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ONEIDA INDIAN EDUCATIONAL PLANNING IN WISCONSIN

State University of New York at Albany

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ONEIDA INDIAN EDUCATIONAL PLANNING
IN WISCONSIN

by

Rosalie M. Robertson

A Dissertation
Submitted to the State University of New York at Albany
In Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy

College of Social and Behavioral Sciences
Department of Anthropology

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ABSTRACT

An educational planning survey conducted on the Oneida Indian Reservation in Wisconsin has been designed to determine if community needs are served by the tribal education programs. The purpose was to access current understandings and concerns of the Oneida people regarding education generally and Oneida educational goals specifically.

The Galileo methodology utilized provides a metric multidimensional scaling instrument (MMDS) to identify and measure cognitive domains. The procedure contains two phases of interviewing. Within the target population, a sample of Oneidas first responds to a series of questions in open-ended interviews. These Phase 1 results provide a qualitative description of the domain of education for the Oneidas, identifying the specific concepts within their cultural reference frame. A paired comparisons questionnaire administered in Phase 2 allows for a precise representation of the domain of education, and generates a cognitive "map." For educational planning, a message component of the Galileo instrument is especially designed to identify effective messages to potentially improve communications between tribal staff and the community, and to help achieve specific educational goals.

As a document in applied anthropology, the Oneida

study is first a problem-oriented report for the Oneida education staff and the community. It is secondly an exposition of the Galileo theory and method of research on the measurement of cognitive and cultural processes, as it may be successfully applied to anthropological and educational research.

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1. INTRODUCTION

1.1. Applied Research for Oneida Education

One of the hallmarks of anthropological research has been the investigation of cultural diversity and cultural processes. "Culture" has been defined in terms of material traits or customs, as well as cognitive orientations of peoples. It is this aspect of culture, the cognitive, that is the foundation of the Galileo theory and method presented here (Woelfel & Fink 1980).

Goals in cognitive research, in anthropology in particular, have been to discover what phenomena are significant to given cultures, and to understand how people organize these phenomena (the "cognitive maps" or semantic domains) (Tyler 1975). The Galileo instrument provides a means of discovering cognitive frameworks of a cultural entity, of mapping changes in cultural processes (changes in relationships between cultural concepts), and of comparing the reference frames of different cultural groups using a precise, and powerful mathematical model.

Effective means for understanding cultural and cognitive processes in anthropology have centered on methodologies involving field research among distinct cultural groups. In recent years anthropologists, and in particular field ethnographers, have developed a

stronger sense of partnership with the groups, neighborhoods, tribes or nations with which they work. The current research falls within the domain of applied anthropology. For this reason, its first function is facilitation of the goals of the Indian community itself. The tribal education programs on the Oneida Indian Reservation, near Green Bay, Wisconsin, have been expanding in recent years, concomitant with the growth of the tribe. It is the Oneidas' particular interest to determine the perceived needs of the community, and to respond to the concerns regarding the tribal education programs. The researcher (author) became involved in this effort in 1981, in coordination with an Ad Hoc educational committee. This research team developed and produced a survey to identify attitudes toward education generally and tribal education specifically.

While the field research extended for approximately ten months, the current document focuses primarily on the educational planning survey (November 1981-January 1982). Education as a single cultural subset, conceptual category or "domain" has undergone considerable change among Native American peoples, moving from traditions of non-formal education and socialization processes, to combinations now which almost invariably include formal, institutional educational systems. Documenting the perceptions of education as it is experienced by Oneida Indian people

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is an effort to recognize distinct educational needs of Indian children in contrast to those of the adjacent white communities, and to improve the educational process for people of the tribe. This survey is also intended to broaden our general understanding of the effect of maintaining cultural boundaries and of the nature of educational experiences for peoples of different historical and cultural backgrounds.

1.2. Methodological Issues

Anthropology and education are distinct fields of inquiry in American scientific research, but they have shared theoretical approaches, methods, and interests since the earliest part of this century. Qualitative techniques distinguish research in these fields, as in other social sciences. The investigation of cultural identities has been especially seen as the domain of qualitative rather than quantitative methods; thus definition of cultures, their traits, categories of perception, in fact their unique character, has been said to defy precise quantification. In anthropological theory, the concept of cultural relativism is focal: the idea that cultures should be described in terms of themselves (Fenton 1957: 13; Harris 1968). As a consequence, research comparing cultural groups have not turned to formal analyses to examine cultural phenomena;

as in many cases, comparable units of study have not been available.

The Galileo theory and method of investigating cultural processes recognizes the principle of relativism in the study of cognition, and combines this with both a qualitative aspect (open-ended interviewing technique) which has been so well developed in anthropological methods, with a procedure for precise measurement of cognitive domains. The Galileo is a metric multidimensional scaling instrument to map specific subsets of the cultural experience, in the case of this research, the conceptual domain of education. It offers a method of investigating cognition and cultural diversity from the communication sciences, with a new approach in eliciting technique, and a ratio scale of measurement to better represent the experiential continuum (as cognitive and cultural processes could be termed).

To record, compare and predict human behavior, the social scientist requires tools that can accurately report human phenomena in precise ways. The Galileo approach is a powerful measure of cultural aggregates, that is, of the shared perceptions of a unique population. The Oneida Reservation is geographically a "checkerboard" reservation, one in which Indian trust, fee-owned and privately owned land is interspersed with White-owned farms and residences. The political

separation of the original reservation into two counties and into four different school districts reveals a complex picture of community boundaries, but the distinct social, political and legal organization of the Oneida community identify the cultural system. The effect of history and traditions, and the contemporary cultural and political situation, all play a part in the Oneidas' perceptions of their community. In particular, goals in education refer back to the continuity of the tribal community.

The definition of these attitudes and goals as shared by tribal members is the focus of this research.

1.3. Structure of the Research

The report is organized into three major sections. First is an exposition of the Galileo theory and methodology (Chapter 2), with an emphasis on anthropological and educational applications. Numerous descriptions and applications of this MMDS model are available in the scientific literature (see Barnett bibliography), the central reference being Woelfel and Fink's 1980 publication, "The measurement of communication processes: Galileo theory and method."

In the second section (Chapter 3) a survey of the shaping of Native American education is presented to document the unique character of Indian experience with

education. This historical summary describes primarily the period from European contact to the present, with special emphasis on the policies shaping formal education for Indian peoples. The aim is to recognize and document the process by which Native American peoples have developed a distinctive reference frame for education.

In the third section (Chapter 4 through 6) a brief description of the Oneida Indian community and its educational programs is followed by the results of the field survey in educational attitudes. The intention is, first, to demonstrate how the Oneida Indian experience with education in the United States has also been, as with other Native American groups, a culturally oriented and interpreted domain. The survey itself supports this contention with a description of the cognitive domain, as represented in a sample of tribal members.

As an applied anthropological report, the educational survey emphasizes possible approaches to improve the perception of tribal educational efforts, and to coordinate the programs with needs of the community in general.

The summary comments (Chapter 7) draw together the practical applications of Galileo methodology and issues within a Native American community: how cognitive research can benefit short and long-term

planning strategies, and increase awareness and communication between different segments of the community as well (e.g., the educational staff and the community). Applied and theoretical issues in anthropology and education are also addressed, in order to demonstrate how cognitive studies might develop more reliable measures of cognition by the methodology proposed here.

2. GALILEO THEORY AND METHOD

2.1. Introduction: A View of Culture and Cognition

Anthropology has long been concerned with the differences and similarities of cultures, and has approached human diversity from a number of different perspectives. A cognitive or psychological approach to culture has developed in the last four decades that seeks to answer questions about meaning in human behavior: why and how people of different groups perceive and react to the world in different ways. In order to illustrate how the Galileo methodology contributes to the study of cognitive and cultural processes, it is necessary to first examine the research interest of anthropologists and other social and behavioral scientists in cognitive studies.

Earlier evolutionary theories of cultural development focused on the stages through which cultures might pass, i.e., savagery and barbarism, in order to attain the grace of civilization (Morgan 1877; Tylor 1871). Implicit in these formulae have been considerations of the intellectual capacity of the human species. By virtue of a "psychic unity" of humankind (universal underlying principles or rules of conduct), it was thought that one could predict the evolution of

"lower level" primitive peoples. These evolutionary schemes were not supported by the extensive ethnographic data collected in following decades, and the concept of psychic unity with its distinctions between primitive and civilized logic was not considered a useful explanatory framework for cultural diversity (Voget 1975: 576). Essentially, ideas of mental or psychological phenomena were not well developed in anthropological theory during this period. There was a greater interest in the categorization of cultures, and within them, the cultural traits or customs distinctive of particular groups or between cultural entities.

In the early 1900s, Franz Boas (1896) and Bronislaw Malinowski (1922) stressed a new perspective in cultural research: the importance of learning about the "native view of reality" (Gamst & Norbeck 1976: 175). Kroeber's (1909) early work on kinship, for example, reflected this interest. He examined kinship terminology as cognitive categories: views of reality. In Lewis Henry Morgan's (1870) work on kinship categories also, he recognized that a given category formed a system of underlying semantic contrasts that could be formally analyzed (see also Frake 1962: 74).

The emphasis on fieldwork and on learning and recording native languages in the early twentieth century became important in the development of a distinct anthropological methodology, particularly

through the influence of Boas and Malinowski. While there has been a strong interest in the structure and function of social and cultural systems (Radcliffe-Brown 1935; also, Malinowski), the study of culture has also been directed toward the investigation of cognitive (consciousness, modes of thought) phenomena. In particular, anthropologists have studied how language (lexical categories, verbal labels, semantic domains) sheds light on "native principles of classification and conceptualization" (Romney & D'Andrade 1964: 3). As Gamst and Norbeck (1976: 174) point out:

The view that man's intellectual or cognitive perceptions of the universe form subconscious systems, patterns, or structures that follow panhuman principles of thought is widespread in the social sciences. (These fields) include ethnoscience, ethnosemantics, ethno/psycho/sociolinguistics, formal semantic analysis, componential analysis, new ethnography, new structuralism, French structuralism, and cognitive anthropology.

Bateson (1936) had suggested almost fifty years ago that cognitive aspects of culture ("eidos") could be an important focus in anthropology (see also discussion in Neisser 1962: 54), but it was not until later in the 1940s, through the 1960s, that cognitive anthropological studies really took shape. Important influences have been in other disciplines, notably in linguistics and psychology (e.g., developmental psychology, psycholinguistics).

The "prime movers" of cognitive anthropology in the mid-1950s, according to Gamst and Norbeck (1976:

175), were the anthropological linguistics. With the investigation of languages in different cultures, linguists were developing precise techniques to describe, classify and analyze language. Gamst and Norbeck (1976: 175) note that "these analytic constructs and associated working procedures were then adapted to the study of cognition, which may be regarded as semantics placed in an ethnological framework."

Sankoff (1971: 389) states that the focus of cognitive studies in anthropology is on the description of "cognitive maps," and the degree to which they are shared or not shared by individuals in a culture. Tyler (1976: 177) wrote in 1969 also that cognitive research is an effort to understand the "organizing principles" underlying human behavior:

It is assumed that each people has a unique system for perceiving and organizing material phenomena - things, events, behavior, and emotions. The object of study is not these material phenomena themselves, but the way they are organized in the minds of men. Cultures then are not material phenomena; they are cognitive organizations of material phenomena.

The sociologist Talcott Parsons (1976: 111) has also identified cultural systems as cognitive phenomena. He refers to four subsystems of human action, culture being the one that functions as "pattern-maintenance," while the "social system" provides internal integration, the "personality system" provides goal-attainment, and the behavioral organism functions in adaptation to the

physical environment. Key to the cognitive approach, then, is its emphasis on native concepts or world views. Gamst and Norbeck (1976: 175) state emphatically that the primary goal is not in collecting ethnographic information, but in understanding the regular ways in which human groups segregate, classify, and organize the world around them.

In ethnosemantic studies such as Berlin and Kay (1969) on color categories, the effort has been to identify native systems of classification or "folk taxonomies." The ethnosemantic viewpoint is reported by Voget (1975: 576):

The heart of culture...must be sought in a network of symbolic communications, subject to procedural rules which regulated inclination and choice. The procedural rules constituted a system or cognitive model internalized by members of a society.

The emic-descriptive orientation of the cognitive approach was criticized as being noncomparative, particularly because of its historical connections to more descriptive, non-comparative approaches in descriptive linguistics and to the historical particularist orientation of Boas and his students (Voget 1975: 577). Linguistic procedures, however, were providing a means by which to examine cognitive "structures" as semantic categories in a particular culture. That is, language is equated with cognition. Frake (1962: 73) stated in his "Ethnographic study of

cognitive systems," that the fundamental task is to determine the "verbal-labels" people use to identify things. He wrote (Frake 1962: 75, 76):

Culturally significant cognitive features must be communicable between persons in one of the standard symbolic systems of the culture...The study of the referential use of standard, readily elicitable linguistic responses - or terms - should provide a fruitful beginning point for mapping a cognitive system.

In Tyler's (1976: 177) view, cognitive anthropology has been developed to deal with two major issues in the study of cultures: (1) what phenomena are significant for the people of some culture, and (2) how people organize these phenomena. Cognitive anthropology is a "theory of cultures" in his perception. Consequently, it will tell us something about the conceptual organization of peoples' lives: their "cognitive maps," or cognitive systems. This view of cultures is, according to Tyler (1976: 184), one in which

A culture consists of many semantic domains organized around numerous features of meaning, and no two cultures share the same set of semantic domains or features of meaning, nor do they share the same methods of organizing these features.

The best methods for discovering these domains, and thus learning about cognitive processes, is by controlled eliciting techniques and methods of formal analysis, as Tyler recommends. In the following section (2.2.) I will demonstrate the usefulness of the Galileo methodology for formal analysis of cognitive (semantic) domains, and for generating cognitive maps that are

comparable over time (longitudinal study) or across cultural entities.

It should be noted that the field of psychology has also been instrumental in developing many aspects of cognitive research (Voget 1975: 474ff; Romney & D'Andrade 1964). The work of developmental psychologist Jean Piaget in the 1950s is pertinent here as he focuses on development of memory, intelligence, and learning among children. Piaget (1968) discusses learning as the "cumulative effect of cognitive activity" (see Neisser 1962: 58). The processes he describes include that of "change accommodation," by which an individual "assimilates" experiences (reality) and "accommodates" to them; i.e., experiences modify the learner. In "Memory and intelligence," Piaget (1968: 109) wrote, "...every assimilatory scheme has to accommodate itself to the objects to which it is applied... . . . assimilation without accommodation does not exist, nor conversely, accommodation without assimilation..."

The value of Piaget's ideas to cultural and cognitive research is suggested by Neisser (1962: 59): "What we acquire as we grow up is not merely content, but process. We understand the world through, and with, assimilative schema." (Schema are the perceptual structures of accommodation and assimilation.) That is, the individual acquires a cognitive map, which is not simply a "structure" of cultural reference, but a

particular means of assimilating and processing new information.

The usefulness of the Galileo methodology is that it stresses an interactive (information processing) approach and is able to investigate these processes of cultural change (how the exchange of information can affect the cognitive domain). The representation of a cognitive map itself is only the first step. Examining the movement of concepts or frames of reference by members of a specific cultural group as these cultural attitudes or beliefs change through time represents more effectively the experience of culture, its dynamic nature.

2.2. Observation of Human Phenomena: Fundamental Concepts

A fundamental insight in cognitive research is that a culture views "reality," the human experience or human conduct, through the mediation of a system of concepts: whether these be identified as symbols (language), semantic domains, cognitive maps, mental templates, shared beliefs, or a "pattern-maintenance system." The following sections of this chapter illustrate how a mathematical model may provide a powerful picture of cognitive domains. In the particular Native American case, a specific cultural subset or domain, education,

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is investigated.

The Galileo theoretical approach to cognitive research is based on a social interactionist perspective, using a metric multidimensional scaling (MMDS) technique to model the complexity of human cognitive processes. Both eliciting technique (Phase 1 non-directed probe) and structured questionnaire (Phase 2 paired comparisons of concepts) are designed to discover the "native view of reality," i.e., the ways in which one group may be similar or differ from other cultural groups. The first goal of this research in Oneida Indian education is to discover the "cognitive map" of education (the Oneida's perception of "education") to improve educational planning strategies. A second and theoretical concern is to show the potential contribution of the Galileo MMDS methodology to studies in cognition.

In understanding the nature of human phenomena, social scientists have traditionally relied upon observational frameworks that categorize behavior into discrete units, events, subsystems, or cultural traits (see Pelto 1978). The history of anthropological theory attests to the general usefulness of such itemizations and comparisons of cultural traits in examining the dimensions of cultural differences (Harris 1968). The Iroquoian anthropologist Fenton (1957: 14) noted in his investigation of the "ethnomethodological" approach

(cultural historical):

The analysis of culture into its constituent elements or traits has a certain utility...because these traits cluster in complexes which are the situational effects of major cultural activities; and the traits, complexes, and activities move about on the map as customs, are diffused from people to people, sometimes losing their original consistency and appearing elsewhere in otherwise quite different wholes...

In the past decades, there have been clear efforts to correlate the anthropologists' objective or "etic" categories with the emic or native categorizations of customs or lifeways. However, Tyler (1976: 177) suggests that, generally, the categorical approach "may tell us something about the way an anthropologist thinks about a culture, but there is little, if any, reason to believe that they tell us anything of how the people of some culture think about their culture."

To investigate the native processes of categorization or organization of their culture, Woelfel (ms) notes that, "the notion of categorization means that individual members of a class are grouped together on the basis of some shared characteristic or set of characteristics...It is this process that makes organized social life possible." But for the researcher, relying on the categorical approach to investigate cognitive processes is problematical. Kobben (1967) states, there is a "bias toward classifications which treat 'continuous relationships' as dichotomies." That is, the reality of the cultural

experience is one of a continuous changing, dynamic process. It is important for social science, in its instruments, to be able to replicate these processes.

A theoretical language of human behavior, if merely categorical, does not offer the precision, reliability and predictive ability that a mathematical language provides: a means of translating these cross-cultural experiences into comparable reference frames (the coordinate system).

In recent years in anthropology, mathematical and statistical models have been devised to analyze categorical data, such as ethnosemantic research and componential analysis (Goodenough 1956; Wallace 1965).

