference at the .05 level in scores on the A.T.I. between male and female.

The results from the analysis of variance between sexes on the A.T.I. indicated a F ratio of 4.16 which was significant at the .05 level. Null hypothesis three was rejected.

Females scored significantly higher than males. This result indicates the need for further indepth study into the possibility of a difference in concept development between males and females. It appears that females are more atuned to animistic thought than are males. Since all the concepts and societal mores are demonstrated and taught within the home by the mothers and the elders, the girls are more firmly inculcated with cultural values. Girls are kept in the home and are more closely watched, have more contact with their elders and are socialized to replace their mothers as the teachers.

In contrast, the boys tend to be freed earlier from parental control and even encouraged to develop independently at an early age. They therefore may develop some of the more basic concepts associated with animism at a later stage. Since the boys have less exposure to adults and adult conversations and tend to associate with their peers, boys have
less exposure to their language and its intricacies. They may not be as verbal and may have less dexterity with the language than the girls.

Another interpretation may be made in terms of verbal development. Females may be more talkative than males. Since this test required the subjects to be adroit linguistically, it may have been biased against Ojibway boys at these developmental levels.

**Hypothesis 4**

Hypothesis four stated that there is no difference in the reasons given by bilingual and unilingual subjects in kindergarten, grade four and grade six for animistic and non-animistic qualities in objects, using "maba" and "manda" as determiners.

Piaget stated that animism has four levels: First level, everything is alive (ages 4-6); second level, everything that moves by itself is alive (ages 7-8); third level, everything that moves as a criterion for life (ages 8-10); fourth level, only plants and animals move (adult, ages 11 up).

In this study the levels of kindergarten, grade four and grade six were chosen to represent three different developmental levels -- levels one, three and four. The researcher recorded the reason, if any was given, to each response. The following tendencies were observed.

**Unilingual and bilingual kindergarten responses.** These were similar in that there was no consistency or regularity in the reasons for the responses. Common responses were, "I like it", "I don't know", "It moves", "It doesn't move", "It goes in the house" or "Because." Some children gave no response to the question "Why?"

This indicated that neither the unilingual nor the bilingual may
have a clearly defined concept of animism. They often exhibited confusion and dismay at having to explain their responses. The question "Why?" did not appear to matter to them. They may not have considered "why" and in responding to the initial question, "Is it alive?", they may have felt that their answer was complete. Furthermore, when they did respond they tended to repeat the same answer each time they were asked the question. This occurred even when the question was completely reworded.

**Grade four.** There appeared to be definite differences in responses between the unilingual and bilingual subjects. One reason may be that the bilingual subjects tended to respond in Ojibway. Secondly, the unilingual subjects tended to respond according to Piaget's levels of animism. These children volunteered numerous answers as to the qualities of the objects. Some examples are, "it grows", "it doesn't grow", "it moves", "it doesn't move", "it eats", "it walks", "we use it" and "it opens." Thirdly, since the Ojibway speakers responded mainly in Ojibway, they tended to respond to the question "why" with responses often referring to the grammatical correctness as well as to the quality of animism. Their answers were such as "mino tagwat" (it sounds better), "widjewemigad zhiwi" (it goes with "maba"), "madizimgad" (it's alive), "madjegin" (it grows), "guy madje gazina" (it doesn't grow), and "nabidat" (it is useful).

Collectively, both the unilingual and the bilingual subjects responded in all levels of animism. This is as shown by Dennis in much of his research. The subjects did not fit neatly into the proper levels as designated by Piaget. Responses tended to be scattered inconsistently throughout the four levels. Basically there tended to be more adult
level responses than responses pertaining to the first three levels of animism.

**Grade six.** All responses, bilingual and unilingual, tended to relate to the adult level of animism when a reason was given. However, the bilingual almost exclusively gave the sound or grammatical reason. Furthermore, the Ojibway speaking subjects (bilingual) presumed that the researcher should know the correct response. Persons reaching the age of eleven or over are expected to know what is correct and what is not correct. They therefore assume that all Ojibway adults know it as well and that it therefore goes without saying. The students often replied impatiently -- "maba kosha" (this, damn it) which is the animate form or "manda kosha" (this, damn it) which is the inanimate form. Another response was "Mekosha iziwi debendakwakwe" (that's where that belongs, you should know that). This may be just a characteristic of the Ojibway culture where responses are generally accepted without question.

