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A TRANSFORMATIONAL ANALYSIS OF THE WRITTEN  
AND ORAL SYNTAX OF FOURTH, SIXTH, AND EIGHTH  
GRADE OMAHA INDIAN CHILDREN

by

William D. Conway

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Under the Supervision of Professor Leslie Whipp

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June, 1971

**TITLE**

A Transformational Analysis of the Written and Oral Syntax

Of Fourth, Sixth, and Eighth Grade Omaha Indian Children

**BY**

William.D. Conway

**APPROVED**

**DATE**

Leslie T. Whipp

June 29, 1971

Dudley Bailey

June 29, 1971

Frank M. Rice

June 29, 1971

Paul A. Olson

June 29, 1971

**SUPERVISORY COMMITTEE**

**GRADUATE COLLEGE**

**UNIVERSITY OF NEBRASKA**

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PREVIEW

## CHAPTER I. INTRODUCTION

### Objectives

This study is an attempt to add additional data to that obtained by Hunt (1964) (1965) and O'Donnell, Griffin and Norris (1967) in their investigations of syntactic development in elementary school children. This study deals with a group of Omaha Indian children living in a rural setting on an Indian reservation.

The primary objective of this study is to compare the oral and written syntactic structures (performance) of rural, disadvantaged male and female Indian children with the known data on another specific geographic, economic, and racial group. To this end, this study is a rather complete replication of the work of Roy C. O'Donnell, William J. Griffin, and Raymond C. Norris entitled Syntax of Kindergarten and Elementary School Children: A Transformational Analysis found in the National Council of Teachers of English Research Report No. 8, 1967.

(Hereafter this study will be referred to as O'Donnell.)

A secondary goal of this study is to investigate the linguistic implications of the "cross-over phenomenon" in Indian youth which characteristically comes near the 8th grade as he undergoes a psychological crisis of identity which often leads to his dropping out of school. Is there a manifestation of this in his linguistic performance?

### Related Studies

Many studies of the language behavior of children have been made. Descriptions of these earlier studies may be found in McCarthy (1954), Carroll (1960), Ervin and Miller (1963), and O'Donnell (1967).

The present study relies heavily upon the type of cross-sectional study utilized by Hunt and O'Donnell in their efforts to refine previous analytical techniques and to utilize the methods of transformational-generative grammar. To date, these studies represent the major sources of recent investigation into the development of syntax in the language of elementary school children.

This investigator is aware of the interest in longitudinal studies such as Roger A. McCaig recommended in the May, 1970 issue of Elementary English.<sup>1</sup> This study accepts Hunt's distinction<sup>2</sup> between the period of language acquisition (roughly the pre-school years) and the later years when the speakers seem to develop in their use of the rules acquired in the earlier period. Hunt, in further clarifying the foundation for cross-sectional studies of language development, points out that although a school child has "acquired the recursive rules which are, in

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<sup>1</sup>Roger A. McCaig, "How Not to Analyze the Syntax of Children: A Critique and a Proposal," Elementary English, XLVII (May 1970), 612-618.

<sup>2</sup>Kellogg W. Hunt, "Responses to 'How Not to Analyze the Syntax of Children' by Roger McCaig," Elementary English, XLVII (May 1970), 619-623.

principle, sufficient to produce an infinite variety of fully mature sentences, it is a fact of experience for all of us that the child does not produce them."<sup>3</sup> The present study, then, as were those of Hunt and O'Donnell, deals with the apparent development of language usage by studying the "performance" (Chomsky's sense of the term) of groups of school children in a controlled situation.

In reviewing traditional syntactic measuring devices such as "mean clause length," "sentence length," "main clause coordination index," and the "subordinate clause index," Hunt recognized that both clause length and subordination were proven significant factors in measuring developing syntactic maturity in children's writing, and he combined them into a new, single unit which equalled or excelled the reliability of all the previous measures--the T-unit. Hunt defines this measure as "one main clause with all its subordinate clauses attached to it." (Hunt, 1965, p. 20.)

Hunt's 1965 study further established the statistical validity of the T-unit. O'Donnell (1967) adopted this unit in his study as a means of preliminary analysis of significant sentence length factors in his study of the development of syntactic control in maturing school children.

Hunt found that the T-unit increased in length with advances in the age and grade level of the subjects being

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<sup>3</sup>Ibid., p. 620.

studied. He noted that this was in part attributable to the increase in the number of dependent clauses, but he also found that clause length also increased with age and experience. He also noted that another important factor in the progressive lengthening of T-units is an increase in the number of sub-clausal sentence combining transformations embedded in them. This is substantially the point where O'Donnell (1967) began his study and where this present study begins.

Also of primary interest to the present study is the work of John F. Bryde in his two year study of the "correlates and possible causes of what is known as the cross-over phenomenon in the educational performance of Oglala Sioux Indian students" which he describes in The Indian Student: A Study of Scholastic Failure and Personality Conflict, 1966.

Bryde's study dealt primarily with comparative data on 164 Indian 8th graders on the Pine Ridge Reservation in South Dakota and 76 White 8th graders living near the Reservation although the entire study ultimately included 415 Indian students and 223 Whites from 8th, 9th, and 12th grades.

Bryde found that school achievement records as measured by the California Achievement Test showed that 4th and 6th graders excelled national norms but at the 7th grade, suddenly "crossed-over" and fell two months behind and five months in the 8th grade. Bryde "hypothesized that

psychological conflict during the period of adolescence causes personality problems which block educational achievement." (Bryde, p. 128) He found 26 of 28 personality factors showed significant differences between the Indians and Whites.