Mitchell (1979) wrote "On quantification in social anthropology" to discuss the problems of qualitative vs. quantitative orientations in anthropological methods. Quantification has slowly become a more useful research tool in collecting and analyzing data, and its use in cognitive research has developed within anthropology only in recent years. Mitchell (1979: 44) notes its usefulness in investigating the multivariate nature of human social phenomena:

Analyses that set out to uncover the consistent relationships lying behind social phenomena must take cognizance of the multivariate nature of the material they are concerned with. For this purpose techniques such as the analysis of variance and covariance, the analysis of factorial arrangements, factor analysis, and latent-structure analysis are likely to prove

particularly useful.

Guttman (1944: 147) suggested a method for scaling information that is qualitative, in order to summarize large classes of data and to "draw inferences about the universe of attributes." In Guttman's view, a "universe" defines a large class of behavior (such as "marital adjustment") and within this universe are all of the "attributes" that could define (explain, relate to) the concept of "marital adjustment." The language of cognitive research, as can be seen from Guttman's description (and also Frake 1962), has no standardized terminology within or across disciplines. In the Galileo theory these ideas of "universe" are referred to as cognitive domains (one of the most widely used terms) or "neighborhoods" within which one locates a group of related concepts (also referred to as objects, attributes, symbols) (Woelfel & Fink 1980).

The complexity of human behavior and cultural diversity have led social scientists to assert that these social phenomena are qualitatively different from those of the physical world; that is, they are "relatively unobservable, subjective, complicated, and spontaneous" (Woelfel & Fink 1980: 3). In anthropology, for example, there has been an emphasis on a qualitative methodology to study diverse reference frames of human groups, and a tendency for researchers to distrust and avoid precise quantitative measures or

mathematical models of human phenomena. The premise is that cognitive processes are not directly observable and so cannot be measured or verified in the manner that physical phenomena can. Thus observations tend to be categorized by use of vernacular symbols which are non-numerical.

Kay (1971) wrote that anthropologists have had a tendency to view human phenomena as "inherently imprecise," thus any effort to use formal mathematical analysis "imposes a spurious structure on phenomena that are by nature vague... There have been enough facts around for quite awhile to suggest that this view is untenable" (IBID 1971: xii-xiii). The works of Geoghegan (1971) and Keesing (1971) and other anthropologists in a volume edited by Kay are examples of ethnographic studies that utilize formal mathematical analysis to study cognitive domains (e.g. Geoghegan model of cognition as information processing systems).

In fact, both physical and social scientists "measure" phenomena, and the standards they use are in both cases arbitrary, and relative. That is, the physical and social world are viewed, investigated, analyzed, through the "cultural biases" of the observers, whether anthropologist, physicist, Native American, or Inuit. The standards are generally agreed upon by a consensus of observers (the social unit). For example, the measurement of the earth's surface with a

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"metric ruler" has no more inherent validity than measures of human perceptions. The ruler is an arbitrary standard applied to solve a problem; measuring the distance with paper clips or hand spans is equally valid. For physical or social measures, the relevant questions are whether these measures are reliable (repeatable), testable, precise or appropriate to the task. In finding appropriate, testable models of human behavior social scientists have been less than successful. But, given the arbitrary nature of measures in the physical as well as social sciences, there is little reason why these measures cannot be adapted and used to advantage in the study of human behavior. The Galileo offers a representation of cognitive "space" mapped onto a coordinate system to define human perceptual domains.

Social science researchers have developed some effective mathematical models and measurement scales to increase information and understanding of human phenomena. An early proponent in anthropology, Tylor (1889), wrote an essay on the use of mathematical controls of ethnological materials. But even by 1953, over sixty years later, Harold Driver was speaking still of the very gradual shift in the status of statistical analysis from "hostility" to some modicum of "respect" (Driver 1953; see also Mitchell 1979; Voget 1975).

The application of unidimensional Likert-type

scales (Likert 1932) and the semantic differential scales (Osgood 1964) are dominant in social sciences today, serving as complex mathematical models of cognitive processes or psychological attitude structures (Woelfel 1980). Osgood (1964) has applied the semantic differential technique in the comparative study of cultures, and developed a theoretical model of cognition that, like the Galileo, involves the identification and measurement of "semantic space." Osgood (1964: 171) describes this concept:

Imagine a space of some unknown number of dimensions. This will be our hypothetical semantic space, (which) has an origin like all space... The meaning of a sign can be conceived as some point in this n-dimensional space, and thus can be represented by a vector from the origin to that point: the length of this vector would index the "degree of meaningfulness" of this sign...and its direction would index the "semantic quality" of this sign....

The semantic differential task for the respondent, according to Osgood (1964: 173), is to make judgements about a series of concepts (e.g., mother, sand painting, Chinese) "against a series of bipolar, seven-step scales defined by verbal opposites (good-bad,...strong-weak,...fast-slow...)" The data is then factor analyzed (a non-metric MDS procedure to discover "latent psychological trait" or factors in the data; Woelfel & Fink 1980: 78). Osgood's use of the 7-point scales revealed a set of factors that have reappeared again and again in comparative studies based on the semantic

differential scales. Three dominant, independent (orthogonal) factors are identified as (Osgood 1964: 173): "Evaluative factor" (good--bad, positive--negative), the "Potency factor" (strong--weak, heavy--light, hard--soft), and the "Activity factor" (fast--slow, active--passive, excitable--calm).

These "independently variable dimensions of meaning" (Osgood 1964) have not been verified in the Galileo MMDS instrument, which uses a continuous ratio scale to measure cognitive space. Galileo cognitive maps (e.g., studies of the configuration of emotions with the Galileo instrument; see Woelfel & Fink 1980: 79ff) suggest that Osgood's three dominant factors are in part artifacts of the 7 point scale. In any given semantic space or cognitive map, then, the independent dimensions of meaning are not always defined by Osgood's factors.

Componential analysis became an important tool for cognitive and cultural research in anthropology in the 1950s. Its purpose, according to Wallace (1965: 229) has been to analyze meaning: "to make statements about concepts in the native's 'cognitive world.'" Componential analysis is not restricted to the analysis of "connotative meaning" or "arbitrarily restricted domains" as with Osgood's psychological instrument. In Wallace's (1965: 231) summary of the approach, componential analysis offers a semantic analysis of

lexical domains to identify taxonomies of information used by speakers and hearers in a culture; and from these analyses derive a "unique description of a native cognitive (or semantic) system." Wallace's critique of componential analysis emphasized the following:

If an anthropologist wishes to claim that he has produced a valid description of a cognitive (semantic) system, he needs to use additional techniques beyond those of the classic method of componential analysis...
...there must be techniques to identify dimensions of classification and log operations which are demonstrably real to the native speaker...(and) there must be some techniques for demonstrating that a given logical operation or dimension of classification, however derived by the anthropologist, is not employed in the native speaker's semantic calculus. (Wallace 1965: 232)

Wallace (1965: 234) also points out that there is "no generally followed procedure for eliciting directly from the native speaker a statement of what to him are the dimensions of the taxonomy, whose nomenclature is under investigation." Difficulties in getting complete information on lexical or cognitive domains is resolved in the Galileo procedure by a form of eliciting technique called the non-directed probe. The purpose is to discover the relevant concepts a native speaker uses to refer to a particular conceptual domain. Input from historical and ethnographic research can provide additional means by which to design a non-directed probe. It is especially important in applied anthropological research for members of the target

population to be involved in the design of the eliciting instrument (as was the case in the Oneida research in this report).

It is useful to investigate cognitive modeling through the social interactionist perspective as well, as it has been developed in the philosophy of George Herbert Mead (1934). Mead's contribution, although not quantified in his own work, has been to call attention to behavior as a continuous process rather than a series of discrete acts (such as categorization techniques provide) (Woelfel 1980: 92).

Mead additional recognized the importance of the self and what he termed "significant others" in determining one's attitudes and beliefs (Strauss 1956; see also Woelfel & Haller 1971). In anthropology, the self concept was first linked with evolutionary theory: in the 1940s, ethology and hominid evolution were seen from the perspective of an emerging "self-consciousness" and inner awareness, "generated only by the social experience," says Voget (1975: 555; see also Hallowell 1961). Hallowell defined self-awareness in terms of a subjective-objective dichotomy of experience. His discussion of the self concept is especially pertinent to an explanation of the Galileo methodology, which has operationalized the self-concept to investigate cognitive domains (these being aggregates of individual (self) experiences). Hallowell (1955: 84) wrote:

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If we accept the hypothesis that awareness of self as an empirical object and awareness of objects other than self are a coordinate result of maturation and socialization in man and that both involve cultural constituents, then we can go a step farther. This categorical distinction, and the polarity it implies, becomes one of the fundamental axes along which the psychological field of the human individual is structured for action in every culture. ...where differential cultural factors enter the picture is in the varied patterns which the environmental field may take when viewed from the standpoint of the self. Since the self is also a partly cultural product, the field of behavior that is appropriate for the activities of particular selves in their world of culturally defined objects is not by any means precisely coordinate with any absolute polarity of subjectivity-objectivity that is definable.

The Galileo instrument allows for direct representation of relations between concepts and especially "from the standpoint of the self," as Hallowell suggests. Fred Voget (1975) in his review of the history of ethnology, remarks that a unitary view of cultural process has developed in the last decades, one in which the "self" concept is important in "discovering systematic relationships among diverse phenomena..."(Geertz 1970). Voget (1975) states, "man is considered a partially free and a partially determined agent, according to circumstances,...(this is) more realistic than a monolithic view which describes man as a determined component of structural processes." In fact, anthropological methods and techniques, while identifying the individual as a central actor, the object of socialization, the source of intra-cultural

variability, or agent of change, has rarely operationalized this concept, "self," in its instruments, qualitative or otherwise.

According to Woelfel (1981: 8-9) it is possible to define beliefs and attitudes in relation to the self and at the same time to other objects in an individual's experience (Woelfel 1981: 8-9). A "belief" is the relationship perceived between any two objects (object---object). An "attitude" is a belief about the relation between the self and another object (self---object). Identifying the self-concept within this framework of "objects" in human experience is not to deny its special character, but to recognize that self is present as a component of any perception, and may be measured directly, in relation to these perceptions.

In anthropological research, this provides a useful new dimension in defining cognitive maps, or "semantic domains." Atkins (1974) utilized the self concept in an anthropological study of consanguineal kinship. In measuring the "closeness or remoteness of various types of consanguineal relationship," he included an Ego point, "identity or zero-power factor" (Atkins 1974: 4).

According to Mead (1934) an attitude regarding a certain object is also a belief about the self: a measured separation between the self and that object or set of objects (Woelfel 1980). Consequently, the self concept may be appropriately represented within any

conceptual domain, to determine its precise relation to other measured attitudes and beliefs.

In the social sciences, theories of measurement and scaling procedures are based primarily on Stevens' (1951) classification system of nominal, ordinal, interval and ratio scales. The acceptance of these different scales assumes that the phenomena they measure are qualitatively different. That is the essential nature of the scales (nominal, ordinal, and so on) has only to be discovered by the researcher, who then uses the appropriate scale to investigate particular human behavior.

In contrast, the Galileo approach to cognition assumes that the act of measuring is not separate from the object measured nor from the observer who is doing the measuring. Hallowell (1955: 83-84) in his studies in psychological anthropology also recognized the utility of this approach: "perception in man...does not present the human being with a 'picture' of an 'objective' world which, in all its attributes, is 'there' only waiting to be perceived, completely unaffected by the experiences, concepts, attitudes, needs, and purposes of the perceiver." Woelfel and Fink (1980: 4) report that, in reality, "no object is observable independent of some method of observation." Thus, measured variables such as distance or time rely upon the creation of consensual rules of observers,

whether they refer to physical or social phenomena. Those individuals living within a particular group observe and internalize their experiences according to such "consensual rules" they have learned. If this is so, then an appropriate scale of measure should reflect these (arbitrary) encoding systems of human groups.

2.3. Cognitive and Cultural Processes

In anthropology in the last decades there has been a greater recognition, in theory and method of observation, that the interaction of individual or group with the environment is a vital part of the communication process (e.g., the cultural ecological approach of Steward (1955) and others; see Voget 1975: 581ff). The individual is identified as a single biological organism operating on a level of consciousness (cognition) that is shared by others. This model of the physical world or biological phenomena is not the first to influence anthropological conceptions of cultural organization. The cultural ecological-environmental model served to broaden the perspective of cultures as groups of human beings living within networks that were social, biotic and abiotic. Such a human, and cultural, awareness of "belonging" to certain sets of phenomena, and not belonging to others, is fundamental in human cognition.

Durkheim (1951) proposed that consciousness can reflect upon itself only by having access to or recognizing something that is not itself. Fundamental to human cognition, then, is the perception of difference or dissimilarity to other selves, other objects. "Objects" can be defined, according to Woelfel (1981: 8) as a "psychological content of which some consciousness (personal or cultural) is aware." It is a means by which individuals break down ~~experience~~ into some constituent parts or objects.

These objects may be designated in different ways in different cultures, as pointed out by Tyler (1976) and Gamst and Norbeck (1976) above. It is a part of individual identity (self) to recognize things and events as different or separate from the self. Charles Frake (1962: 83) uses a similar term "segregates" in semantic analysis, referring to "a terminologically distinguished array of objects...categories..." (Frake 1962: 83).

According to Woelfel and Fink (1980: 49), "the concept of difference or separation among experiences lies at the foundation of our experiences." Individual cognition then, can be modeled as a space-time continuum (process) that is multidimensional. Concepts that individuals include in a particular cognitive domain (the "objects" within the domain) are treated essentially as points in perceptual space (Barnett,

Harrison, Wigand, Woelfel & Cohen ms.: 8). State Woelfel and Fink (1980: 30), "Any point in this continuum will represent a set of values, one for each of the attributes of perception at each point in time." Following this argument, it should be possible to represent this perceptual space in mathematical notation. For the individual, this experiential continuum can be arbitrarily represented $E(i)$. The "social reality" (Durkheim 1951) that identifies the collective experiential continuum becomes \bar{E} . Any subdivision of this perceptual continuum is a process of applying units of experience and marking them by linguistic code (i.e., into categories).

The definition of cognitive processes is that activity of individuals of encoding observations into symbols, and of communicating them by means of language. Collective cognitive processes are cultural processes: the result of coordinated activity of a system of individual cognitive processes (Woelfel 1980: 97).

Lindesmith, Strauss and Denzin (1968), using a social interactionist approach, have also devised measures of stable attributes of attitude and self, recognizing that humans are "symbol-producing and symbol-using organisms," (Lindesmith et al. 1968: 25). Thus the identification of other "objects" is the action first of the individual, who then communicates these symbols to others. Symbolic communications are best

evaluated in terms of an emic perspective: within the interaction sphere of the individual and group. Leslie White (1976: 26) wrote about this symbolic aspect of cognitive and cultural processes: "Only man has the ability to bestow meanings upon things and events and to comprehend such meanings as bestowed by others. ...a symbol may be defined as a thing or event, an act or an object, upon which meaning has been bestowed by human beings..." Such ideas reflect the anthropological commitment to emic or native viewpoints. It is proposed here that an emic model of human behavior can be objectively recorded, explained and analyzed through the application of a mathematical model of cognition.

2.4. Concept of the Reference Frame

As stated in the previous section, different cultures order the experiential continuum in different ways; that is, they segregate their experiences and refer to them by means of a linguistic code or symbol. Any single experience is a combination of immediate and past experience. For example, the linguistic code "education" is an arbitrary symbol. It represents a system of concepts recognized to have certain meaning in the collective experiential continuum E (the cultural aggregate). The symbol "education" may be identified as a "marker variable" (see Cushman & Pierce 1977) which

delimits a region of this experiential continuum. This would be a typical categorization of cognitive and cultural experience. "Education" then binds together objects (perceptions) which are similar enough to be associated in the individual's experience. Wallace (1965) also talks about "frames of reference" in native cognition in his review of componential analysis, and defines the way in which these frames may differ between cultures:

Let us suppose that a ...people - such as the Seneca Indians - have a word which refers to petroleum, a substance which they collect from the surface of pools and use as a liniment. To a contemporary Chinese, petroleum is a substance with certain physical and chemical properties. Both the Chinese and the Seneca word for petroleum refer to this same substance, but it would be silly to cite the Chinese chemist's definition of petroleum as the 'meaning' of the Seneca word...(IBID: 230).

It is not necessary in the Galileo model that these conceptual domains be taxonomies of concepts or attributes. The Galileo domains have more in common with the idea of "paradigms" in Frake (1962): attributes intersect with concepts that may exist in other semantic domains. The nouns (words, symbols) then serve as marker variables for recalling and communicating experiences, and form the basis of the cultural experience: the transmission of information to others and to succeeding generations (Durkheim's collective social consciousness). In order to represent

such a conceptual domain, a mathematical coordinate frame can be established, combining the reference frames of multiple observers (members of the culture), and mapping the experiences of these observers onto each other (Woelfel & Fink 1980: 58). A set of common reference objects and their precise relationships is the result.

The anthropologist Sankoff (1971), in a cognitive model of the Buang "dgwa" (descent unit), also utilized a concept of "shared" culture being a "summing of individual informants' responses as an average, rather than a 'shared' model" (Sankoff 1971: 404). This modeling is merely a translation of cultural experience, as we observe it ethnographically: a representation of the process by which people transform their experiences within or across cultural reference frames (boundaries). Process here refers to changes in the interrelations or separations among such concepts over time (Woelfel & Fink 1980: 33). "Mathematizing these operations," state Woelfel and Fink (1980: 58), "is not a radically different approach...it is simply abstracting the form...to record it in a symbolic way...to routinize the comparative process."

In a cultural aggregate, individuals will learn symbols which designate neighborhoods in the experiential continuum which they may not have themselves encountered. This dissociation between the

continuum of concepts and the continuum of experiences has led Woelfel and Fink (1980) to postulate the existence of a "representational continuum."

2.5. The Representational Continuum and Cultural Aggregates

In a culture, each individual possesses a slightly different version of his or her culture. Bruner (1976), who has written on the psychological approach in anthropology, defined this type of diversity as follows:

Culture is, in fact, characterized by diversity of individuals and groups, each acting to further their own interests, ...Individuals differ because of variations in genetic constitution and because of unique experiences in the life career. Society is stratified, regimented, and diversified due to age-sex differences, occupational specialization, the necessary inequality in social life, and differential participation in the total culture. Rapid cultural change does not necessarily lead to disintegration; as Wallace says, it is the natural condition of man. In view of the above, the research problem is to investigate the basis of orderly social life. How do diverse individuals organize themselves so as to maintain a cultural system which is itself constantly changing, shifting and oscillating? (Bruner 1976: 158-159).