Basically all levels of animism, as designated by Piaget, were demonstrated over the whole sample. However, the Ojibway speakers (bilingual) tended to respond in the Ojibway adult level earlier than Piaget said adult responses should be expected. This result demonstrates further than it is presumptuous to accept the universality of Piaget's levels of animism even though responses were represented in all of his categories.

The Russell and Dennis research showed no clear adherence by children they tested to animistic levels as designated by Piaget. Furthermore, in Dennis' testing of high school, college and university students and in Dennis and Mallinger's study of senescence, there was no
consistent or clear classification into the four levels of animism. Cultural factors might have had some bearing in some of these studies but these researchers appeared to be unprepared to accept this factor.

**Other Findings**

The analysis of variance computed other interactions which are submitted as additional findings.

The interaction between language and grade was shown to be statistically significant in Table 2.

The means of the raw scores by language and grade are shown in the graph in Table 3.

**Table 3**

Language by Grade Interaction on the Concept of Animism

<table>
<thead>
<tr>
<th>Scale Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
</tr>
<tr>
<td>17</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>12</td>
</tr>
</tbody>
</table>

Table 3 indicated that the developmental projection within the Indian language was different than within the English language. In the graph the Ojibway speaking child continued to rise in the three grades while the English speaking Ojibway child continued to drop from kindergarten.
ten to grade four and then appeared to level out by grade six. This appears to show that, for the Ojibway speaking child, the concept of animism becomes more clearly differentiated as he becomes older. On the other hand, the English speaking Ojibway child's concept of animism becomes more differentiated within the English language framework. Therefore, his responses in the Ojibway framework would be less and less accurate. These results, therefore, substantiate Piaget's concept of the developmental stage for the concept of animism. Piaget contended that a child loses or outgrows animism as he grows older. Findings in this study imply that the Ojibway child grows stronger in animistic thought as he grows older. However, for the Ojibway speaker, this may not be the same concept of animism which Piaget considered universal. The Ojibway child appears to mature in the knowledge of a uniquely Ojibway concept of animism.

These Ojibway responses by the bilingual further emphasized the fact that their Ojibway concept of animism had matured to an adult level. An adult response was given when an elder was asked to explain why the animate or inanimate forms were used. He replied, "Gemenigomi gidanawemona, ya debendang we, a nendagwad dash we zhinagwak ezhinagwak." 70 This translates as "Our language was given to us. There is a person who owns it. It must be the way it is as it is right that way." The implication of this answer is most clear in Ojibway for it says, "Who are you to question what has been designed by a higher authority."

The other interactions shown in Table 2 were not statistically

70Mr. Jonas Odjig, in conversation, May, 1975, Wikwemikong Reserve.
significant. This indicates there were no measurable differences in these areas -- i.e. no statistically significant differences in the interaction between language and sex, sex and grades or language and grade and sex.

Summary

The results of this study indicated the strong influence of culture in the examination of the universality of the concept of animism. When the test for animism was administered to the Ojibway children in their language, it was found they responded to the concepts of animism within the Ojibway framework as denoted by their linguistic ethnosemes. The English speaking Ojibway children tended to conform more with the Piagetian definition of animism.

Other findings indicated there was no significant difference between grade levels in either the Ojibway or English language speaking groups in their differentiation of animism, though females tended to score slightly higher than males. Finally, the interaction of language with grade levels indicated that the Ojibway speakers' concept of animism increased with age while the English speaking Ojibways' concept of animism becomes less prevalent with age.

The reasons for the responses to the question, "Is it alive?" indicated the same general areas of animistic differentiation as outlined by Piaget -- i.e. movement and growth. However, the reasons were not consistent with Piaget's developmental levels within animism or the stage of animism within developmental thought growth. The Ojibway speaking children tended to give reasons which could be categorized as Piaget's adult level. Furthermore, the older Ojibway children gave more responses on linguistic grounds, which re-emphasized that the concept of
animism of the Ojibway speaking child was contained in his language.
Chapter 5

SUMMARY AND CONCLUSIONS

The purpose of this chapter is to provide a summary of the study and to relate its findings to previous studies. The chapter also summarizes the significance of the findings and makes recommendations for further study.