"The comparison of all Indian boys and all White boys on the 28 personality variables revealed 20 differences significant at the .01 level and two at the .05 level. The Indian boys revealed themselves as feeling significantly more rejected, depressed, dependent, alienated from themselves and others, and were also, more anxious, withdrawn, and paranoid." (Bryde, p. 129)

"Comparing the Indian 8th grade with the White 8th grade on the 28 personality variables, the Indian pupils showed themselves to be significantly poorer on 20 of the variables at the .01 level and on four at the .05 level. The Indian 8th graders further revealed themselves as feeling caught and carried along by circumstances beyond their control; hence, they were more rejected, depressed, paranoid, withdrawn, and alienated from themselves and others." (Bryde, p. 130) Bryde notes also that 60% of the Indian students drop out of school.

Those that remain in school are apparently better adjusted. When Bryde compared the Indian 8th graders to Indian 12th graders, he found that the younger students "Showed themselves significantly different in feelings of powerlessness and external influence, rejection, depression,



and alienation." (Bryde, p. 131)

Of particular interest to the present study are his comparisons of Indian boys and girls. Six significant differences were found at the .01 level and three at the .05 level--all in favor of the Indian boys. "The Indian girls evidenced more depression, hysteria, social isolation, anxiety, repression, less ego strength, more dependency, and self alienation." (Bryde, p. 133)

The present study provides interesting correlation for some of the findings of the Bryde study.

#### Limitations

This study does not attempt to evaluate language in terms of its grammaticality, in the traditional school-grammar sense; similarly, it is not concerned with the effectiveness of the writing or the style. Accuracy in punctuation, spelling or inflection were not considerations either. As in the O'Donnell study, "attention has been focused almost wholly on syntactic units and their constituents . . . . It should be emphasized, too, that we did not study all transformations that could be identified in the language samples, but only those regarded as sentence-combining." (O'Donnell, 1967, p. 26)

As has been stated earlier, the present study is a replication of the research of O'Donnell, Griffin and Norris. The same stimulus was used to obtain data, the same basic research design was used, as were the form of analysis and the method of representing the data. Therefore, most data are directly comparable to that presented in the earlier study.

## CHAPTER II. RESEARCH DESIGN AND METHODS

### The Subjects of This Study

The subjects of this study were all students at the Macy Elementary School located in Macy on the Omaha Indian Reservation in Northeastern Nebraska. There were three groups: eighteen students in the 4th grade (male and female), fifteen in the 6th grade, and fifteen in the 8th grade, roughly every student in each grade who was present during the week in which data was collected.

O'Donnell used subjects from Murfreesboro, Tennessee, who were from urban, middle-class White socio-economic backgrounds. The contrast between the Murfreesboro subjects and those from Macy is made evident in the paragraphs that follow.

The area serviced by Macy Elementary School has a population of approximately 500. Included in this number are the members of the Omaha Tribe who do not actually live in town but do live within a few miles of it. Approximately ninety-eight percent of this number are considered Omaha Indians. The only White people in the community are teachers in the school or those who own and operate the only businesses in Macy.

The employment situation in Macy is dominated by the government operated Tribal Office or service agencies, by the school or by Iowa Beef Packers in Sioux City, who employ approximately twenty percent of the work force in the community. The other eighty percent are unemployed and on welfare.

Of the children attending Macy School only about ten percent have families in which both parents live together as a family unit. Many children live with one parent or with relatives or, as is frequently the case, the children of a family are split and live with various relatives. A house may have several families living in it with additional persons of various relationships.

Until 1965 when the new housing project was built, most of the housing (90%) was substandard. Today about sixty percent is standard under Nebraska law. For the most part, the remaining forty percent are crowded shacks having neither running water or electricity.

Entertainment in the community comes from a variety of sources. Television is very common in the housing project and in other homes. Those located outside the community have no television because of the lack of electricity. In 1970 the school purchased its first television set. Other forms of entertainment are hand games, funerals, the games at the community center--ping pong and table games, and the local poolroom. School activities such as basketball and track complete the picture.

Macy students have a high dropout rate, approximately ninety percent dropout after the eighth grade or shortly after entering high school. There is no high school in Macy, and those who go on must go to Winnebago, a nearby reservation community of a different tribe, or to Walthill, a nearby White community. A few students go to boarding

schools in Flandreau, South Dakota, or Wapdin, North Dakota, and others may go to live with families through a program sponsored by the Mormon Church.

The school board for Macy is all Indian. The teachers, on the other hand, are all White, usually driving in to teach from nearby farming communities.\*

Testing data was not available on the student population used in this project; therefore the usual Metropolitan Achievement Test and Lorge-Thorndike IQ scores cannot be utilized as a basis for comparing the subjects of this study with those of other investigators. It is hoped that the rather detailed account of the environmental situation of the students may partially off-set the missing standardized data.

The mean ages of both boys and girls in the Macy group seem to compare favorably with those of the Murfreesboro subjects.

See Table 1 for the distribution of the sexes in grade level groups. Table 2 shows the age ranges and the mean age of the subjects in years and months for both boys and girls at three grade levels.

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\*All data on the community was obtained by first hand observation or from two residents of the community, one a teacher in the school during the year this study was made (1970).