A representation of the individual within his or her own culture might be (following Woelfel & Fink 1980) $R(1)$, $R(2)$, ..., $R(n)$ being the composite of all individual spaces, or \bar{R} . This may be referred to as a "central tendency of opinion around which individual beliefs may be seen to cluster themselves more or less cohesively:"

the representation of a cultural belief (Woelfel ms.: 10). The Galileo method, state Woelfel and Fink (1980: 36) "establishes a metric on these spaces so that the separations among the concepts and the changes among them representing cognitive and cultural processes can be measured in a theoretically and pragmatically useful way."

Neugebauer (1983), a historian of the exact sciences, notes that the estimation of magnitudes (quantification) is human behavior of great antiquity, and we follow the example of numerous non-western and western traditions in using such tools to observe social as well as physical phenomena. The procedures in an instrument such as the Galileo questionnaire are conventions only, arbitrary measures of the representational continuum (\bar{R}) that will record the separations among concepts to produce a mathematical representation of cultural subsystems or cognitive domains.

The Galileo procedure is simple and direct (see Woelfel, Holmes, Kincaid & Barnett 1980). First, a set of reference objects are elicited from a sample of the target population. The interview is in the form of a non-directed probe, in which respondents can use their own words and ideas to describe the domain being investigated (see sample, from the Oneida survey, Appendix B)... This procedure is basic to methods of

cognitive research, notes Tyler (1976: 180):

Nearly all of this work (linguistic) has been concerned with how other peoples 'name' their 'things' in their environment and how these names are organized into larger groupings. These names are thus both an index to what is significant in the environment of some other people, and a means of discovering how these people organize their perceptions of the environment. Naming is seen as one of the chief methods for imposing order on perception.

The major concepts derived from these interviews (by hierarchical clustering techniques) may be regarded as the set of concepts that define that domain for the group (words or phrases most frequently used). This phase of the Galileo procedure has much in common with ethnosemantic approaches. The aim is to discover the emic, "native," category and the concepts which define it for a specific cultural aggregate (social group). As Goodenough (1956) points out, one must first find which terms go together: what is the semantic system? In componential analysis, he states, one determines this "universe" in a manner similar to the Galileo: "Gather all expressions whose denotata make it appear...that there might be some common element in their significata...that they appear to relate to the same general subject matter.."(Goodenough 1956: 195, 198).

In the Galileo methodology, the central concepts are then submitted again to the target population, in a second phase questionnaire, and a comparison of each pair of concepts is requested of members of the

population (a second sample set). These direct measures are direct pairwise estimation of separations and can provide an effective scale of measuring and representing the experiential continuum. The logic is as follows: for any n concepts, it is possible to form $n(n-1)/2$ nonredundant pairs and to ask the respondent to estimate the magnitude of difference between each pair on some (arbitrary) numerical scale. As Woelfel and Fink (1980: 45) report, "each cell of the distance or separation matrix $S_{(ab)}$ is estimated directly, rather than being calculated from still other measures."

For cross-cultural research, the argument has been made that quantitative judgements, such as the direct pair comparisons, might be difficult or conceptually unfamiliar for nonwestern or illiterate people (see Barnett et al. ms: 9: Chu 1964). It was noted earlier that quantitative measures are not the creation of western culture alone, and the estimation of magnitudes of differences, or "separations" between objects in one's environment are common forms of behavior.

The applicability of 5 or 7-point scales as the basis of cognitive models in different cultures might likewise be questioned, but Osgood (1974) has reported "theoretically consistent results" with the semantic differential instrument in twenty-seven different cultures, using languages such as Japanese, Dutch, Swedish, Finnish, Spanish and French. Extensive

research with the Galileo instrument has also been conducted in various cultural contexts, on human emotions, occupational choices, sex roles, the effects of multi-media communications, and many others, and illustrates that the concept of comparing two things, or measuring distances between two objects using some arbitrary standard of measure is a fundamental human activity (Kincaid, Yum, Woelfel & Barnett 1981; Barnett et al. ms.; Woelfel 1981).

Traditional ethnographic instruments such as ranking tasks (e.g., perceived statuses of individuals) are also expressions of measuring distances or magnitudes of difference between two or more objects. The comparison of each concept to the other in Galileo measures not only the difference between any given two, but generates a precise representation of all concepts in relation to one another: the multidimensional, multiconcept space that is graphically represented as a cognitive map. The direct measures of the Galileo questionnaire provide a more mathematically powerful instrument to determine these conceptual distances, and map them.

2.6. Principles of Measurement

Suppes and Zinnes (1963), in their discussion of a basic measurement theory, note that the first fundamental problem is one of isomorphism: to identify isomorphic or similar structures between the empirical situation (i.e. cultural context) and the computational method used. The Galileo theory acknowledges this representational problem with a mathematical model that reflects the object-segregating activity of human groups, and can reveal the multidimensionality of cognitive space.

According to Woelfel and Fink (1980: 39), the "idea that cognitive and cultural processes might be represented as motions in a multidimensional continuum is not a new one." Dimensionality as a device for representing human cognition centers on the multiple concepts that refer to a given domain. Thus, the domain of occupational choices, for example, may be represented in conceptual space with that set of concepts that people use to refer to, think about, or make decisions about, their occupations (e.g., job, teacher, doctor, good, salary, vacation, satisfaction, and so on). Multidimensional scaling routines are distinct in social science research in that they (1) make initial measures of distance, and (2) use some algorithm to measure discrepancies (separations) which are then projected onto coordinate axes (Woelfel & Fink 1980: 40).

Any act of measuring requires, state Woelfel and Fink (1980: 45), "assigning some numerical value to the judged difference between two objects." Semantic differential scales, for example, are designed to rate concepts on a set of bipolar attribute scales, such as "good--|---|---|bad." The difficulty of such indirect measures, remark Woelfel and Fink (1980: 41), is that they may unintentionally "leave out an attribute which respondents use routinely to differentiate concepts." For example, a five or seven point scale measuring attributes of snow among a particular group of Inuit would very likely be an inadequate representation of the experiential continuum and its subdivision by Inuit peoples. The dimensionality of the concept of "snow" might thus be underrepresented, and certain concepts (or dimensions) would be entirely missing. The result, then, can be substantial errors in estimating the dimensionality, and overall separations, in the conceptual space.

The advantage of the Galileo model is that it utilizes native concepts (words, phrases) to create the actual instrument (the interview schedule). The choice of a ratio scale of measure has developed in the Galileo instrument because it is formally infinite: the magnitudes are not artificially restricted to a 5 or 7 point (Likert-type) scale, and finer discriminations of perceptual distances are possible.

The metric multidimensional scaling method (MMDS), of which the Galileo method is one, is also referred to as the classic multidimensional scaling model, and is outlined in the work of Young and Householder (1938) and Torgerson (1952). The logic of MMDS is presented by Woelfel and Fink (1980: 73):

...meaning of any set of concepts may be represented by a NxN dissimilarity (distance) matrix. Each row (vector) of the matrix describes the definition of a concept, which is defined as the symbols' relation to all the other concepts. The resulting distance matrix provides a static picture of the interrelationships among a set of concepts possessed by a single individual. This separation (mean distance) matrix \bar{S} has the elements:

$$\bar{s}_{ij} = \sum_{p=1}^n s_{ijp} / n$$

where i and j are each pair of objects (concepts from the respondents) measured.

In the field of communication research, it is typical that two of the objects (concepts) being measured are assigned some numerical value. All other pairs of concepts in the given domain are then compared as ratios to this "criterion pair" (Woelfel & Danes 1980). An example of the utility of the criterion pair is its analogy in conversational form: "Tela and good are 5 units apart." From the assignment of a relationship between Tela and good, one can, from that standard reference frame, measure other individuals or objects relative to this criterion: "Harlan and good

are n units apart" (a higher number, if Harlan is not as "good," in the respondent's view). Setting this arbitrary standard provides the respondent with a "measuring stick" to compare perceptions (according to Piaget, this would mean assimilating and accommodating new experiences).

As Woelfel and Danes (1980) report, "since the (coordinate) axes in multidimensional space have an arbitrary orientation, some scheme of rotation and translation is necessary to "match" the spaces as closely as possible before...comparisons are undertaken." Succeeding transformations of the original interpoint matrix are designed to establish a common frame of reference: between respondents, or across time periods.

A derivation matrix is the result of the conversion of the original dissimilarities matrix (means matrix). This derivation matrix is then converted into a scalar products matrix (multiplying through by its transpose; described by Woelfel and Danes 1980). The resulting scalar products matrix is transformed to principle axes, the result being the desired matrix \bar{R} (Woelfel & Fink 1980). These transformations are required to convert the original data into a multidimensional coordinate space.

Another important dimension of the MMDS model is that in the metric analysis of ratio-scaled data, which

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Another important dimension of the MMDS model is that in the metric analysis of ratio-scaled data, which

has been here "averaged over" the sample, "all or nearly all eigenvectors (dimensions) are retained, including the imaginary eigenvectors" (Woelfel & Danes 1980). These imaginary eigenvectors, they state, "are the result of violations of the triangle of inequalities usually found in empirical data-sets," and must be accounted for in the analytic algorithm. The Galileo method recognizes that this triangle of inequalities is an expression of the non-linear aspect of the space of human cognition: Riemannian space represents this "curvature" of space more accurately.

In the vernacular, an example of this result might clarify its implications for the investigation of human behavior. A triangulation joins together three concepts in a cognitive (semantic) domain when an individual determines the relationship between, for example, Jobs---Good---Self. If the pair-comparison of Jobs to Good elicits "24" units (close or similar, let us say), and Self and Good are equally close (20 units), but the perception of the distance between Jobs and Self is reported as "100" units, it is clear that the perception of the three related concepts is non-linear (i.e., could not be represented by Euclidean space; Woelfel & Fink 1980: 78). In mathematical terms, the space that represents this condition is Riemannian. The mathematical model has evolved as a consequence of, or in response to, the properties of human cognition. The

Galileo metric attempts to represent the apparent shape and quality of perceptual this space, as well as the multidimensionality of cognitive and cultural reference frames.

To follow the proposition of Durkheim (1951) concerning the collective consciousness, culture may be perceived as follows: "the aggregate psychological configuration which constitutes culture may be represented as the average distance matrix, generated from a representational sample of the population..." (Barnett et al. ms.: 8). This is a mathematical expression of cognitive anthropological principles. A definition of "culture" is not confined, within the Galileo theory, to this aggregate, which produces a model that is descriptive, structural. Cognitive systems may be investigated more systematically and more usefully by outlining the dimensions of cultural processes and using tools such as the Galileo to examine cultural change through cognitive processes.

Cultural process, or the dynamics of the experiential time-space continuum, "can be recorded in successive matrices as known time intervals and the changes between matrices calculated" (Barnett et al. ms.: 8). Movement of concepts within the cognitive space denotes belief or attitude change, measured by the altered relationships between the concepts, which with MMDS, have been measured very precisely by means of a

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ratio scale.

The problem with scaling procedures, as suggested by Suppes and Zinnes (1963), is that no direct correspondence exists between scaled values and psychological phenomena themselves (see also Wallace 1956, on the psychological validity of componential analysis). An assumption of normal (canonical) distribution in statistical analysis, for example, will result in the adjustment of the units of a scale until the assumed distribution is recovered (Stevens 1951: 27-28). The value of mathematical models of human behavior is not in their exact representation of such phenomena. None of these choices of scaling procedure are "correct," but some are more useful than others in analyzing and predicting human behavior.

Several advantages of the Galileo metric multidimensional scaling instrument center on its high degree of precision of measure, that is, a goodness of fit to observed human behavior. The use of a ratio scale and an infinite symbol set can provide an important advantage in accurately portraying the "cognitive map," and how changes in cultural attitudes and beliefs might be traced over time.

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3. NATIVE AMERICAN EDUCATION: HISTORICAL DEVELOPMENT

3.1. Introduction

The shaping of Native American education did not begin with the arrival of the Europeans in the fifteenth century. The contact period is merely a marker of change in the socialization and education of native peoples, many pre-contact traditions having been lost or radically changed.

The following exposition is designed to show how a unique reference frame for the educational process has evolved historically for Native Americans. Neisser (1962), in an article on "cultural and cognitive discontinuity," states that a process of "cognitive reorganization" occurs with the modification of a way of life, and concomitant with this "external" change process is an "accommodative cognitive change:" "Every cultural transformation, whether it is viable or not, will be accompanied by changes of schema, or mode of thought, that must have consequences for memory" (Neisser 1962: 70). The reorganization of Native American lifeways to accommodate an expanding EuroAmerican culture is epitomized in the history of Indian education. How Native people group "educational" phenomena within distinctive conceptual categories is

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the focus of this chapter.

Today Native American education is a field of research developing through the coordinated efforts of Native American peoples and other educators and consultants. This is a significant departure from the past. Since the early 1800s~~s~~ in the United States, federal agencies and their representatives have sought to shape and control Indian educational policies. Written histories of Native American education attest to the fact: the most appropriate framework for presenting the development of education is considered to be the political, legal and economic policy history of the federal government. U.S. federal treaties and statutes have set the precedents in Indian education, more than have historical landmarks in the public education system.

Publications by both Indians and non-Indians have recognized several distinct periods in the history of Indian affairs, and these are acknowledged as well in the following essay. First is the conquest and treaty-making era, with forced removal and relocation of Indians westward, and the domination of the religious missionary in "civilizing" the Indian. The Allotment Act of 1887 and assimilation policy of the federal government marks a second period: the beginning of federal control of Indian education and the evolution of the off-reservation boarding schools.

A third period could be described as the reorganization of federal programs in the 1930s and the return of Indian self-government, through the impetus of the Meriam Report on Indian Affairs and the government's "New Deal" policies. Following World War II, a fourth period or phase is initiated by a return to assimilationist policy, called "termination" in the 1950s. At this time there was a new direction in leadership forming in Indian communities, and a reconsideration of the value of formal education. Since the 1960s, Indian affairs have become a question of self-determination and of growing control of Indian education: a fifth and current era.

In general, it might be said that federal policy has alternated between a protective, guardian-ward relationship with the Native American people, and aggressive legislation to assimilate or terminate Indian lifeways. Indian tribes, nations - their traditions and cultures - have survived. One idea that has undergone a good deal of change for Native peoples is that of education as formal and institutionalized. Formal education has acquired its own unique concerns and characteristics among Native American people, being as much the product of traditional lifeways as of federal educational policies. Many Indian groups are active in efforts to find alternative educational models to the public school system.

The following chapter is intended to review briefly some of the significant events that have occurred historically in Native American life with reference to education. The eventual recognition of the culturally-distinct educational needs of Indian youth is the result of this history. Ideas about the learning process and attitudes about education are the central focus here: how they have changed or not changed, and what the important issues are for both educators and Native American communities.

3.2. Federal-Indian Obligation: The Religious Missions

The involvement of religious missionaries in Indian education began with the arrival of Europeans on the American continent. The processes of civilization and Christianity "were consistently linked with one another" report Provenzo and McCloskey (1981). As early as 1712, the Mohawks (Iroquois Confederacy in New York), with the assistance of Reverend Thomas Barkley, an Anglican missionary, built and operated their own school (Fey & McNickle 1959). This was over one hundred years before the Monroe Congress was authorizing funds for such purposes. In 1755, Eleazar Wheelock, a Congregationalist minister, founded Moor's Charity School in Lebanon, Connecticut to train Indian youths in

a course of study including reading, writing, arithmetic, English, Greek and Latin. Eventually, Dartmouth College was established from this beginning. Both independent itinerant teachers and missionaries began teaching among the Cherokee in Georgia. By the 1820s, the Cherokee Council had adopted a national Cherokee language syllabary developed by the Cherokee Sequoyah, and had established a number of common schools with funds from their land cessions.* The high degree of literacy and educational attainment among the Cherokee and the Choctaw people is well-known in the historical literature, including the publication of a tribal journal. Their forced removal westward in the 1830s interrupted these educational developments only temporarily (Malone 1956).

The perceptions of tribal elders and chiefs during the early 18th century is recorded in many historical documents. Clearly some of the earliest educating and "civilizing" efforts of the missionaries and other agents were seen for the cultural biases they represented. In response to Benjamin Franklin's offer of education to Indian youths in the late 1700s, one American Indian leader replied,

You who are wise must know that different nations have different conceptions of things and will therefore not take it amiss if our ideas of this kind of education happen not to be the same as yours. Several of our young people were formerly brought up at the colleges of the northern provinces; but when they came back to us, they were bad runners,

ignorant of every means of living in the woods...totally good for nothing. We are, however...obliged by your kind offer...and to show our grateful sense of it, if the gentlemen of Virginia will send up a dozen of their sons, we will take great care of their educations; instruct them in all we know and make men of them. (in Fuchs 1970: 54)

The European colonists themselves had come from a continent in which education was strongly influenced by religious institutions for many centuries. Sullivan (1937), in her examination of the history of literacy, indicates that the fall of the Old Roman Empire was simultaneous with the rise of the Christian Church - the new "civilizing agent of the Western World."

In the sixteenth century, the Protestant Reformation had a profound effect on the nature of religious instruction: it introduced an emphasis on the "common man's" access to the Bible, and the invention of printing made this a reality (Havelock 1973). Laubach (1960: 16), a missionary who pioneered in literacy work, wrote that "the belief that everyone has a right to read and write is modern; it came out of the Protestant reformation." Thus the origins of compulsory, systematic, formal education, in the Old World as well as the New, has been relatively recent.

Lockridge (1974: 43) notes that in the New World, the "Puritan respect for education" was imoetus for the eventual establishment of a public school system. However, the aim was not so much to liberate men - or

Indians - or to create an equality by education, so much as to satisfy the religious goal that all people should have access to the Word of God, the Bible.

Thomas Thompson (Blackfoot) (1978) refers to the early Indian-White contact period as the Epoch of Evangelical Control. The early funds made available by the U.S. government for instructing the American Indians were generally contracted by the various missionary societies (Ryan 1982). It is these groups who introduced the modified European models of education: apprenticeship training, Latin grammar schools, elementary reading schools (Pulliam 1968). According to Deloria (Sioux) and Lytle (1983) the humanitarian efforts of the missionaries were still essentially directed toward assimilation: "they deeply believed that successful defence of Indian rights and any assurance of equality for Indians meant complete absorption into the mainstream of American society." In the nineteenth century, prior to the Civil War, it was popularly believed that the Indians could not be civilized. Settlers on the western frontier were most likely to subscribe to such negative views of American Indian peoples. Also, government efforts to remove and relocate tribes westward did not encourage egalitarian recognition of Indian peoples.