The Study

The original purpose of this study was to determine whether there was any difference between children whose dominant language was other than the English language and children whose language of dominance was English in their conceptualization of animism.

The review of the related literature covered in Chapter 2 indicated certain areas for further study in the cross-cultural application of the concept of animism. To investigate some of these factors, the study examined the concept of animism among Ojibway children on Manitoulin Island in Ontario. This concept of animism was tested across three age groups to see the developmental variances as well as to determine a sex difference. The results of this test were stated in Chapter 4. Analyses were conducted through the parameters of two questions and four hypotheses.

The first question was, "Is there a difference in animistic thought between Indian children who are: (1) at different developmental stages?, (2) bilingual or unilingual?, (3) male or female?" From this
question three null hypotheses were formulated -- (1) there is no significant difference at the .05 level in scores on the A.T.I. between bilingual and unilingual Ojibway subjects, (2) there is no significant difference at the .05 level in scores on the A.T.I. between subjects in different developmental stages, and (3) there is no significant difference at the .05 level in scores on the A.T.I. between male and female.

The second question was "What reasons do children give for using 'maba' and 'manda' in describing objects?" From this question the following null hypothesis was tested: There is no difference in the reasons given by bilingual and unilingual subjects in kindergarten, grade four and grade six for animistic and non-animistic qualities in objects, using "maba" and "manda" as determiners.

The results of the analysis showed a stronger concept of animism by the bilingual group than the unilingual group. There was no statistical significance developmentally, while females tended to score higher than males. Further, there was no consistency in reasons given for animistic levels as defined by Piaget and that the interaction of language by grade revealed that Ojibway speakers matured in their concept of animism while English speakers tended to adhere more to the Piagetian principle.

The purpose of this study was for the researcher to demonstrate that the language is a reflection of the culture. It attempted to meld linguistic and psychological theories in the testing of concepts within Native North American cultures. It attempted to show that there are unique classifications of reality within these Indian cultures and that there is more that can be said about Indian thought processes than
statements which state that on tests the Indian scores deviate from the norm.

It is time that so-called academics were shaken from their ethnocentrism and intellectual complacency. It is time that they looked behind the labels that they have applied, such as "primitive", "prelogical", "mentally immature" and "anomic" or "simple." The philosopher, the psychologist, the anthropologist and the linguist alike have been locked within the narrow limits of their discipline and have tended to blithely apply their culture bound theories without the slightest inkling that these theories might be inappropriate for a different cultural group. Heaven forbid that these other cultural groups might have their own unique way of ordering life. For example, Piaget studied Swiss children and tested them in French. Huang attempted to test Chinese children by literally translating Piaget's terminology. Dennis tested the Hopi in English. Jahoda, through informants, tested Africans. Mead tested the Manus by looking at their drawings and ink blots and Looft did a nonverbal study. From all these studies it has been concluded that the concept of animism, as defined by Piaget, is universal. Linguistic considerations were acknowledged by some of the researchers but it didn't deter them from the "pre-determined conclusions."

Likewise, the problem of the educator has been to fit these "culturally deprived misfits" into the predesigned structures built by the intellectual heavy-weight. The system has always been destined to fail.

This study shows that the language of the people can no longer be ignored, that within the Ojibway culture, as in all other cultures, the language is the vehicle of the thought process. It is the Ojibway
language that determines the boundaries of reality for the Ojibway child. These boundaries can not be revealed through the restricting limits of the English language.

This study examined the concept of animism within the Ojibway context using the Ojibway language. It must further be stated that this is the first study of its kind done within the language by a member of that cultural linguistic group. The researcher was born and raised in Wikwemikong and his mother tongue is Ojibway. For this reason, this study could be considered as unique.

Europeans imposed the particular label of animism against certain structures within the Ojibway language since it appeared that these differentiated objects somewhat approximated the animate-inanimate dichotomy of Western thought. This study showed that Ojibway children mature within their definition of animism and that English speaking children do not. Thus, in the Ojibway concept of animism, English speakers could be regarded as retarded. However, resorting to such labelling does not further our knowledge of the concept of animism within the Ojibway culture and is definitely unfortunate to the children involved.