In 1817, the then U.S. President James Monroe proposed, in his first message to Congress, that

"efforts be made to preserve, and civilize the original inhabitants" (quoted in Fey & McNickle 1959: 108). Two years later the Congress passed the Act of March 3, 1819, known as the Civilization Fund. It carried an appropriation of \$10,000 for the first year (Ryan 1982). This act served as the fundamental authorization for educational policies and activities carried on by the federal government through the 1870s. Specifically, it proposed to "instruct them (the Indians) in the mode of agriculture suited to their situation, and for teaching their children in reading, writing, and arithmetic..." (Ryan 1982).

From 1778 until 1871, the United States was engaged in treaty-making with various American Indian tribes, establishing or redesigning land claims, acknowledging and rewarding assistance during the Revolutionary war, or setting the terms for removal of tribes from the East to the Western territories. The first provision for training or instructing Indians is found in the 1794 treaty between the United States and the Oneida, Tuscarora and Stockbridge Indians in New York (7 Stat., 47. Proclamation June 21, 1795). In addition to the building of a saw mill and grist mill, a sum of \$5,000 was to be distributed to these tribes in reward for their assistance to the colonists in the Revolution, and for the loss of their lands. Article III of the treaty states that "the U.S. will provide, during three years

after the mills shall be completed, for the expense of employing one or two suitable persons to manage the mills, to keep them in repair, to instruct some young men of the three nations in the arts of the miller and sawyer..." (Kappler 1904: 38). Numerous other treaties made individual provisions for instruction, the hiring of teachers, the construction of schools (see Kappler 1904; Thompson 1978). The Civilization Fund in 1819, however, established a general obligation to all of the tribes, whether individual treaties contained educational provisions or not.

In 1824, the Bureau of Indian Affairs was established within the War Department, with a post for a Commissioner of Indian Affairs created in 1832. From 1849, however, the Bureau of Indian Affairs (also referred to as the Bureau, Indian Service, or B.I.A.) has been under the direction of the Department of the Interior, the administration of Indian lands being a central function.

In the eastern United States, one intellectual current affecting the developing educational institutions in the mid-19th century was known as unilinear evolution, a model of social progress. Lewis Henry Morgan, who is credited with publishing the first ethnography of an American Indian people (1851, *The League of the Iroquois*), presented the theory that peoples other than those of "civilized" European

derivation could be classified under one of several progressive evolutionary stages of savagery and barbarism. Fundamental to this position was the notion that native peoples could be said to be evolving toward civilization, but were living at present at a lower stage of cultural evolution. As a result of living at this primitive, lower stage, American Indians were victims of misguided or "faulty" reasoning. They were, however, educable, given the proper guidance and civilizing influence of the European missionary-reformers.

By the late 19th century, the federal government was seeking a unified approach to Indian affairs in a policy of assimilation. The current of opinion began to move against the sectarian schools attended by Indian youths (Provenzo & McCloskey 1981), and in general against a separation of the Indians in the schools or on the reservation. Factionalism and competition for government contracts had intensified in the 1880s, until finally by the end of the 1890s, the Protestant sects withdrew from the funding programs and left the Catholic missionaries with 98% of the funds available for contract schools (Ryan 1982). In 1897, Congress declared that no further public funding shall be set aside for the use of mission schools. This policy was amended and upheld by the Supreme Court in 1908, to allow the use of tribal funds for sectarian schools when

specifically requested by a tribe (Fey & McNickle 1959).

By the end of the nineteenth century, missionary reform movements were in decline, as was their dominant influence over Indian education. Mission schools have, of course, continued to be a viable option for many Indian communities. Szasz (1974: 203) records that in 1930, 8.3% of Indian children in school were still in mission schools (6,000 of 72,000 children).

In 1955, the Catholic Sioux Indian Congress in Rosebud, South Dakota, testified before a Congressional hearing (in Szasz 1974: 203):

We Indians are more and more convinced of the absolute necessity of educating our children well in these difficult times of transition for our people. We believe that the mission schools have in the past and are today an invaluable service in helping our people.

The B.I.A. Statistical Report (1969: 7) reveals that 6% of Indian children were in mission schools in that year (10,500 of 178,000), a testimony to the influence of the early missionary work in conversion and education and to the continuing efforts of religious educators.

3.3. Allotment and Assimilation: The Boarding Schools

Already by 1842, thirty-seven Indian schools were being run by the federal government under the Bureau of Indian Affairs. In 1860, the first federal boarding

school was opened on the Yakima Indian Reservation, Washington. Thompson (1978) identifies 1870 as the beginning of an Epoch of Federal Control. Key to developments in Indian education during this period (approximately 1860 to the 1920s) is the assimilation policy of the federal government. In 1871, an act of Congress brought the treaty period to an official close. Funding of schools was designed to move Indian youth away from the reservations and to teach them to become citizens in mainstream America.

There were, however, individual efforts by tribes such as the Cherokees and Choctaws to develop their own educational programs. By 1852, these tribes had re-established school systems in their new territories in the West, the Cherokees with 26 elementary schools and two academies with enrollments of 1,100. The Choctaws had nine schools, seven of these experimenting with teaching reading and writing to adults. Teachers from the East came to teach advanced academic work, with a course of study including music, astronomy, Latin, botany, algebra, and elocution (Fey & McNickle 1959).

In the United States at this time, the rise of agricultural common schools, or manual labor schools, constituted a move toward utilitarianism in education according to Ryan (1982: 424). This direction was also reflected in the Bureau schools for Indian youth. Appealing to Bureau administrators was the economics of

the common school: the curricula included the requisite labor of the Indian children, and decreased the cost of maintenance and operation. Indian agents of the Bureau were politically appointed; they were responsible, in turn, for appointing the boarding school teachers. There was no uniform or ~~standardized~~ course of instruction throughout the Bureau's school system.

In 1878, General Richard H. Pratt founded the now-famous Carlisle Indian school in Pennsylvania, a large multi-tribal off-reservation boarding school. One of the first of its kind, Carlisle was dedicated to principles of military discipline, and to the eradication of Indian culture, language and religion. By 1884, five more boarding schools had opened: Chemawa (Forest Grove) in Oregon, Genoa in Nebraska, Haskell in Lawrence, Kansas, Chilocco in Indian Territory (present state of Oklahoma), and also at Albuquerque in New Mexico (Jackson & Galli 1977). An Act of July 31, 1882 (22 Stat. 181) authorized the Secretary of War to use vacant army posts and industrial training schools for the Indian boarding schools. This Act, indicate Deloria and Lytle (1983: 11) was a "major commitment by the U.S. to Indian education," establishing funds for centers of instruction. These educational provisions went well beyond the Congressional appropriations of the previous half-century. Here was an explicit national education program for American Indian youth, but one intended to

implement assimilation and eventually to free the federal government of its treaty obligations.

Indian land policy was key to this shift in educational emphasis. The Allotment Act of 1887 (Dawes Act) was designed to "allot" limited plots of land to individual Indians. Many of these tribal peoples had had no previous traditions of private ownership, or experience in cultivating the land. The government encouraged farming of these plots, envisioning the subsequent assimilation of Indian peoples into the wider social network - one which centered upon the White towns rather than the Reservation communities. This policy also coincidentally freed large tracts of Indian land that was "left over" after allotment of individual parcels: a surplus devised to make available additional tracts for settlement by non-Indians (Ryan 1982).

In the late 1800s and early 1900s, the Indian boarding schools were a clear expression of the assimilationist policy. They were located far from the reservations, and children were permitted to return home only infrequently. In addition, an "outing system" was instituted to "complete the training" of Indian youths when finished schooling, by placing them with White families for three years more (Fey & McNickle 1959: 116). One Hopi woman recalls her experience in boarding school, saying,

Policemen gathered us up like sheep. I was scared to death. My mother tried to hide

me...but the police always won. I was there three years...I was so glad to get home that I cried and cried. Glad to have Hopi food again, fun again. (in Eggan 1963: 327)

The apparent success of the boarding schools led to Congressional increases in the annual federal appropriations to Indian education. In 1870, \$100,000 was appropriated, and by 1900, \$2 million. By 1885 also, the merit system of appointment that was affecting government employment policies throughout the states was instituted for Indian Service personnel. In 1891, agency Superintendents, physicians, matrons and teachers came under the civil service system, moving away from the old patronage system with its political appointments, and from the hiring of unqualified and incompetent educators (Fey & McNickle 1959).

While Pratt at Carlisle and other administrators were merited with an acculturation policy that was working, there were questions being raised concerning the real effectiveness of the boarding school system. Says Szasz (1974: 10), "the most convincing criticism was that many Indians who attended the schools 'returned to the blanket.'" That is, Indian youths were returning to the reservations and to a traditional lifestyle without applying or using the boarding school training. Pratt (1897: 14) was aware of this possible consequence of the multi-tribal boarding schools. "No better means," he wrote in his Annual Report, "of perpetuating

tribalism and Indianism can be inaugurated than a system of schools holding the Indians together." In the Annual Report of 1908, Pratt wrote again that the result of "mixing the tribes" was nationalizing the Indian people (Pratt 1908: 19-20; also McBeth 1983). Pratt's comments proved to be prophetic of events that occurred later in the 1950s. Rather than serving as temporary institutions to process "assimilated" Indians, the multi-tribal schools brought Indians together with opportunities to learn of each others' traditions, shared hopes and concerns, and a common pride in their distinctiveness, their "Indianness."

As a special field of cross-cultural investigation, anthropology became firmly established by the late 19th-early 20th century. Professional organizations produced influential scholars working in American Indian archaeology and ethnology. In 1856, Samuel Haven of the American Antiquarian Society rejected the popular thesis that the burial mounds found in the central U.S. were the product of an ancient, lost Moundbuilder race rather than the artifacts of ancestors of the "savage" Indian tribes (Willey & Sabloff 1974). Controversy over the origins of the American Indians nonetheless continued, until in 1894, Cyrus Thomas of the Bureau of Ethnology (Smithsonian Institution), presented scientific evidence that discredited the myth of the Moundbuilders. The effect of this and other archaeological and ethnographic

work was to establish and identify the reality of American Indian civilizations, prior to the arrival of the Europeans. But in fact, as Willey and Sabloff (1974: 50) point out, "it did nothing to change the prevailing popular attitudes against the American Indian." Policies of the dominant White society that were influencing Indian life were formulated in political circles, and here anthropologists and other social scientists had no consistent influence. Ethnographers were concerned with the task of recording the lifeways of native peoples that were quickly being lost, languages that were dying out, and communities that were disintegrating in the face of Euro-American political, economic and religious conviction.

A special interest in education developed within anthropological circles, and in 1904 Edgar Hewett published the first article on the relationship between anthropology and education. The emphasis of Hewett and other researchers was on the importance of socialization as (informal) education of a child, especially in cultures where no formal educational institutions existed (for example, Malinowski's article on African education, 1936; Johnson's 1943 "education without schools;" or Redfield's 1943 analysis of Guatemalan education). These early works were laying the groundwork for the decades of research to follow. Important to American Indian education was the

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identification and understanding of the pre-school socialization process as a vital period of learning and development for the child one which occurred within his or her own cultural milieu. Ethnographic data could reveal a fundamental error in the federal policy of assimilation through boarding school training: an Indian child already socialized, perhaps exclusively within his or her own culture at an early age has acquired an understanding of the meaningful organization of the world around him or her. Introduction into the boarding school environment at that point meant alienation from one's own cultural values, not a ready impression of White values, and in far too many cases, not assimilation. A Hopi man's memory of four years in a federal boarding school is quoted in Eggan (1963: 327):

We worked like slaves for our meals and keep...we didn't learn much...I didn't understand and it was hard to learn... At that time you do what you were told or you get punished... You just wait 'til you can go home.

Federal policies pressed for assimilation and used education as a major instrument, but effects appeared to be equal and opposite for Indian people. Off-reservation boarding schools were intended to force children away from tribal culture and toward White society. Students returning to the reservations often did face difficulties in re-entering tribal life. The "either/or" philosophy of assimilation, says Szasz

(1974: 10), forced the students to choose one culture or the other, and in some cases, face ridicule both on and off the reservation. Segregation into Indian-only schools also had the effect, however, of mingling youths of different tribes who shared experiences and identification with other American Indians, where no such cross-cultural identifications existed before.

Similarly, the policy of allotment forced many reservation people into settlement and cultivation of individual plots of land, and disrupted community life. This was intended to re-orient tribal peoples, it was reasoned, toward economic and social compatibility with the larger society. But another effect of allotment was major losses of these traditional lands by Indians who were ill-equiped to live by cultivation. Rather than dispersing many communities, the result was a class of impoverished, landless non-citizens.

During the first quarter of the twentieth century, Indian school enrollments were increasing. Fey and McNickle (1959) report these figures:

1900	26,451 students
1926	69,892 students

Since 1890, the Bureau had begun reimbursing public schools for their cost increases in taking Indian children into the schools. Only 900 Indian youths were enrolled in public schools in 1909, but by 1926, over half of Indian students were in public schools (37,730

of 69,892) (Szasz 1974: 203).

The development of the public school system in the United States and the introduction of the reservation day school offered viable alternatives to the boarding school system in the early 1900s. Indian parents who had been hostile to the sometimes forcible seizure of their children for education in the Bureau schools found the day schools in the community more acceptable. These community-based schools increased in number with the turn of the century (Szasz 1974).

3.3.1. Public Schools in the Early 1900s

In the American public school system, John Dewey at the University of Chicago was introducing a new philosophy of education. Dewey's ideas, called "Instrumentalism," gave impetus to the Progressive Education movement (Pulliam 1968: 80, 97). His innovative suggestions appeared in "Democracy and Education" in 1916. Three years later, the Progressive Education was founded.

Fundamental to Dewey's philosophy is the idea that learning should be child-centered, activity-centered, and derived from the life of the community, both in intent and content. Curricula should be based on "natural needs and interests of the children" in "activity curricula" (Dewey 1900(1956): 15). Although

he was not directly addressing the problems of Indian children in school, Dewey elucidated problems in general with the traditional American classroom, the same classroom that was becoming more and more a part of the Indian child's socialization process:

From the standpoint of the child, the great waste in school comes from his inability to utilize the experience he gets outside the school in any complete and free way within the school itself; while on the other hand, he is unable to apply in daily life what he is learning in school. (Dewey (1900) 1956: 75)

Dewey could have been referring to Indian children directly when he wrote these words. In 1913, Thorndike was also outlining general principles of learning within the field of educational psychology, and these and other educational innovations were influencing, if not readily replacing, the earlier emphases on reading and the accumulation of knowledge as the business of education.

Progressive educational curricula included physical education, nature study, music, handicrafts, field geography, drama, storytelling, games, and concepts of numbers, with creative and group activities the focus. The aim was to develop the "whole child," with physical and social well-being in mind as much as academic achievement. Progressive philosophy did not gain the momentum that some of its proponents had hoped, and factionalism split the Association, leading to its decline (Pulliam 1968). These ideas, however, and the

innovations of Maria Montessori in pre-school learning environments were changing ideas about instruction and teaching methods in American public school education.

The presence of federal control over Indian education throughout this period, i.e., 1890-1930, precluded an extensive development of new methods and innovations in curricula. By the 1920s, some of the boarding schools were being closed, and day schools consolidated. Write Deloria and Lytle (1983: 12): "It was the first indication at the reservation level that the government knew its goal of assimilation had been a miscalculation of major proportions." The Bureau had become known for bureaucratic inefficiency and ineffectiveness, and the effects were observable in the federal schools. Szasz (1974: 12) describes the conditions of the tribes generally at this time: "By the end of World War I, (the Indian) was suffering increasingly from disease and a short life expectancy, malnutrition and starvation, a diminished land base, and a stagnant, unrealistic school system."

The movements toward placing Indian education within the framework of public school systems grew, and in 1921, the Snyder Act (42 Stat. 208; 25 U.S.C. 13) gave the Secretary of the Interior general authority to provide educational funds to local school districts. This gave states more incentive to increase their responsibility for Indian education and acculturation

(Deloria & Lytle 1983; Andriot 1984). Thus could the states also recover what they perceived as financial losses, by the presence of non-taxable Indian lands within the boundaries of their school districts.

In 1924, federal law proclaimed American Indians to be U.S. citizens (Ryan 1982). Also in this year, the California case *Piper v. Big Pine School District* (193 Cal. 664, 226P 926 1924) guaranteed Indian children the right to attend public schools rather than separate schools for non-White children (Deloria & Lytle 1983).

3.4 Meriam Report, New Deal and Indian Self-Government

In 1927, the Grand Council Fire of American Indians prepared a memorial to Mayor William "Big Bill" Thompson of Chicago. They protested the falsifications and distortions of Indian people in American school textbooks (Costo & Henry 1970: 2). This was a first official protest of a group of Indian tribes, and in the following year, another official protest of the B.I.A.'s programs and policies brought national attention to the issues. Lewis Meriam (Meriam 1971) and the Brookings Institution produced an important document titled "The Problem of Indian Administration," under contract to the Secretary of the Interior. The Meriam Report was an evaluation of the failures of the Indian Bureau to

provide adequate management of Indian affairs. The educational section of the report was written by Carson Ryan, an educator involved in the Progressive Education movement. The section report documented in particular the failures of the boarding schools. Problems and issues addressed included food service, medical services, overcrowding, the existence of student labor, teacher qualifications, inadequate vocational training and secondary or higher educational opportunities, high drop-out rates, and over-agedness of children in individual grades. Recommendations of the report stressed the cultural approach: differences among tribes must be recognized and developed within the classroom materials, and the Indian child's need for the home and community environment should be acknowledged.

In the reform atmosphere of the 1930s and President Roosevelt's "New Deal," an "Indian New Deal" was initiated under a new Commissioner of Indian Affairs, John Collier (term of office 1933-1945). His efforts and those of his successor Willard Walcott Beatty (term 1945-1952), a Progressive educator, saw the potential in Dewey's ideas for Indian cross-cultural education (Szasz 1974). New and forceful leadership in the B.I.A., and increased Congressional funding for experimental programs, helped change the education division in the Bureau during this era. Collier (1934: 41-42) noted that land problems constituted an "economic handicap"

for the tribes - over 90 million acres of original holdings lost during the allotment period, with only forty-seven million acres remaining. These conditions militated against effective reform in Indian education, medicine, and other services, since the largest budgetary expenditures in the Bureau went into land administration.

For the first time in Bureau policy, Collier challenged the prevailing "either/or" concept of education. American Indians, he believed, could and did live in both worlds. Collier introduced programs in bilingual education, adult basic education, training for Indian teachers, Indian culture, and teacher in-service training (Ryan 1982). Anthropologists and other specialists were being utilized to clarify B.I.A. programs and aims. Anthropologist Mekeel's (1936) field report to the Office of Indian Affairs in 1932 expressed the opinion that education for the Sioux children in Pine Ridge (South Dakota) was a problem not only of an individual being educated, but of community participation in the educational process. Previous methods of "reconditioning" a child to White culture were unsuccessful because the Indian child came to school already inculcated with "configurations and attitudes," says Mekeel (1936: 152) with which he or she viewed the world.

The Indian Reorganization Act (I.R.A.) in 1934

ended the policy of land allotments (48 Stat. 984, 25 U.S.C. 461 et seq.). Tribal governments were given official sanction with a right to form and adopt their own constitutions and by-laws. Community day schools built during this period appeared to be less restrictive and more tolerant of Indian customs and languages (Fuchs 1970).

Also in 1934, the Johnson-O'Malley Act (Ap. 16; 48 Stat. 596) was passed in Congress, providing assistance to public school districts for each Indian student enrolled. This act expanded the powers of the 1921 Snyders Act. Johnson-O'Malley (J.O.M.) was intended to simplify administration of Bureau contracts with school districts by passing on the administration of funds to the respective states. However, Beatty at the B.I.A. found that state education systems were not interested in applying the funds toward Indian enrollments. The results were frequently inferior educational opportunities for Indian students. Often no special programs were developed and most J.O.M. money went into the general school budgets (Szasz 1974).

The 1920s to 1940s were generally more hopeful and innovative years for Bureau administration of Indian education, in contrast to the years of assimilation and allotment. There were some advances in a philosophy of Indian education, especially in the recognition of cultural differences and tribal self-rule. It was

generally felt in the United States that the Bureau was meeting the needs of Indian people more effectively, but, says Szasz (1974), they still neglected formal inclusion of American Indians in the decision-making process. The increasing involvement of the states and the public school districts also revealed a new source of difficulty in the acquisition of quality education for Indian people: the control of funding shifting between federal and state agencies. By the late 1940s, however, after World War II, a new direction in federal policy would adversely affect American Indian tribes, and by extension, the development of Indian education.

3.5 Termination and Post-World War II America

World War II affected American Indian communities in at least two important ways: the enlistment of Indians in the armed services, and the movement of Indian people off of the reservations for war jobs, into the urban areas. Says Szasz (1974: 108), "Families and homes were uprooted, perspectives were broadened and changed." Many Indian servicemen and civilian workers who returned to the reservations brought with them a new perception of the egalitarian status of American Indians in the society. For these individuals and their families, increasing attention was being paid to the

potential of formal education and the value of higher education. A more politically aware and experienced Indian leadership would be confronting federal policies in education.

In 1944, the report of the House Select Committee to Investigate Indian Affairs and ~~Conditions~~ criticized the trend toward use of reservation day schools, and returned to the assimilationist view that the off-reservation boarding school would be the most appropriate vehicle by which Indian children would "accept and appreciate the white man's way of life" (Szasz 1974: 109). Day schools were one form of federal schooling with some degree of support among Indian people, but Congress was more concerned with cutting post-War expenditures. Thus the B.I.A.'s budget came under renewed attack.

The House Concurrent Resolution 108 (1953) marked a reversal in the federal policy of the earlier decades of the 1900s, returning to relocation and termination of Indian tribes. Employment assistance programs were created to relocate thousands of Indian families to urban centers for available job training programs. Bureau schools in operation were directed to emphasize vocational education. Forced integration again was viewed as the means to raise the Indian child's low level of academic achievement, according to federal authorities (Ryan 1982: 426). However, adverse effects

of termination, such as those suffered by the Klamath tribe of Oregon and the Menominees of Wisconsin, led eventually to a re-evaluation of the policy. By 1958, legislative detribalization efforts lost their momentum (McNickle 1973). During this period, the Bureau was under the direction of Hildegard Thompson (term of office 1952-1965). The heavily restricted powers of the agency prevented any major developments in Indian education.

It was not the B.I.A. nor the various reform groups who successfully fought the termination efforts of the U.S. Congress; it was organized Indian leadership. The National Congress of American Indians founded in 1944 was just one of a number of growing pan-Indian, national native groups forming (Szasz 1974). This legislative fight against termination gave Native Americans experience in wielding political power to protect their interests, and served to unify the peoples of different tribes in the manner that Pratt at Carlisle had predicted in the late 1800s.

3.6 Self-Determination: Indian Control of Education

In the 1960s and 1970s, the number of pan-Indian organizations grew. The American Indian Historical Society was founded in 1964 in San Francisco. Its goal

in particular was to correct "erroneous school textbook portrayals of the American Indian" (Thompson 1978: 173). In 1970, the Society sponsored the First Convocation of Indian Scholars at Princeton University, and a second Convocation was held the following year in Aspen, Colorado. At the 1971 Convocation, John Woodenlegs (Northern Cheyenne) put into words the feelings that he shared with other Indian people:

What philosophy is best for me and my people in using the learning I get from two cultures? Be proud to be an Indian. Use all the good of Indian ways to keep you strong and happy. Use the non-Indian education so that you can make a living, take care of your loved ones, help other people, help your community be a good place to live. (in Indian Voices 1974: 46)

The concern for improving American Indian education, especially in the inadequate curricula in public school systems, refers in no way to a desire for assimilation. Jeannette Costo (Cherokee) (Indian Voices 1974: 96, 100) pointed out that "we should consider the possibility of an educational system which is not yet in existence, but which could be founded by the Native people." The development of unique curricula had already begun in experimental schools such as Rough Rock on the Navajo reservation in the southwest. Says Johnson (1968), the importance of these schools is in the involvement of Indian parents and in the leadership of the all-Indian school boards.

In 1970, the National Indian Education Association was formed in Minneapolis, and the Coalition of Indian-

Controlled School Boards, Inc. (CICSB) was founded a year later in Boulder, Colorado, also to address issues of educational reform (Szasz 1974). During this time, a new scandal had arisen in the Bureau of Indian Affairs concerning the mishandling of federal funds for Indian students. Indian organizations as well as other groups brought attention to these findings, and a special Congressional subcommittee was appointed to investigate. In 1969, the (Edward) Kennedy report was published, entitled "Indian Education: A National Tragedy - A National Challenge" (S. Report No. 91-501, 91st Congress). The Kennedy report brought attention to the fact that in the forty years since the Meriam Report, which had addressed the very same issues, there were no appreciative changes in the quality and extent of Indian education, nor had many of the recommendations of the 1928 report yet been implemented.

While the Kennedy Report in 1969 brought much national attention to Indian education, there was still concern that this report also did not adequately explain the historical reasons for the failure of federal programs, nor adequately recognize the fundamental cultural differences in Indian and White perspectives on education (Deloria & Lytle 1983; Szasz 1974).

In 1969 also, the Bureau instituted project T.R.I.B.E. to yield more school control to Indian communities (Thompson 1978: 174). In the next year, the

first Indian-controlled high school opened at Ramah on the Navajo reservation.

Indian education in the 1960s and 1970s is still showing the effects of the mixed history of Federal and Indian affairs. There exist federal boarding schools and day schools, Indian-controlled schools, and public school districts with Indian enrollments. In 1979, the Bureau published the annual statistics concerning Indian education. It was recorded that in schools receiving government funds, 221,271 Indian children are enrolled: 23% in federal schools and 77% in public schools. Use of public school facilities has increased as the numbers of American Indians in urban areas has grown: 52.7% of the Indian population, according to the 1980 U.S. Census. Although the Kennedy Report had recommended "equal opportunity" for Indian children, the differences in the socio-cultural backgrounds of the Indian and White child could not be ignored. Ryan (1982: 427) records testimony in the Congressional Record of 1971:

Since most Indian children begin school with environmental handicaps of rural poverty, cultural isolation, low level of parent education, and in many cases...a non-English native language, equality of educational inputs requires greatly superior in-school resources of teachers, curricula, facilities, and equipment to balance the inadequate preschool preparation of most Indian children.

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Anthropological research on education and socialization of Indian children has also brought attention to these issues, as well, and there appears to be a greater

degree of accountability in social science research toward Indian leadership, and cooperation in defining the issues, needs and goals in Indian education.

Rohner (1965) working among the Kwakiutl Indians of Gilford Island in British Columbia, writes that "a fundamental difference between formal education and the sociocultural system of the Kwakiutl lies in the method of learning" (IBID: 335). Kwakiutl children learn by observation, manipulation, experimentation; but in the schools, verbal instruction is the central method, with reading and writing in the classroom and emphasis on language skills. The importance of the pre-school socialization process is also recognized in Eggan's (1963) work with Hopi children. Eggan notes that the inculcation of values of interdependence, within the Hopi maternal extended family, rather than independence such as the schools foster, create conflicts for a Hopi child. These and many other research efforts have been designed to understand the academic and social consequences of the Indian experience with American educational institutions. Rosalie and Murray Wax (1964, 1974) found that contrary to the Bureau's beliefs, Oglala Sioux parents supported the school system in general and encouraged children to continue. Drop-out rates on the Pine Ridge Reservation were not so much a conflict between school authorities and Indian elders as much as they were the result of problems of Indian youth

with school authority and social disadvantage in the public school environment (Wax & Wax 1974: 202).

Indian leadership has also emphasized these issues and others, especially that of a culturally distinct way of learning. Both content of educational materials and the context of the learning and teaching experience are being investigated. The studies of the Kamehameha schools for native Hawaiians have produced a new methodology for education of native peoples, based on cultural differences in patterns of learning. These methodologists have recognized the importance of the Hawaiian native sibling group as a cooperative means of achieving goals for children, and have emphasized a small-group instruction format for reading programs. The Kamehameha Elementary Education Program (K.E.E.P.) in 1983 initiated an experimental program with the Navajo school at Rough Rock to test the viability of the Hawaiian methods for other native groups (Tharp 1981; Jordan, D'Amato & Joesting 1981). This cooperative venture and other Indian-directed programs illustrate the direction of Indian self-determination in education. Pan-Indian organizations are sharing resources and ideas, but also support distinct regional and tribal identities and goals in education.

In 1967, the Bilingual Education Act was passed, amending the Title VII Elementary and Secondary Education Act of 1965. It initiated some important

funding programs for Indian peoples, such as the pre-school Headstart. In 1972, after the publication of the Kennedy Report, the Indian Education Act (I.E.A., PL 92-318) was passed. Says Ryan (1982: 427), the I.E.A. "is the only piece of equal educational opportunity legislation specifically focussed on Indians." For the first time, educational programs were not placed within the B.I.A. An amendment of the I.E.A. (PL 93-380) stated that the organizing principle was to be education, not management of resources. Also, those tribes not federally recognized, native people living in urban areas, and "terminated" tribes were all considered eligible for I.E.A. programs, where many Bureau programs have not been available for these groups.

3.7. Conclusions

In 1983, Brod and McQuiston conducted a survey of adult Indians nationally, to determine the educational satisfaction of the Native American population generally. Of the 4,095 respondents, 33% indicated that they were dissatisfied with their education. When asked if they felt they needed more education, 78.6% answered "no." Would they have liked a different education? "Yes," answered 67.3% of the respondents (Brod &

McQuiston 1983: 5). Participation in formal educational institutions and the western philosophical notions of "universal schooling" has occurred very gradually for American Indian peoples in the United States. Radical changes occurred in traditional lifeways after the arrival of European settlers: patterns of community life were altered, as was the dominance of informal educational processes.

The earliest forms of instruction during the contact period were religious, but then followed a period of federal control of Indian education that lasted from the 1870s into the 1960s. Under the direction of the Bureau of Indian Affairs, educational policy was molded by Bureau administrative restraints, the politics of other federal agencies, and the economics of the times. Federal boarding schools designed to remove Indian youths from the reservations for more effective assimilation into White society were more effective in engendering inter-tribal contacts and cooperation, and in maintaining the separateness of Indian groups.

Indian communities and traditional cultures have survived, and their unique educational-instructional arrangements (of almost three centuries) have evolved into a dissatisfaction with many concepts of public school instruction, both in content and method of learning. American Indian communities, then, in terms

of the theoretical focus of this research, exist as viable cultural aggregates within a larger social aggregate. Distinct concepts of education can have readily evolved from both traditional sources and learned experiences within the school systems (federal or public). These concepts, while they may be expressed in a vernacular that is shared by the larger society, have historically been understood in a different reference frame (e.g., the context of the boarding school experience).

It should not be surprising that the domain of education and its conceptual referents might generate a distinctive "cognitive map" for American Indian peoples. Educational planning and change, then, should be developed within the context of unique cultural and cognitive systems, where motivations toward educational opportunities refer back to tribal identity.

Beginning in the 1960s, particular issues have been focused on, such as school texts and the American Indian stereotype. Textbook materials portraying Indian people inaccurately, or classrooms that ignore Indian children's distinct cultural experiences, are being opposed by Indian educators and other leadership (Deloria & Lytle 1983: 244; Costo & Henry 1970). The importance of native teachers is emphasized, in their roles as "cultural translators" (Revhner 1981) and as active participants in the communities they serve

(Rohner 1965).

The networks that have evolved to resolve problems in Indian education today are centered on inter-tribal organizations or interactions. Says Demmert (1971: 32), the goals and perspectives of American Indians and Alaskan Natives "vary as much as tribes vary," and no single philosophy encompasses all Indian groups, nor is it sought.

The creation of Indian-controlled schools has been an important departure from the decades of Bureau-domination. In the native schools, experiments in education for Indian children is taking place. Many Indian parents choose to have their children remain in the public school systems, in their concern for "survival" in the White society as well as in the Indian community. Roger Buffalohead (Ponca) (Indian Voices 1971) states that American schools may "teach something about Indian culture, but...cannot teach Indian culture. That's something that tribal people do; that's their life; that's their way." Multiculturalism is a popular concept in education at present (Mayers & Walter 1981), but in American Indian education, the concept will likely be fruitful only if it involves a negotiated and cooperative effort of the Indian communities and native educators with other educational personnel.

The Galileo methodology, which has developed out of the field of communication science, is adaptable to the

structure of field ethnography and applied anthropological work, as it offers definition of community concerns and "facilitation" of community goals. Eliciting and interviewing techniques can be the product of coordination of researchers and native staff, where possible. In the case of education, the investigation of the cognitive domain (perceptions of the community members) can be mapped and evaluated for potential improvement in tribal educational efforts. The following chapters (Four through Six) relate the application of the Galileo technique to Oneida educational planning.

4. ONEIDA NATION RESERVATION

4.1. Community Life

Since the 1820s, Oneida Indians have been living in Wisconsin, the reservation land located on the southwest of the town of Green Bay, and within the boundaries of two state counties, Brown and Outagamie. A brief summary of the Oneida community and its history is presented here in order to demonstrate the unique cultural traditions and lifestyle that have developed over time within the tribe. The researcher acknowledges the necessary constraints on writing history, and social and educational descriptions, in order to protect the privacy and anonymity of tribal members. The research contracted with the directors of the Oneida education programs, and discussed with the Oneida Tribal Council, is the focus of this document (original report in Robertson 1982a).

The original homeland of the Oneidas is in New York state, where they were once part of the powerful Iroquois Confederacy. The Oneidas, Mohawks, Onondagas, Cayugas, Senecas, and later the Tuscaroras (1722) were members of this confederacy of tribes in the Northeast, and were some of the first native peoples to come into contact with the Europeans in the 16th century. Mithun (1979: 133) writes that Iroquoian was probably the first

Native American language to be recorded by European travelers. Contacts with representatives of the growing White populations had important effects on the social, political and religious systems of the Iroquois, including the Oneidas. The Revolutionary war marked the end of the confederacy among the tribes in the Northeast. Social disorganization and displacement by White settlers, and pressure by the New York state and federal governments resulted in land cessions by the Oneidas and other tribes in the region.

In the 1760s, the Presbyterian minister Samuel Kirkland began his forty year mission among the Oneidas (Pilkington 1980: 40). As with other missionaries of this period, Kirkland participated in and mediated in the treaty process that dispossessed Indians of their traditional territories. However, Kirkland received some support through the Oneida Chief Shenandoah to continue his mission. By 1791, Kirkland had drawn up a "Plan for Education for the Indians," in which he proposed a central school with both Indian and White children in a fundamental education program. A school building was erected in 1792, later to be the campus of Hamilton College (Pilkington 1980: 192).

In the 1800s land pressure was such that a movement to the territory of the present-day state of Wisconsin was debated. This move was led by one of the Oneida factions, known as the First Christian Party, with the

aggressive support of the then Episcopalian missioner Eleazar Williams (Oneida Tribe of Wisconsin ms.: 16; also Ellis 1908). Treaties drawn up between the Menominee and Winnebago tribes in the Northwest territory, and the Oneidas and Stockbridge from New York (1822-1838) led to the eventual settlement on the reservation land near Green Bay. Only a small portion of the original four million acre grant remain. The Treaty of Buffalo Creek reduced the size in 1838 to 65,426 acres. By the 1840s, the original tribe was scattered in three localities: on the Wisconsin reservation, in Ontario, and in New York.

Although originally, attempts were made to farm the Wisconsin reservation lands, the majority of land was lost in the allotments of 1877 (Dawes Act or General Indian Allotment Act). In the 1930s when the Indian Reorganization Act (1934) created a "New Deal" for Native Americans, the Oneidas designed a new constitution and charter (U.S. Department of the Interior 1937; approved December 21, 1936).

The Oneida community exists on what is called a checkerboard reservation: Indian land interspersed with White-owned farms and residences, within the boundaries of the 65,000 acre tract. Members of the tribe recognize general geographic and social relationships with White neighbors, but the definition of "community" is strongly related to tribal membership. Primary

political, social, economic and religious ties are defined within the context of the tribe.

The policy-setting body of the Oneidas is the General Tribal Council, consisting of all members of the tribe (on the tribal rolls). It is the General Tribal Council which elects the members of the Oneida Business Committee, who in turn conduct the day-to-day tribal business. A Chairman, Vice Chair, Secretary, Treasurer and five Council persons are elected to three-year terms, and they supervise the activities of the Tribal programs and standing committees (e.g., Education programs, planning office, land office, Commission on Ageing, Cannery, Kalihwi-saks Newsletter, Library, Oneida Nation Museum, Nursing Home and Health Center, and the Bingo and Tobacco enterprises).