But for the Ojibway speaking child, it is evident that he is inculcating the concepts and world view of his own cultural group. He is becoming a full person in the Ojibway sense by acquiring the concepts which make his people unique. This is a natural and necessary growth which is common to all peoples. By the time a child reaches pre-adolescence, it is expected that he would be cognizant of all the values, norms and mores which are necessary for survival within his particular circumstance. The unfortunate thing with regard to the Ojibway child and
other North American Native children living within the context of their own language in their respective communities is that they are judged by a foreign set of concepts unrelated to their daily existence, not on their knowledge of the concepts of their home community.

For years the parents in the home have been conditioned by their own educational experience to refrain from teaching their children their native language as it would confuse them. It has also been maintained that learning of English in school makes a child's Indian language poorer. In the light of the results of this study, both of these assumptions would appear to be fallacious.

The subjects of the sample were paired academically according to school performance. Both the unilingual and the bilingual subjects were advancing competently within the school. However, the results of the study show that the Ojibway speaking subjects were maturing in their own language simultaneously. Thus there appears to be no cognitive dissonance because of their bilingualism. This substantiates what our Elders have known all along. That is, that a child who is bilingual moves more rapidly through the process of education for he is more learned than a child who has had his education at the expense of his native language. The tragedy of Indian education has been that the educationalists have given little credence to an uneducated Elder's wisdom.

An Ojibway Views Animism

Animism to the Ojibway has no parameters. It is as boundless as the universe and limitless as time. Animism to the Ojibway means life,

---

71 Mr. Phillip Pitawancikwat and Mr. Joe Peter Pangowish, in conversation, May 24, 1975, Wikwemikong Reserve.
but the definition of life is not established on its converse but rather from its extension into further life. Animism transcends death. Animism encompasses the past and the future simultaneously in the present and converges all things into one.

Since animism has no boundaries, its definition is only governed by the moods of the moment. This contradicts the Western thought that animism is established on the restricted dichotomy of animate-inanimate which linguists applied to the Ojibway linguistic dichotomy which is in fact animate-more animate. That is to say, all things in the universe are at times animate but due to the circumstances of that moment, can be more animate or less animate. Only mood determines this. The aura of a valley in the morning is different from the aura of the midday or evening and each will set a different mood.

Two trees growing side by side may tend to appear identical and yet one tree appeals in a different way. The mood of what one sees affects how one thinks about it and this in turn affects the way one speaks of it. If one chops down a tree, it obviously becomes less animate; but, alter its mood by anthropomorphizing the remains and what was once a tree becomes more animate than it was originally. Unlike the Western man who imposes his mood on the surroundings, the Ojibway is imbued by the mood of his cosmos.

The cognitive orientation of the Ojibway cosmos is that man is last in the order of the universe. Man is entirely subject to the moods of the universe and graciously accepts his subservient co-existence with the more animate creations of plants and animals. For, the Ojibway man knows his life is dependent upon their life and yet their life is not
dependent upon his own. The recognition of his own frailty makes the Ojibway feel the sacredness of all life, animate and more animate. He feels humble when he recognizes that all things are interdependent, but that he alone is the most dependent. All other things within the universe can exist without him and remain in harmony. He alone cannot exist without the others.

In man's cosmos, plants are closest to the Maker of all things, followed then by the animals. Plants and animals are both animistic. However, plants and animals are more animistic than man. A bear is more animistic than man for a bear can assume anthropomorphic traits while man can never assume ursine characteristics. Similarly with birds, man cannot assume avian characteristics.

In the Ojibway mythology, one basic theme is evident and repeated in legend after legend — man's powerlessness without magical intervention. Every weakness and frailty of man is painted against a background of the natural superiority of the plant and animal kingdoms. Even intermediaries, like Nanabush, used their supernatural powers to assume an animal form in order to achieve their goals.

The Ojibway concept of animism is the central tenent of his ontology, cosmology, and epistemology. His whole "weltanschauung" revolves around this one concept. Early Europeans recognized the importance of the concept of animism to the Ojibway and attempted to define it. However, within their limited frames of reference, they were unable to explain what they knew was there for it was at the one time both simple and recondite.

The concept of animism is implicit in the Ojibway language but no
Ojibway is consciously aware of it, nor does he attempt to explain the function of his language. He is secure in the knowledge that his language is right, for it is a gift from the Maker of all languages and therefore, unquestioningly, he uses it. When an Ojibway child enters the world of his language, the reality of that world is implicit and he becomes one with his world. He is completely enveloped with order, logic and harmony but it's not order and harmony as usually defined by academics.