Approximately 2,000 Oneidas live on the Reservation, while over 8,000 appear on the tribal rolls. A number of Oneidas work for the Tribe in its various programs (probably less than 10% in the community), and many others work in offices, factories, and schools in the adjacent towns, especially in the Green Bay area. Few Oneidas farm the land, as much of the good farmland was lost during the allotment period. However, ties to this land base are an important part of the Oneidas basic values and tribal identity. Other aspects of community life reflect the Oneidas' distinct value system, in contrast to the surrounding social

groups, White or Indian: there is exclusive membership (by ascription) on the tribal rolls, a unique history, language, ceremonies and belief system.

The sense of community is also based on strong kin ties. Oneidas recognize and name fifth and sixth cousins in their extended kin network. The concept of the "clan mother" inherited from the originally matrilineal Iroquoian pattern, has not entirely disappeared although clan names in Oneida are no longer retained or in many cases known. A great deal of respect is accorded the eldest female member of the family, as well as a recognition of her authority in family affairs. The Oneidas have elected in the past a female tribal Chairperson, and had a female doctor on the Reservation, long before "women's liberation" found its way into contemporary White society.

Inter-community ties are maintained especially with other tribal groups, within Wisconsin and elsewhere, including ties to the Oneidas in Ontario and New York state. These networks, both organizational and personal, again reflect the emphasis on common kinship and shared perspectives with other tribal entities.

Social activities in the community also generally define the boundaries between the Oneida and White social groups. Pot-luck dinners and lunches are frequent events, and Oneida elders gather weekly at the Methodist church for "Senior Citizens" social meetings.

The Oneida singers continue the tradition of singing hymns in the Oneida language, both in the churches and for social events, on and off the reservation. The Oneida Dancers also perform for tribal ceremonies and in public events outside of the Indian community.

Athletic clubs, such as baseball and basketball teams, compete with White teams in the adjacent towns, and Oneida youth attend school and social functions, to some extent, with other young people on and off the reservation. Growing up in Oneida means participating in all of these community affairs, and at the same time, learning the responsibilities of tribal membership. While many young Oneidas leave the reservation in their late teens and early 20s, a great many also return, because, in their perceptions, Oneida is home, and family (see Chapter 5, below).

Whereas a number of years ago, in the 1960s and 1970s, Campisi (1974) found eight identifiable neighborhoods or subdivisions of the Oneida community, these are not so evident today. Tribal housing projects have redefined several areas of the reservation, and some Oneidas have returned from urban areas (Milwaukee, Chicago) to live in these projects. There is some sense of separateness between urban Oneidas and those who have lived all their lives in the community, and there appears to be some difference in degree of involvement in the community between these two groups.

Additionally, the Methodist and Episcopal congregations define important subgroups in the community. The locations of the two churches coincide with earlier neighborhood-designations that Campisi (1974) wrote of, and there is some recognition of these today. One Oneida elder who attended the Methodist church referred to "over that side" for the northern segment of the reservation that includes the Episcopal church (Holy Apostles). A group of Oneidas who are traditionalists and adhere to the Longhouse religion live on the Reservation, and again constitute another element in the community that draws distinctions between Oneidas.

It is this complex organization of community that was the concern of the educational planning survey: how to discover overall perceptions of education and of the tribal education programs. It is useful, consequently, to determine the nature of aggregate beliefs about the educational process, using the Galileo interview and questionnaire techniques. The distinct community structure and tribal cohesiveness on the whole suggested that the domain of education would take on a uniquely Oneida character.

4.2. Oneida Education

Relates Campisi (1974: 491), "it is at the level of community that the structural distinctions between White society and Oneida communities are maintained.... The social system of the community screens and revalues the symbols of the dominant society by making clear the difference between the groups. Behaviors may be the same; it is their interpretations that make for distinctive boundaries." A concept, such as formal education, is essentially the product of Indian-EuroAmerican contact. There are obvious benefits the educational process can bring, but as the Oneidas' responses to interviews and questionnaires of this research indicate, there is, in fact a re-evaluation of the educational experience within their own cultural context. The domain of education includes concepts of being Indian, and Oneida, learning one's cultural heritage and language. This reference frame is not shared by the White community, nor by the teachers and administrators in the schools that serve the majority of Oneida students.

The reservation is divided into four school districts: Freedom, Pulaski, Seymour, and West DePere. Oneida children are separated into these different school settings, and also attend schools in the town of Green Bay, nearby Appleton, and the Oneida Tribal School (23% of the Oneida children in school, computed for

1982). The relative numbers of Oneida and White students in these schools for 1982 is shown below. Overall, Oneida children constitute approximately 8% of the school population in the area.

	<u># Oneida Students</u>	<u>Total Student Population</u>
Freedom	114	1499
Pulaski	43	3136
W. DePere	208	2095
Seymour	192	2297
 Tribal School	 164	 164
 Totals	 721	 9141

(Figures: Oneida Education Office, Wisconsin)

In the earlier part of this century, the Oneida Reservation contained a boarding school on 80 acres of land in the center of the reservation, one government Day School (No. One) leased from the Methodist Church, the Episcopal Mission Day school, and an Adventist school (Anonymous ms.: Section 1). Historical notes on the day schools show that the Oneida involvement with federal school programs was very similar to the experiences of other Native Americans in the late 1800s. The children were shipped to off-reservation boarding schools, and forbidden to speak Oneida. The reservation day schools, and the use of the public school system was growing in the early 1900s.

By 1919, it is recorded (Anonymous ms.: Section 35)

that 217 Oneida students were in non-reservation schools, 141 in five district schools, 154 in the Oneida boarding school, 34 in mission day schools, and finally 352 children (of school age) not in school (almost 40%). Forty percent also, at this time, were in the public and non-reservation schools, in contrast to the present day - approximately 75% (based on 1982 figures). A strong tradition of separate educational facilities and instruction have influenced the direction of Oneida education. Coupled with the survival and persistence of the tribe and the community in Oneida, commitments to education based on Oneida values and beliefs should be evident in the educational planning survey.

The Oneida education programs include a Bilingual Education project, with its origin dating to the WPA projects of the 1930s (see Lounsbury's work on the Oneida language from this period (1976)). The Oneida Education Office directs special programs such as Job Training, higher education counseling, and the Johnson-O'Malley contracts to coordinate Indian education activities between the public schools, Home-school coordinators, and parent committees (LIEC, or Local Indian Education Committees). The Oneida Tribal School consists of eight grades at present, and its current plan is to expand the school into the secondary level within the next few years. The Oneida Headstart Program is the preschool component of Oneida education, and the

G.E.D. courses (Graduation Equivalency Degree, or adult education) also operate on the reservation.

The summary of existing programs here is not meant to be comprehensive of Reservation life and educational experiences. It is intended to give a general sketch of community life to demonstrate the existence of a strong and functioning cultural entity. The history of Oneida education (see also Orie, ms.) shares much of the distinct development of education for other Native Americans. In the following description of the Oneida survey it is possible to see the perceptions of the Oneidas themselves concerning the position of education in their cultural reference frame.

5. ONEIDA EDUCATIONAL PLANNING SURVEY: PHASE 1

5.1. Introduction

The purpose of the community attitude survey was to assess the current understandings and concerns of the Oneida people regarding education in general and Oneida education in particular. The Galileo methodology (Woelfel & Fink 1980) is the basis for the survey, utilizing a metric multidimensional scaling instrument that has been developed as a set of computer programs. Central to the Galileo survey method is the notion that the information conveyed through the medium of the interviews and questionnaires is a record of an on-going communication process between the Oneida community and the tribal education staff.

Education, then, is defined as a conceptual domain which can be "mapped" or recorded as the Oneidas see it, including all those associated ideas or concepts which are important to them, and which they will consider when making decisions concerning education. To view education as a multidimensional concept is to say that all of the associated ideas constitute a reference frame: they are interrelated (such as teacher - school - learning - books - grades, etc.), and it is just as important to measure these interrelationships as it is to ask the meaning of any single idea. A change in

beliefs or attitudes about one educational concept (such as the capability of teachers) may influence a change in another (such as the increased desire to be taught in school).

The survey was conducted in two phases: the preliminary non-directed interview, and the Galileo structured questionnaire. These phases are sequential, and the results of the first set of interviews became the content of the following questionnaire. Seventy-two Oneidas were interviewed, 69 cases being used in the final results. Each of these phases, and their results, will be discussed in turn. The educational survey is intended to complement other planning information accumulated by the tribal education staff, and the results are intended to be a preliminary and initial assessment of education in Oneida, as it is viewed by a sample of tribal members.

In terms of achieving specific educational goals, such as increased involvement of Oneidas in the tribal educational programs, the survey technique has a message component which identifies potentially useful messages to move closer to the goal(s). Since these messages are derived from the Oneidas responses to the interviews and questionnaires, they are consistent with Oneida beliefs concerning education and the educational goal itself. These messages are discussed in the results of Phase 2, and also appear in Table III.

Equally important in a planning survey is the ability of the instrument to report on change and review possible results over time. The Galileo technique is especially adapted for longitudinal studies. It is possible to "map" changes in attitudes toward tribal programs over time, and evaluate the changing relationships between education and other related concepts such as "jobs," or identify the effects of new educational policies. This survey serves as time-zero for any future planning surveys.

The analysis of the information from the interviews and questionnaires was conducted utilizing the University of Wisconsin-Madison MACC computing facilities (UNIVAC 1100/82) and the Galileo program tapes from the Department of Rural Sociology and Department of Journalism and Mass Communication at the university, as well as those at the State University of New York at Albany. The storage of the original data is on IBM punched cards and tape.

5.2. Phase 1: Preliminary Interviews

5.2.1. Methods and Materials

The first phase of the survey involved selecting a reputational or "Snowball" sample of 24 Oneidas, each of whom responded to a series of seven questions. These questions (see Appendix B) were designed by the researcher and tribal education staff, and concerned education and community planning, with an emphasis on the Oneida school programs. The interviews lasted an average of 35 minutes, ranging from 15 minutes to an hour.

The questions were prepared in order to discover, in a non-biased and non-directed way, the most frequently used words, ideas, or concepts referred to when Oneidas discuss the community and tribal education. In this way, the respondents provide a description of the educational programs as they see them, and elaborate on the issues and problems that concern them most, not those directed or emphasized by the interviewer. The Oneidas' answers to each question (considered an "episode" in their interview) were recorded as faithfully and completely as possible.

The contents of these interviews were then subjected to a content analysis, to produce a count of the frequency with which different concepts occur in people's conversations. The primary result of the

initial interviews is a list of the most frequently occurring concepts, and the additional words or ideas that cluster with them. The Oneida interviews produced a set of 7,130 words or concepts in 201 episodes (an individual question or section of a question). Of these 7130, 1337 were identified as unique - approximately 19% of the interview content. Thus, the other 81% content was repetitive of these concepts. Of the 1337, also, a large percentage consisted of concepts with a frequency of occurrence of one or two times.

5.2.2. Results

Sixteen concepts appeared to be central to the Oneidas' perception of education in their community. A discussion of these concepts follows, in order to elaborate briefly on words or ideas associated with them. These related ideas are useful in analyzing Phase 2 results as well, particularly in constructing potential messages to move toward goals in education (see Section 4.4.4.). The inclusion of direct quotes by individual Oneidas illustrates the content of the interviews, identifies alternative words or phrases that refer to each of the sixteen concepts, and portray some of the collective and unique concerns of Oneidas which were expressed. Demographic information requested during the interviews appears in Appendix A.

Concept 1: Tribal School

The Oneida Tribal School is frequently referred to by Oneidas as an alternative, an opportunity for Oneida children to learn their culture and their language, as well as a place to teach them the "3 R's." Says one Oneida man: "If I would see it ideally, I would think it is the repository of basic survival knowledge for the tribe and for the children that attend it. And I would see it as performing the functions in a modern, present context, providing in an orderly way the skills and knowledge the children need as they assume responsibility...and as leaders of the tribe."

The same person commented that, as the Tribal School is still a "new" school, its philosophy is not yet well-established. This perception is reflected in the comments of one or two other Oneidas. A number of people whose children have already been attending public school in the four surrounding school districts were not in touch with the goals and programs of the Tribal School and other educational programs on the Reservation. One Oneida parent remarked, "I don't know what's different there from the public school... I think they're just Indians. So they get social problems,...I don't think the social problems are ending when (moving) from the Tribal School to the public school..." And another comment: "Whatever direction

the school sees it (its role) as being, it only goes up to the 8th grade, so that means they (the students) have to be educated in the same manner as others (to continue on to public school)."

One Oneida teacher felt that the Tribal School program was "one of the most successful schools" in relation to the public schools. An educational consultant had also noted that the language program in the school was more extensive than that available in other schools, public or Indian. The importance of learning about Oneida culture, history, Oneida language and traditions, was repeated again and again, by parents and non-parents. Said one Oneida: "That should be a strong role, not just the basic 3 R's; and I think that's what they're doing (the Tribal School)."

Learning about their own culture is seen as having positive survival value, a part of the children's fundamental education. But there is also a concern that the educational programs be structured for survival in the "White world." One 62-year-old Oneida man stated, "I feel the attempt here is to teach the children to be bicultural. They have to compete in the real world, and yet they're being taught their heritage and what it should mean to them..." Thus there appears the ambiguity in the Tribal School's relationship to the public school system in the Oneida area.

There is resistance to discrimination by Whites

against Oneida children, and concern for the lack of presentation of Oneida culture and history in school. One 39-year-old Oneida man commented on the potential difficulty of making the transition from Indian to public school: "I went to a school heavily in the majority of Indians, very few Whites. Then when we went to high school, we were in the minority. The culture shock was tremendous." Another Oneida man added, "If an Indian goes to school in another place, they pick on them. ...but here (in Oneida), you're in as a group; of course, they've got White children, (but) they don't feel like an outsider. And that's what the Oneidas need, to communicate with one another and help one another." Said an Oneida woman concerning the Tribal School, "It's offering them (the children) a chance for identity, community identity." Its small size is seen as a very positive aspect, including the individual attention given each student, and the rapid resolution of discipline problems.

Education, in the comments of many Oneidas, is as much learning about life as it is learning formal educational skills. One man remarked that experience is more important than education, and more than one parent indicated that they participated in educating their children, within the family and in the home. This is one of the places Oneida children learn about their roots and their identity, as well as in the Tribal

School. The school programs become important especially for parents who feel that they have not had the opportunity to learn about being Oneida, nor learned the language themselves.

Concept 2: Headstart

The Headstart program in Oneida seems to be generally regarded as important in helping socialize Oneida children, and beginning to teach them aspects of their culture and native language. Said one Oneida man who had a child in the program, "It's probably the most important thing that's going on in the education area. ... Its socializing function is extremely important...kids learn a lot in there, I think it's well-run." When one mother shifted her son from an urban Headstart program to the Oneida program, she remarked, "He was just frightened. But when we came to Oneida, that all changed. I hate to say it was being around Indians, but it seems to work."

Some Oneidas interviewed felt that Headstart brought the children into the school environment too early, and this was often related to the feeling that parents might be abrogating their responsibility for raising and teaching the children themselves. Said one 72-year-old Oneida man, "The home life always has something to do with education." One Oneida acknowledged the economic necessity of two-job families,

and having an early childhood program in which children could be placed. Those individuals involved as parents in the Headstart program, however, feel very positively about their ability to participate in the program themselves, and about their corresponding role at home to help "educate" their children and support them in the learning process.

Concept 3: G.E.D. Program

The adult education program in Oneida (G.E.D. - Graduation Equivalency Degree) is seen as a useful tool in upgrading educational skills for older people as well as the younger generation Oneidas who have not completed high school. One Oneida woman described its value: "Being out here (in Oneida), you're among your own people. There's still shame connected with not having an education, and out here, there's no feeling of being uneasy. You're with your own people..." Said one 24-year-old Oneida woman, "I like to see the older people go back...because (then, other) people say, hey, it's a good thing... I feel very proud."

The G.E.D. program is seen generally as being more practical in orientation, a program in which individuals can work "at their own pace." It provides "something a high school diploma can give you...opportunities...Requirements for most jobs require a G.E.D. or high school equivalency of some sort," one

Oneida man related. He also added, "I'm not saying a high school education is that great, because it isn't." A less positive aspect of the program, as seen by a number of people, was the possible abuse of the financial aid opportunities given G.E.D. students. Commented one Oneida woman, "I think some people were in it for the money, just to go as long as they could." But this perception is counterbalanced by comments such as one Oneida offered: "There's a lot of good people in the program you just don't see; they come in and leave, but others stay."

Concept 4: Oneida

The concept of Oneida or being Oneida is frequently associated with being Indian and coming from an Indian heritage, although reference to the Iroquois and other tribes in the New York Confederacy is not frequent. Two qualities consistently associated with being Oneida were pride, or "being proud" to be Oneida, and being "different" from other people. "Just being Oneida, being Indian, makes you different," says one Oneida man. This feeling of being different has its negative as well as positive aspects, especially for Oneidas who have attended White schools or grown up in White towns. Says one Oneida woman concerning "being Oneida:" "For a good many years, it wasn't a very good feeling, because I went to a White school, and their feelings there were

made known to us. When I was young, I didn't like being Indian, but now I don't mind, because of all the attitudes that are prevalent." Another Oneida woman of 35 said, "Discrimination. That's what it (being Oneida) means to me, growing up in the Green Bay area."

One Oneida man added, "~~It's~~ being identified as a group,...being a part of something. Being unique." Family ties and having roots in the community, and in the land, are important aspects of being Oneida, in the words of the people interviewed. Also mentioned frequently was the concept of "home," being home, coming back to Oneida, which is the place one can always return to, again and again. It is a sense of "belonging," "togetherness," banding together in difficult times. Many Oneidas at some time in their lives leave and return to the community, and one Oneida man who was away approximately 30 of his 62 years said, "...well, this is home. I was born and raised here, and I always wanted to come back here. ...I felt, and I think with other people as well, they leave home to learn, and come back to share."

Oneida is a "sense of nationality, a family," said one Oneida woman. "It goes back generations." Another Oneida brought all of these things together in the concept of Oneida: "It's all the interlocking things, this community, good or bad. You (interviewer) probably don't even know who your second or third cousins are,

but here, people know who their sixth cousins are;...being Oneida is being involved in all that whole complex."