Implications of the Study

Since this study reveals that in the concept of animism Ojibway children mature in a uniquely Ojibway manner and since the study reveals that English speaking Ojibway children regressed, the education system under which these children are made to conform must build upon the child's own philosophical framework in order to succeed.

It is preferable that there be native teachers who know and are part of the philosophical background involved in the determining of curricula and it is imperative that the non-native teacher become knowledgeable in the culture of the people.

This necessarily implies that the Ojibway language become the language of instruction throughout the school system and that English be taught as a second language. The only way that a school system will be successful in building on the Ojibway theoretical framework is to make the school the lecture theatre of the people of the community. The school environment should be such that the elders of the community feel they are an integral part of the teaching of their children from the community. Their legends, oral traditions and years of wisdom, if allowed, can enhance any discipline.
Since this study has revealed another level of thought processes, curricula must be established on a more comparative format. Indian children should be given the opportunity to examine Indian values while at the same time other Canadian school children should be given the opportunity to assess their values along with Indian values. For it is only through comparison that we are able to see what we are.

It is about time it is recognized that the Indian be taken out of the clutches of the museum and the anthropologists and the world be shown that there is valid Indian thought, philosophies, music, literature and that these be given the respect and credibility of being as valid as any others in the world. Historical racial pride is the primary source and basis for an individual's personal identity. This must be a prime element of an Indian child's learning process.

It is imperative that the awesome atmosphere of the school be changed to an atmosphere of warmth, friendliness and acceptance, where the child can feel he is as much a "somebody" there as he is in his own home.

Since it appears from the research that Ojibway learning does not take place in the set developmental levels taken for granted within the school system, perhaps age-grade segregation is inappropriate for the learning patterns of the Ojibway. It may even be that these separations are detrimental, for within Ojibway society the education process is directed by a tri-generational experiential model. Within this model, there are no levels other than the generations.

Since animism has no parameters and since animism is the center of Ojibway ethno-metaphysics and the Ojibway world is a harmonious whole,
it seems incongruous that within the school his world is chopped up into little pieces, structurized, classified and compartmentalized until it becomes unrecognizable and it is no longer the reality he knows. Thus, the Indian child can see no correspondence between the world of the school and the world which he knows.

Implications for the Ojibway People

The world of the Ojibway, with particular reference to the people of Wikwemikong, Manitoulin Island, have maintained the conviction that their Indianess is good. All the forces of acculturation have attempted to prove to them that it is otherwise. All the forces of acculturation -- religion, economics and more so education -- have worked toward that one end. However, it is evident that the Ojibway within their own language have maintained their conviction. Indian children have been growing up within the fluid processes of their evolving culture. They have been imbued with metaphysical presuppositions which are uniquely Ojibway, which have remained, as Ojibway people have remained, and will continue to remain.

Since this study has revealed the concept of animism as believed by the Ojibways and since this particular definition is fundamental to the Ojibway world view, it can be said to have revealed that Ojibway children think in a characteristically Ojibway fashion. If this is true, will it be accepted? Is it possible that one and one don't make two? Is it possible that there is a world beyond "See Dick", "See Jane", "See Spot run"; a world in which the Ojibway child is the teacher and the teacher is the seeker of meaning?
Suggestions for Further Research

1. It is suggested that the same group of children be retested using the Piagetian test for animism, administered in English, to see whether the interaction between language and developmental level would be reversed. In that case, would the English speaking Ojibways show a continuous development of the concept of animism and the Ojibway dominant speakers show a regression?

2. It is suggested that the A.T.I. be adapted to test the concept of animism among other tribal groups within the Algonkian linguistic family.

3. It is suggested that the A.T.I., or a modification thereof, be constructed and administered to other linguistic families of Native North Americans to determine the presence or lack of presence of the concept of animism within these groups.

4. It is suggested that other concepts which help reveal thought processes be identified, and tested in Ojibway from within the language and culture.

5. It is suggested that further study be conducted into the Ojibway world of animism. For example, Tchïcak-soul-orenda etc.

Recommendations

The conclusions reached in this study and the interests and experiences of the researcher have led to the following recommendations. It is hoped that these recommendations fulfil the wishes of the people this study is meant to serve.

1. It is recommended that the school system make every effort to create a bilingual child rather than a unilingual one. That is to
say, that the school system should make a concerted effort to fortify the Indian child's natural world view through his language while at the same time building a complementary English theoretical framework.

2. It is recommended that the tri-generational experiential model of learning be extended from the home to the school. This would involve the decompartmentalizing of the discipline and the grade system. This would further involve a continual process of interaction around the children, parents, teachers and grandparents (and everyone else).

3. It is recommended that all teachers of Ojibway children be or become bilingual (Ojibway/English) in order that the dominant language in the school setting can be the Ojibway language.

4. It is recommended that all teachers become knowledgeable, sensitive and tolerant of the Ojibway child's world. This means total involvement in the community life beyond the superficial level of attending church, using the store and being seen catching suckers.

5. It is recommended that hiring practices for teachers be reviewed with special emphasis on selection procedures and criteria.

6. It is recommended that universities include within their language departments the Ojibway language, giving it the same respect and appreciation afforded all other world languages.

7. It is recommended that a department of Ojibway philosophy be co-ordinated, utilizing the existing data which has so carefully been preserved through the years on shelves of various university libraries.

Summary

This chapter, after reviewing the results, presented implications of the study. Ojibway animism was elucidated in the context of the
Ojibway world view. Further implications were mentioned as they applied to the educational process of Ojibway children. Recommendations for further research resulting from this study were listed along with specific recommendations applied to the community where the study was conducted.

In conclusion, this study of animism incorporates the Western intellectual experimental design with the Ojibway holistic view. This in itself presents a contradiction. An experimental design dissects reality and plucks its concepts out of their natural order just like the teacher who takes a live bird to class to give a lesson about living things. To explain life, the bird is put to sleep, cut open and dissected to expose the vital life systems but, in the process she has removed the vital -- life. All the Ojibway want is the gift to understand reality as it is. Everything that they have ever seen, thought, felt or dreamt, make up that reality and as a whole, it is good.
BIBLIOGRAPHY

1. Books


2. Unpublished Sources


3. Periodicals


______. "Animistic Thinking Among College and University Students." *The Scientific Monthly*, 76 (1953), 247-249.

______. "Historical Notes on Child Animism." *Psychological Review*, 45 (1938), 257-266.


4. Oral Sources

Atimoyoo, Smith. Director, Cultural Centre, Saskatchewan Indian Cultural College, in consultation throughout the writing of this study, Saskatoon.

Fox, Mary Lou. Director, Ojibway Cultural Foundation, in conversation, May, 1975.


APPENDIX A

(List of Forty Items)
Animism Testing Instrument
(A.T.I.)

To develop the A.T.I., twenty items were randomly selected from the following list:

Powagan        Pipe
Dehwegun       Drum
Mögwan         Feather
Shéshépkik     Kettle
Kik            Pail
Sema           Tobacco
Daban          Car
Mazintchigan   Picture
Makwam         Ice
Dahbahgeswanes Wristwatch
Manjigohndehn  Dress
Wagakwat       Axe
Dgëman         Canoe
Akun           Bone
Mishi          Stick of Wood
Nibeesh        Water
Zibewganatik   Pencil
Mazinigan      Book
Mokoman        Knife
Nagan          Dish
<table>
<thead>
<tr>
<th>English</th>
<th>Ojibwe</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damnowagun</td>
<td>Doll</td>
<td>MABA</td>
</tr>
<tr>
<td>Dewmin</td>
<td>Strawberry</td>
<td>MANDA</td>
</tr>
<tr>
<td>Mishéwmin</td>
<td>Apple</td>
<td></td>
</tr>
<tr>
<td>Dabagahns</td>
<td>Ruler</td>
<td></td>
</tr>
<tr>
<td>Mandamin</td>
<td>Corn</td>
<td></td>
</tr>
<tr>
<td>Shkōdehns</td>
<td>Match</td>
<td></td>
</tr>
<tr>
<td>Miskomin</td>
<td>Raspberry</td>
<td></td>
</tr>
<tr>
<td>Asin</td>
<td>Stone</td>
<td></td>
</tr>
<tr>
<td>Odjë (ba)</td>
<td>(Dead) Fly</td>
<td></td>
</tr>
<tr>
<td>Zasgokwan</td>
<td>Frying Pan</td>
<td></td>
</tr>
<tr>
<td>Tchibieyatik</td>
<td>Cross</td>
<td></td>
</tr>
<tr>
<td>Zhoshkwadwemtik</td>
<td>Hockey Stick</td>
<td></td>
</tr>
<tr>
<td>Zakketchigan</td>
<td>House Plant</td>
<td></td>
</tr>
<tr>
<td>Madwewetchigan</td>
<td>Radio</td>
<td></td>
</tr>
<tr>
<td>Gézis</td>
<td>Sun</td>
<td></td>
</tr>
<tr>
<td>Kokbinagan</td>
<td>Basket</td>
<td></td>
</tr>
<tr>
<td>Tibikigézis</td>
<td>Moon</td>
<td></td>
</tr>
<tr>
<td>Wassetchigan</td>
<td>Window</td>
<td></td>
</tr>
<tr>
<td>Pakindagan</td>
<td>Pelt</td>
<td></td>
</tr>
<tr>
<td>Shkwandem</td>
<td>Door</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