Concept 5: Indian

One 21-year-old Oneida woman remarked, "I feel a lot about being Indian but not just being Oneida. I think all Indian people are equal, all the tribes are the same." Another woman stated, "I don't think it's a feeling of being Oneida, but it's a feeling of being Indian," distinguishing between the two concepts. Growing up in a White community and being "Indian" has been this woman's experience, rather than having a sense of being Oneida, with Oneida culture and language. The more explicit contrast is, of course, between Indian and White people. One Oneida man notes in reference to Indian history, "...of course, Indian people lived differently than White people. They had different laws and everything else." In general, the occurrences of the concept Indian (=79) was as frequent as references to being Oneida (=72).

Concept 6: White people

References to the concept of White people also occurred as "White man's ways," "the White world." The terms "non-Indians," and "outsiders" were also used, as well as "other people," "other cultures," "other

communities." Said one Oneida man in a discussion of the community, "We have non-Indians living in our community and I consider the reservation Oneida, and I'd rather see all the non-Indians moving out. Then the government would be ours."

In reference to education, one man commented, "I've heard of kids going to Seymour (nearby town), and they've got an Indian-White problem. At Pulaski, it's not so bad. ...I wish we could teach the younger ones to be more proud..." At the same time, an Oneida woman suggests that "this Indian thing (by young people), (of) 'you did this to my ancestors, so now you take care of us,' I think this is a detriment." Adds an Oneida woman who lives in Green Bay, "I'm not saying the White schools are bad... I can't blame it on, 'They don't like me because I'm Indian.' You can do it (get education) if you have your own self-fortitude."

As described above in the comments on the Tribal School-concept, White people and thus public schools appear to be frequently viewed as an integral part of the Oneida educational process. Said one Oneida, "Indian society has changed to such an extent... I don't think the society will survive without being educated in the white man's way." But the individual also added, the Tribal School's role is to educate the Oneidas, "the Oneida children, so they can become productive members of the (Oneida) community."

Concept 7: Public school

Public school (also frequently referred to as "high school" or just "school") was a concept referred to approximately 154 times in the interviews. The individual public schools were named, but only infrequently (Pulaski, West DePere, Seymour and Freedom), and were occasionally identified as "the four districts." All these words or phrases refer to the public school-concept. Both older and younger Oneidas made reference to the punishment of Indian children in the public school systems. Said one 36-year-old woman, "In public school, they punish them,... They're (Tribal School) trying to keep Indian heritage... I think that's a good idea; they don't do that in public schools."

One teacher remarked that discipline is carefully attended to at the Tribal School, but, "the kids in the public school outside of the community, they are more apt to get into trouble...; there's gang fights, racial fights." One 41-year-old Oneida woman added, however, "I guess I would like my granddaughter to be going to a regular school, and would like her to grow up knowing there are good whites as well as bad ones, and good Indians as well as bad ones."

Concept 8: Education

The concept of education occurred approximately 79 times, along with references to ideas such as information, knowledge, intelligence, the institution, and learning (=45 occurrences). Teacher and to teach were closely associated ideas, as well as students, and the classroom. The notions of administrative organization, supervision, or "the principal," were not referred to frequently, nor were fundamental education topics: the 3-R's, the A-B-C's. As noted above under the section on the concept Tribal School, education is discussed frequently in contrast to learning about life and coping with the larger society. Remarked one Oneida man, "No matter where you go, that's what they ask, 'how much education do you have?' But the people with experience are more valuable,...so I would say, education and experience go together."

Emphasis on grades and reference to them include concepts such as tests, transcripts, qualifications, report cards. According to one Oneida man, this aspect of education is overemphasized: "It seems to be what a person is graded on. That's what they look at when you go for a job. They look at the 3-R's... What a person is graded, (it's) a very small percentage of education."

Another Oneida man identifies three important areas in education: "school, parents, and students." Ideally, says one Oneida woman, education should be

"more family-oriented... I guess it first starts in the home. If you put too much emphasis on the institution and the school, all the emphasis is on the status. I think people are losing the reality of what education really is. I see it more as a community-based type of affair. I think...our kids (~~should~~ be) proud of what they are, able to hang onto themselves and what they are."

There was little direct reference to higher education and goals toward college in the Phase 1 interviews. One Oneida woman expressed a concern for Oneidas to "try for a little bit higher goals in education,...it would be better for the Indian people as a whole." One 39-year-old man presented his views on Oneida education: "...without education, you don't have a choice. Teach them (children) both cultures, then you're giving them a choice." Choices are sometimes limited, sometimes expanded, by economic factors, however, as was pointed out by one Oneida man: "...some people come back here from other areas, knowing it's going to be a factor in getting education more readily, because of how the funding is set up, reservation-wise and government-wise."

Concept 9: Jobs

The concept of jobs covers all economic aspects of educational planning, but was selected as the central

concept of the cluster, as the most frequently occurring concern. Related to "jobs" in importance are the concepts of economic survival and self-sufficiency (of the tribe as well as of the individual), funding and financial aid, as well as employment and relief programs such as R.N.I.P. (income maintenance) and C.E.T.A. (job training programs).

The basic opportunity of acquiring housing on the Reservation has been a factor for a number of couples in the survey, in being able to live in and participate in the community. One 23-year-old Oneida woman came from Milwaukee, and stated, "We would have never been able to buy a house. We're buying this and I think this is just right." The influence of economic pressures and the Oneida ties to the land were commented on by one Oneida man: "I have yet to talk to an urban Indian who says, "If it wasn't for the economic situation, I'd be back on the reservation." It has always been economics that...force us...to sell our land. People have to eat."

As noted earlier, one Oneida man observed that the availability of funding in education - economic resources and some financial aid - are factors in people returning to the Reservation. Thus the economic concept is indicated as a significant one in relation to education, by Oneidas. Said one Oneida man, "We have a lot of programs here that are doing good and a lot of

people that have received jobs from the training that they got out here." People referred frequently to a desire for the tribe to be more self-sufficient, independent. Said one Oneida woman with a child in the Tribal School, "People go elsewhere to work...there's nothing to do here, except live ~~here~~ here." This documents again the feelings Oneidas have about their ability to survive economically as a major consideration in their plans, including educational ones.

Concept 10: Cultural heritage

Reference to Oneida culture subsumes a number of ideas or related concepts for the Oneidas: "heritage," "history," "the past," "to have roots," "ancestors," "beliefs" or "values." There is only one reference to the Iroquois Confederacy and the treaties as a part of Oneida history. The Oneida language is a strong component of the cultural heritage, and references to the native language and native speakers was of equal frequency as reference to one's "culture." Said one young Oneida woman, "in this community alone, a lot of people are learning their language. In Headstart and the Tribal School, they need that language and Indian culture, background, to be able to know their own past and still, they're also learning that they need a regular education to get anything in this world. They need to be able to cope with who they are and what they

are."

Elderly Oneidas still recall the educational programs when they were young. "When I went to (boarding) school, they used to punish us if we spoke Indian," said a 72-year-old Oneida woman. These memories and feelings have been carried down to the next generation, as one 41-year-old woman remarks "...I missed out on learning the language ..the history about my own people. The only history I know was what was taught to me in my home. But they (my parents) were shamed into not teaching history... My mother and father both spoke Oneida but (not so much) in front of us kids."

The tribal education programs are an alternative, an opportunity to remedy this. Another Oneida woman notes, "I think everybody believes that education is important. However, I don't know if all of them agree that public school, parochial school, is the answer... But they want to teach their traditional values, the "Indian" way, the "Oneida" way."

Added an Oneida man, "I'm proud of the Oneida people because the policies and government that is in the United States is based in the Iroquois confederacy." A 62-year-old Oneida man also said "In spite of the traumatic times, they've (Oneidas) survived. I think they've always managed to survive well and are known for wanting to get along with their neighbors. ...I

guess it gives you a good feeling, too,...that our people were so influential. (They) took a real active part in the development of American civilization." And another comment, "I think we're a bicultural people, and we can go out and compete with the non-Indian, and go back home and be Indian. I think that's the name of the game."

From the interviews in the survey, different views of the concept of "traditional" appear to exist. One 62-year-old woman remarked, "there's so much out in the world. This "traditional," I just heard about it last week. You can't go backwards and live it." One 72-year-old Oneida man noted the differences of opinion: "I'd like to see the Oneida people know of their traditions; but, actually, if I was asked to be a traditional person, I'd say no." Another Oneida said, "I think traditionalism is great, but I think it has to be understood. ...I'm not sure they (the younger generation, ones up to 30 years old) understand it...I'm not sure they're on the right track. I don't think you have to give up your telephone, (or) go back to outhouses..."

One component of tradition is acknowledged equally by all respondents: language. Remarks one Oneida man, "I think the efforts to revive the language have been one of the greatest things to happen in my generation." In the demographic questions (see Appendix A), Oneidas

were asked about the number of speakers in their families, and those individuals' relationships to themselves (parent, sister, etc.). Nineteen of the 69 Oneidas interviewed stated that there were no native speakers in their families (occasionally because grandparents who were native speakers were deceased). This is less than 30% of the sample. Over 20 of the respondents identified themselves as speakers, varying in degree of fluency with the language. One pattern that has developed in Oneida is the existence of speakers in the grandparent and grandchild generations, notable in the families with children in Headstart and the Tribal School.

Concept 11: Life experience

As noted in the discussion of the Tribal School, and of the education-concept, "life experience" ("life," "learning about life") is something viewed in contrast to the acquisition of formal education. Concluded one 24-year-old woman, "I think people think it's more important to learn about life and how to survive rather than college, because they don't teach you about life." And again, "I'd teach my children myself, if there wasn't a law against it,...because you went through the experiences and you know what to expect."

One 72-year-old Oneida described life and education this way, "I was talking to a professor (who said)

"which would you rather be, an educated person or a wise man?" He always used to get into conversations with me, because I told him I was "uneducated." ...I told him, "I'd like to be a wise man. An educated man knows a lot but he has to be told what to do; but a wise man knows."

Another side of the educating process that is "learning about life" or "experience" as Oneidas refer to it, is the involvement of the families and learning in the home. Said one Oneida, "I think the parents themselves have to work along with the children when they're going to school."

A Tribal School teacher acknowledged the school's role in acquiring skills for living, in addition to providing fundamental or basic education: "It's a school of learning (how) to deal with things outside the community, with different societies." The importance of discipline, self-discipline, and respect of others was also referred to in formal education and home learning environments. One Oneida woman comments: "I think there should be some way to teach the kids that self-discipline...rather than the iron-hand, because you're just emphasizing that "prison" concept. Rather, you should be teaching a person at home what is right and wrong... (If) it isn't being done in the home...I guess the teachers (can't) do it."

Areas of learning that need recognition, beyond the

"3-R's," says one Oneida man, are "a person's creativity, leadership, communication. I think you can flunk mathematics and English, and still be a good leader." The value placed on education, as these comments illustrate, is influenced by a person's experience in life, one's ability to cope in two societies, in a "bicultural" world, and by one's "self-discipline." A 45-year-old Oneida man felt that "the best way to educate your children is to really behave to the best of your ability at all times...by personal example...if you're talking about socializing. ... (Children) will learn formally, and will (also) not learn what they are indoctrinated with unless it's established in the home."

Concept 12: Parents

Parents and the family as a part of the educational process are frequently referred to by Oneidas, as noted in the above discussions. An important theme is that of participation and involvement with the school: teachers, parents and students. Said one Oneida about the tribal programs: "(Now) the parents (are) helping out at school, they need that togetherness with parents, teachers and students, and schools are really doing that now." One Oneida man of 25 described the best way to educate his children: "I'd teach them myself at home. And as they got older, I'd give them an opportunity to

learn what they wanted to learn. ...They'd have to be more disciplined..." In view of the many negative experiences of Oneidas with the public school system, it may be that comments such as these point to a general preference for strong parent roles in the educational process.

Another Oneida man, father of eight children, said that "I have always seen that parents don't play what I consider...the proper role in educating their children. Especially the younger generation, I think they leave it up to the teachers, and I believe they should do (more) at home." Added one Oneida man, "...I don't think there's enough parental participation, to give it the kind of education that the community would like to see. And education doesn't mean A-B-C's, arithmetic, English... I think it's being able to associate with people."

Concept 13: Children

Children as a concept occurs also as the word "kids," "young people," or "teenagers." The importance of educating children in the community is considered to be in training them to become "productive members" of the tribe, and to learn the "Oneida" way, to maintain their family ties and their traditions. There are many ways this is expressed by Oneidas, which is evident in many of the above comments.

Concept 14: Tribe

One Oneida responded in the interview, "What's good about the community? I could say that we have our own tribal government, and our own Tribal School." Community is a word often used interchangeably with "Tribe" by Oneidas. More than one person viewed their work for the tribe as "participating in the tribe,...trying to do something for the tribe, to help make the tribe better," as one Oneida woman described it. "There's a unity with all the tribal members I like...a comaraderie that's always there between older and younger," she added.

Said a 72-year-old Oneida man, "I'm proud of the Oneida tribe. ...we don't have any swear words in our language; you can't swear in it. And the Oneida people, they're progressive, not going backward." When asked about changes they would like to see in the community, Oneidas referred at times to the divisions in the community. "People have been working together for hundreds and hundreds of years, and the government comes in and...people divide themselves (into) higher-ups (who) control the community, where everybody should control the community." This Oneida man also noted that the ties between the older and younger generations are strong among Oneidas: "What I see is more people trying to work with the young people, trying to work with them

(in) finding themselves..." Educating the younger people has consequences for the tribe and thus the community, said one Oneida man: "Education plays a significant part in community awareness or consciousness." Educating the children is providing for the "basic survival knowledge" of the tribe. The concept of the tribe and community including the tribal government, its members, the Tribal Council, occurred 86 times in the interviews.

Concept 15: Good

This concept is self-explanatory, and appears 61 times in the interviews. Additional referents used by Oneidas are "good thing" "good idea," "good concept," "excellent program," "well-run," "the best," "a great job," "tremendous," "valuable," "successful," all a part of this general concept of good associated with the educational domain.

Concept 16: Yourself

By far the most frequently recurring concept (I, me, myself), the self-concept occurred 754 times in the interviews. Oneidas also refer to themselves collectively with great frequency (we, ourselves, our), a total of 131 occurrences. The communication theory that is the basis of the current survey is a self-concept-based theory (see discussion in Chapter 2). It involves a notion that behaviors (expressed here as the

(in) finding themselves..." Educating the younger people has consequences for the tribe and thus the community, said one Oneida man: "Education plays a significant part in community awareness or consciousness." Educating the children is providing for the "basic survival knowledge" of the tribe. The concept of the tribe and community including the tribal government, its members, the Tribal Council, occurred 86 times in the interviews.

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relationships between concepts: beliefs, attitudes) that are close to the self-concept are more likely to be performed than those that are considered far from the self (Woelfel & Fink 1980: 165). Perceiving a concept to be close to the self is not necessarily an indication of favorability or "perceived benefit," but rather illustrates a "goodness of fit" between the two concepts that are considered close together (Green, Maheshwari & Rao 1969). Consequently a special relationship exists between those concepts or behaviors and the "self." If an individual sees "alcoholism" as being close to the self-concept, it may be an indication that this behavior is one frequently performed, or closely linked to that individual. It is not evidence of the favorability of the behavior. It is useful to remember this point when examining the results of the Phase 2 Questionnaire. When identifying goals in educational planning, the point toward which these goals move is the self: the Oneida who is in a sense the central actor in the educational process, as well as the recipient of the educational programs.

6. ONEIDA EDUCATIONAL PLANNING SURVEY: PHASE 2

6.1. Galileo Questionnaire: Methods and Materials

The second phase of the Oneida survey was conducted by asking a sample of Oneidas to respond anonymously to a paired comparisons questionnaire. The questionnaire was produced using the sixteen most frequently occurring concepts for the Phase 1 interviews (see Section 4.3.2.). A reputational sample of Oneidas was drawn, interviewing 45 individuals (demographic data is in Appendix A). To reduce interviewer-bias in the responses, five sets of interviews were divided among the educational staff and the researcher. Individual questionnaires required an average of 25 to 35 minutes to perform, including the demographic questions. Several interviews took approximately an hour, because of necessary interruptions in the home.

In answering the questionnaire verbally, an Oneida respondent was asked to provide a number for the distance between any given pairs of concepts, indicating their closeness, conceptually, by a small number, or their distance or greater difference by a larger number. An initial criterion was offered by the interviewer: "An average distance is 100." this criterion provides the reference frame against which the respondents might anchor their own scale of values. It was suggested that

a small number would indicate that they felt the two things were closer together, and a zero would mean they saw them as identical, the same, most similar. A larger number as large as they wished to name, would indicate that they saw the two things as being further apart, or more different, unlike. The Galileo metric multidimensional scaling technique allows for a continuous scale of values to be recorded, focussing on the relative conceptual distance that people identified between educational concepts. By pairing each concept with each other, the interrelationships between all of the concepts are recorded, in addition to their relationship to the self, "Yourself" in the questionnaire. To compare each concept with the other required 120 responses or distance-numbers given, the formula being $n(n-1)/2$, where n = number of concepts (16).

The Oneida respondent then reported how far the Tribal School was from himself or herself, how far apart (in conceptual distance) the Tribal School is from the Public School, how close either of these are to "Jobs" or to "Education," and so on, for each of the 16 concepts (120 pairs). As all of these concepts collectively form the domain or "neighborhood" of education in the view of the Oneidas interviewed (Phase 1), the measurements given can provide a multidimensional map of their relationships. In shorter

or longer term studies of educational planning, the Galileo survey is a well-structured, comparative instrument for detecting the dynamics of changing attitudes and beliefs, tracing them over periods of hours, days, or years. The Galileo technique is also useful in making static-group comparisons, such as subgroups within the Oneida community based on specific demographic characteristics. The current survey is recorded as a time-zero set of responses, with which additional interviews can provide a more comprehensive statistical sample of the Oneidas between groups, or over time.

The results of the Phase 2 Galileo Questionnaire are discussed in the following sections: 1) the Means Matrix (Table I); 2) the Galileo plot or map, to allow a graphic representation of the relationships between the educational concepts (Maps I and II, derived from the normal solution in Appendix D); and, 3) the message component, derived from the Automatic Message Generator (AMG), to identify potential messages to move the self toward goals in tribal education (Table III).