(Animism Testing Instrument)
Animism Testing Instrument  
(A.T.I.)

<table>
<thead>
<tr>
<th>Object</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manjigohndehn</td>
<td>Dress</td>
</tr>
<tr>
<td>Wagakwat</td>
<td>Axe</td>
</tr>
<tr>
<td>Dehwegun</td>
<td>Drum</td>
</tr>
<tr>
<td>Megwan</td>
<td>Feather</td>
</tr>
<tr>
<td>Akun</td>
<td>Bone</td>
</tr>
<tr>
<td>Shéshépkik</td>
<td>Kettle</td>
</tr>
<tr>
<td>Kik</td>
<td>Pail</td>
</tr>
<tr>
<td>Dgéman</td>
<td>Canoe</td>
</tr>
<tr>
<td>Sema</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Zibewganatik</td>
<td>Pencil</td>
</tr>
<tr>
<td>Mazintchigan</td>
<td>Picture</td>
</tr>
<tr>
<td>Mokoman</td>
<td>Knife</td>
</tr>
<tr>
<td>Dabagahns</td>
<td>Ruler</td>
</tr>
<tr>
<td>Zasgokwan</td>
<td>Frying Pan</td>
</tr>
<tr>
<td>Tchibietyatik</td>
<td>Cross</td>
</tr>
<tr>
<td>Zakkëtchigan</td>
<td>Plant</td>
</tr>
<tr>
<td>Gëzis</td>
<td>Sun</td>
</tr>
<tr>
<td>Wassetchigan</td>
<td>Window</td>
</tr>
<tr>
<td>Tibikigëzis</td>
<td>Moon</td>
</tr>
<tr>
<td>Shkwandem</td>
<td>Door</td>
</tr>
</tbody>
</table>

All listed objects were constructed in single dimensional form and cut out of felt material.
APPENDIX C

(Response Sheet)
<table>
<thead>
<tr>
<th>Stimuli</th>
<th>Response</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>I</td>
</tr>
<tr>
<td>Dress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feather</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kettle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canoe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobacco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pencil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knife</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frying Pan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Window</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

(Inventory Form)
A. T. I.

NAME: ______________________

AGE: ________ (i.e. 06 = six years old)

GRADES: K = 1 Grade Four = 2 Grade Six = 3

LANGUAGES: Bi = 1 E = 2

NUMBERS IN SEQUENCE: 1 to 90

20 STIMULI: Correct = 1 Incorrect = 2

RESPONSES: a. Moves = 1

b. Moves on its own = 2

c. Moves as criterion = 3

d. Adult (Animal or Plant) = 4

e. No comment = 5

f. Other = 6

STUDENT NUMBER: ______________________
APPENDIX E

(A.T.I. Ojibway Concept of Animism

A.T.I. English Concept of Animism)
APPENDIX F

(A.T.I. Reliability)
A.T.I. Reliability

A test of reliability was employed on the A.T.I. to determine the reliability of the instrument. A reliability coefficient of 0.591 was computed on the odd-even items of the instrument.

Ebel\textsuperscript{72}, 1972, states that a minimum reliability coefficient for a testing instrument such as the A.T.I. should be 0.40, approximately. The Kuder-Richardson Reliability (KR20), split-half method formula, was utilized for the purpose.

The A.T.I. data was analyzed on the Heally-Packard computer using the ANOVA program.