6.2. Results

6.2.1. The Means Matrix (Table I)

The table of mean or average values is the central product of the Phase 2 Galileo Questionnaire, and the basis for all additional calculations. It presents the collective or average of the distance numbers given by Oneidas as those distances between pairs of concepts. Mean values ranged from 10 to 245, with a grand (overall) mean of 71. In examining Table I, it is possible to see that the two concepts that are perceived as being the closest (most similar) are Headstart and Children. The two concepts that are furthest apart (most different) are Headstart and the G.E.D. program in Oneida. It is notable also, that the Oneidas report Public school as 234 units from themselves, which is a very high number compared to the others, considering that a majority of the respondents' children were in public rather than tribal school programs (15% of the Phase 2 respondents reported children in the tribal school programs).

In comparing the values of the three tribal programs, Oneida Tribal School, the Headstart program, and G.E.D. adult education program, the distances between them are marked, suggesting that the tribal programs do not function in Oneida perceptions as a unified set of programs. Examining their relationships

to other educational concepts in the table also illustrates their divergence in other areas. For example, G.E.D. is seen as 157 units from Oneida cultural heritage, further even than the Public schools are (144). The Tribal School and Headstart are seen as much closer to the concept (and associated ideas) of their cultural heritage, as is the self-concept.

"Education" is seen as closest to Headstart (23 units) and also very close to Good (25), but is furthest from, or most different from Life experience (98). The Oneidas participating in the second phase have reiterated, in precise magnitudes such as the Questionnaire records, the substantive comments from Phase 1 interviews, placing life and "learning about life" in contrast or opposition to "Education." The means matrix can be examined carefully for many different patterns in the answers. It is important to remember that values are relative to one another. There is no absolute scale of values that Oneida educational concepts are being measured against, thus its usefulness in examining cultural processes, and attitudes and beliefs of distinct cultural groups. The relationship of Jobs to all other concepts, for example, indicates that they are relatively close to Good (55), but further from the self (77), from the Tribe (219), from Oneida cultural heritage (243), from Oneida people (88), and from Indian (151), all of which are closer to

the self. Jobs are seen as relatively unattainable, and in terms of the educational programs, are closest to the G.E.D. program, and equally far from both Tribal School and Public school.

In a further examination of the self and other identity concepts, such as Oneida and Indian, it is interesting to note that "Indian" is somewhat closer to the self than "Oneida," and one's cultural heritage lies even further. One Oneida man has described an "identity crisis" that many Oneidas are going through, particularly the large numbers who leave and return to the reservation; such might be an explanation for the results in the survey. While Oneida culture and language are viewed favorably in the preliminary interviews (Phase 1), it is apparent that they are still at a distance from many Oneidas, who feel they have not had access to their history, or were not given the opportunity to learn their native language.

Table II is also a table of the mean values, in which only the specific school programs have been selected for easier comparison. A comparison of the attitudes of Oneidas toward the educational programs shows that the G.E.D. values are all higher; that is, G.E.D. lies further, or is perceived as more different, than any of the other educational programs. Closest to Parents (and associated with them, participation or involvement in education) is the Headstart program (35),

where Tribal School and the Public schools are not significantly different in the relationship to the Parents (77 and 76 units respectively). ✓

The Tribal School is perceived as being closest to Children (37), to Good (38), to Indian (39), Oneida (45) and Education (46), but further from White people (167), Public school (112), and Jobs (89). All of the tribal educational programs are seen as closer to Education than the Public schools, and Oneidas also place themselves close to Education (35).

An additional statistic that is of interest in the survey is the warp factor, or degree of inconsistency in the data. The factor for the sample was 2.563, a relatively high value. In conjunction with the broad spread of values for the percent error (calculated for each paired-concepts), this is a good indication of the presence of subgroups in the data, and thus in the population sampled. Potential differences may be found among groups of Oneida on the basis of their length of residence in the community, religious affiliation, or their degree of participation in the various school programs. Additional research and more extensive sampling might identify and analyze these differences more effectively.

6.2.2. Galileo Plot - Oneida Map of Educational Concepts

The Galileo plot is produced from the factors or dimensions discovered in the responses (Appendix D). Oneida education is conceptually a map of eight dimensions. Since no more than two or three dimensions can be portrayed visually at a time the Galileo maps serve only as "helpful aids" or sources of ideas and intuition but are not the best representations of the relationships between the concepts. For the precise measure of the distances between concepts, as provided by the Oneidas, the means matrix (Table I) is the most important source of information. These values can be examined and compared over time, if desired, to note the changes in relationships between process. It is this aspect of the Galileo methodology that most fruitfully examines processes of culture change.

In Map I, the first two dimensions (first principle axis) are portrayed. This cross-section representation accounts for 60.43% of the variance in the responses. Because it is most accurately portrayed as an 8-dimensional map, the plot appears to distort distances between concepts within the educational domain of the Oneidas. Distances between Headstart and Good are misrepresented in the first principle plane, as can be seen by examining the values in the mean's matrix. The map does demonstrate graphically that White people,

Public School, and Jobs all lie at an opposite end of the conceptual map for Oneidas, and this is true also when the first and third dimensions are plotted (Map II). The maps serve as "snapshots" of the Oneida educational domain - taken at different angles. The source of the plotting procedure is the table of coordinates (normal solution), which arrays all the values for the eight dimensions (Appendix D).

6.2.3. Messages to Move toward Goals in Education

Produced from the means matrix also is a message component. This represents the potentially best persuasive messages that might move the various educational programs of the tribe toward the self-concept; that is, to encourage participation in the programs by Oneidas. The message generator that computes the effectiveness of these programs relies essentially on the input from the Phase 1 and 2 interviews: given the Oneidas understandings and beliefs about education, only certain messages or communications will be convincing. The message component of Galileo programs extends the examination of cultural processes or culture change. It is possible not only to observe processes of change but to implement them. One of the goals of the Oneida survey has been to determine planning strategies, to improve

community participation in the tribal education programs. The message component of Galileo provides a highly structured means of doing so.

The educational concepts (in multidimensional space) are interrelated such that they do not move independently of one another (see discussion of cognitive processes, Section 2.2.). To attempt to effect a change in attitudes toward education, or in a specific example, toward the Tribal School, involves an estimation of the probable effect on other associated ideas, and the likelihood of any significant change being effected at all, given the strength of beliefs. The message component of the survey offers a prediction, given optimal conditions, of the best combination of concepts (=message) that might move or be moved in order to achieve a certain goal, and what the probable effects might be (how much closer the Tribal School can be moved toward Yourself).

Table III lists the potential messages for four different goals: the Oneida Tribal School, the Headstart Program, the G.E.D. Program, and Education generally. The messages should not be considered simply as advertising aimed "at" the Oneida community. The original source of these messages is the Oneidas, as respondents to the survey. The messages are the Oneidas' communication to the educational planners concerning the direction toward which they might move.

In the table, only those messages with a percent value of 20% or less (with minor exceptions) are included. The percent column indicates the "percent of distance remaining," given that the persuasive message is successful. So, for example, the original distance of 89 between the Tribal School and Yourself may potentially be reduced to a 9.6, if message 1 were utilized (computed 10.8% of 89). A message with a percent value of 0.0 would be a "perfect" message: no distance remaining between the two concepts. A message with a value of 99.9% would not affect the relationship between the two concepts, in all probability.

The best message in Table III(A) for the Oneida Tribal School is one that includes or brings together four ideas: Oneida - White people - Life experience - Good. To emphasize the participation of Oneidas and Whites in the Tribal School, and the presence of programs that teach or encourage life experiences, makes the Tribal School a good place to send Oneida children to school. The optimal consequence in elaborating on these aspects of the Tribal School would be to reduce the distance currently perceived between the School and the self to all but 10.8%. To calculate each remaining distance for each of the messages, one need only multiply the percent given, by the current distance between the two concepts.

For the Tribal School, messages 2 through 9 were

increasingly less effective, but still very good messages. In the Table, all but a couple of the percent values are under 20. This means that nearly all of the listed messages have the probability of moving toward goals in education by at least 80%. The concepts might be considered "key words" or ideas that might encourage involvement in the program (and they are already key words in the conceptual domain of education for Oneidas), and would indicate that the school may be reflecting Oneidas' interests and concerns as they have outlined them for the survey. A comprehensive planning strategy will include a consideration of the best channels by which to communicate information about the school to the community. There is, of course, no persuasive message that can move people in their attitudes or beliefs if corresponding changes in the educational programs are not apparent to them. The message component of the Galileo technique operates as a part of any planning strategy, for the purpose of changing or communicating goals, and can provide an efficient and precise way of mapping and observing these changes.

For the Oneida Headstart program, the best message is one that includes its relationship to the Tribal School and the Tribe, and the teaching of Oneida cultural heritage to the children, as well as learning about life. The percent remaining is 9.9, which

potentially moves Headstart toward the self from 51 to 5.148 units. The G.E.D. program as a goal in education produces a higher number of probable messages, illustrating the potential for a great deal of change in the perceptions of this program. The greater distance of G.E.D. from the other educational programs and from the self may be seen partially as a function of the lack of information concerning the program, rather than negative attitude (Robertson field notes 1981, Ad Hoc Education Committee). The most effective message with percent value of 8.3 (to potentially move the G.E.D. program over 91% toward the goal) is one that includes Headstart, Indian, Education, and Jobs. A tentative example might be, "Oneida G.E.D., like Headstart, is an educational program for Indians and will train them for jobs."

The concept of Education, and involvement in education by Oneidas, might potentially be moved toward the self (by over 91%) when its relationship to the concepts in message 1 (Table III (D)) is elucidated: Tribal School, the Headstart, Jobs, and the Tribe.

7. SUMMARY AND CONCLUSIONS

The Oneida educational planning survey has been designed to record as accurately as possible the perceptions of the Oneidas of their educational and related community concerns. The coordinated efforts of the tribal education staff, the Oneida community, and the field researcher made it possible to produce the Galileo report on tribal education. Practical benefits of the social data are (1) to give information on attitudes and beliefs about education (describing that conceptual "domain"), and on the best direction in which tribal education programs should move (messages in Table III), and (2) to provide a technical and descriptive report with which educational staff could shape requests and proposals to governmental agencies.

As an applied anthropological monograph on education as well, the Oneida study offers first an opportunity to understand the importance of cultural beliefs in motivations toward education, with the experiences of the Oneidas as a guide. Secondly, it investigates the usefulness of the Galileo methodology - the metric multidimensional scaling instrument - in representing cultural processes. Tyler (1976: 186) states that the cognitive anthropological approach requires a rethinking of the "culture concept, the

comparative method, and ethnography." It is possible, in his view, to discern the logical principles underlying "mental phenomena" by using formal methods of analysis, "similar to those of mathematics and logic" (Tyler 1976: 187).

In general, ethnographic field methods involving participation and observation in the community or social group can combine more formal modes of analysis, such as the Oneida educational planning project, to form a qualitative-quantitative "mix" of field methods (such as the eclectic approach espoused by Pelto and Pelto 1974). While the Galileo instrument is a quantitative research tool of high precision, each phase of the project relied on the qualitative evaluation of community needs, i.e., insights derived from day-to-day interactions. The initial phase of designing and administering the preliminary open-ended interviews is a process of exchanging information and eliciting qualitative judgements from individuals interviewed.

A study conducted in Oneida a few months following the planning survey centered on an evaluation of the Johnson-O'Malley Indian education programs (federally funded tribally run), and Title IV (federally funded, run by school districts). This needs assessment (Robertson 1982) made use of a blend of dichotomous-choice scales and open-ended questions in a roughly twenty-five minute interview schedule. Since the

purpose of the interviewing was to acquire approval, or discover disapproval, of certain Indian education programs, a "yes-no" format was required. The qualitative data were complementarily designed to identify and rank (using frequency count and clustering techniques) the concerns about educational programs and opportunities by Oneida parents, Oneida students, public school teachers and administrators.

While the Galileo MMDS method is presented here as a useful in modeling human behavior, community research will inevitably involve that "eclectic" approach. It is this flexibility in research design along with a strong commitment to facilitation of community goals that gives applied anthropological work a future in social science research.

Galileo theory and method emphasizes the individual actor (the self) as the focus of attention, as well as the importance of symbolic communication with others in establishing or defining experiences. This perspective allows us to identify cultural aggregates and their unique frames of reference. These reference frames, roughly equivalent to "cultural subsystems" in the anthropological literature, are an essential element in understanding cultural process and ethnic identities. Cross-cultural research is a natural source of comparative data for the communication science methodology proposed here. It is possible to discover

emic "categories" and discuss them as conceptual domains with a precise representation of the concepts, ideas, or perceptions that are meaningful to the social group.

The educational experiences of the Oneidas place education and tribal identity close to the self. But the great distance seen between Oneidas and public schools and White people attests to the facts of their distinct educational history, and the problems of prejudice and separateness that students sometimes face in the school environment.

The capacity to identify and analyze process has been most elusive in the social sciences, including anthropology. The Galileo study has a high potential for longitudinal attitude research. That is, over time, changes may be noted in the conceptual "distances" between the various educational perceptions - by conducting additional educational surveys in the community. In planning educational programs, it is useful to map the perceptions of the Oneida community at different points in time, especially as new programs are initiated, or others changed. It is also possible to investigate further the reference frames of the educational personnel in the four school districts surrounding the Oneida reservation, or members of the adjacent White community, to understand more effectively where viewpoints may differ, and by direct comparison (on the Galileo scaling instrument) what the most

important similarities and differences in educational goals are.

A fundamental goal in the research has been to assist in improving the quality of education for Oneidas. The Oneida community as a distinct cultural and social unit defines meaningful experiences for its members and their children. An essential function in the Galileo methodology to shed light on the nature of these beliefs and goals, by means of a cognitive model of cultural processes.

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**ONEIDA EDUCATIONAL PLANNING SURVEY:
TABLES, APPENDICES AND MAPS**

TABLE I. TABLE OF MEANS (MEANS MATRIX)*

Pairs of Concepts:	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
01 Tribal School	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02 Headstart	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03 G.E.D.	127	245	-	-	-	-	-	-	-	-	-	-	-	-	-
04 Oneida	45	36	60	-	-	-	-	-	-	-	-	-	-	-	-
05 Indian	39	25	60	26	-	-	-	-	-	-	-	-	-	-	-
06 White people	167	86	80	146	211	-	-	-	-	-	-	-	-	-	-
07 Public school	112	70	101	82	137	24	-	-	-	-	-	-	-	-	-
08 Education	46	23	33	40	73	55	60	-	-	-	-	-	-	-	-
09 Jobs	89	88	50	88	151	33	77	61	-	-	-	-	-	-	-
10 Cultural heritage	56	26	157	58	59	130	144	64	243	-	-	-	-	-	-
11 Life experience	90	40	111	36	50	48	79	98	52	44	-	-	-	-	-
12 Parents	77	35	99	35	31	102	76	46	59	34	28	-	-	-	-
13 Children	37	10	126	29	24	76	70	51	125	32	37	30	-	-	-
14 Tribe	82	46	63	30	34	228	143	38	219	51	165	66	65	-	-
15 Good	38	18	54	27	30	97	75	25	55	19	50	28	23	48	-
16 Yourself	89	52	120	25	19	89	234	35	77	40	23	38	29	50	27

* The means matrix reports the distances perceived between the concepts, averaging all answers of the respondents ($n = 45$). The Oneidas measured the distance between 120 unique pairs of concepts. Grand mean is 71.

** The two concepts with the maximum distance (the most different)

*** The two concepts with the minimum distance (the most similar)

TABLE II. COMPARISON OF ATTITUDES
TOWARD SCHOOL PROGRAMS*

	Yourself	Public School	Tribal School	Headstart	G.E.D.
Tribal School	89	112	-	61	127
Headstart	52	70	61	-	245 **
G.E.D.	120	101	127	245 **	-
Oneida	25	82	45	36	60
Indian	19	137	39	25	60
White people	89	24	167	86	80
Public school	234	-	112	70	101
Education	35	60	46	23	33
Jobs	77	77	89	88	50
Cultural heritage	40	144	56	26	157
Life experience	23	79	90	40	111
Parents	38	76	77	35	99
Children	29	70	37	10 ***	126
Tribe	50	143	82	46	63
Good	27	75	38	18	54
Yourself	-	234	89	52	120

* Values are selected from Table I (means matrix). To read: a value that is smaller indicates that the Oneidas place the two concepts closer conceptually (more similar); a value that is larger indicates that they are considered further apart (more different).

** The two concepts with the maximum distance (most different).

*** The two concepts with the minimum distance (most similar).

TABLE III. POTENTIAL MESSAGES TO MOVE
TOWARD GOALS IN EDUCATION

Percent*

A. Goal: ONEIDA TRIBAL SCHOOL

Start: Tribal School
Target: Yourself
Distance: 89

1 Oneida - White people - Life experience - Good	10.8
2 Oneida - White people - Life experience - Education	11.6
3 Headstart - G.E.D. - White people	13.2
4 Headstart - G.E.D. - White people - Oneida	13.7
5 Oneida - White people - Parents - Children	13.8
6 Oneida - White people - Life experience	17.1
7 Oneida - White people - Life experience - Parents	18.6
8 Oneida - White people - Education - Parents	19.4
9 Oneida - White people - Education - Good	19.9

B. Goal: ONEIDA HEADSTART

Start: Headstart
Target: Yourself
Distance: 52

1 Oneida Tribal School - Cultural heritage - Life experience - Tribe	9.9
2 Oneida Tribal School - Education - Jobs - Tribe	19
3 Oneida Tribal School - Oneida - White people - Parents	22.6

C. Goal: ONEIDA G.E.D.

Start: G.E.D. Program
Target: Yourself
Distance: 120

1 Headstart - Indian - Education - Jobs	8.3
2 Indian - Cultural heritage - Life experience - Children	10.3
3 Oneida - Cultural heritage - Life experience	11.8
4 Oneida - Indian - Cultural heritage - Children	12.9
5 Headstart - Indian - Jobs - Good	12.9
6 Headstart - Oneida - Education - Life experience	13.8
7 Oneida - Cultural heritage - Life experience - Children	14.2
8 Oneida - Cultural heritage	14.3
9 Indian - Cultural heritage - Life experience - Parents	14.8
10 Life experience - Children	15.0
11 Headstart - Indian - Jobs - Parents	15.1
12 Headstart - Education - Life experience - Good	15.6
13 Education - Cultural heritage - Children	15.7

TABLE III. POTENTIAL MESSAGES TO MOVE
TOWARD GOALS IN EDUCATION

	Percent*
14 Indian - cultural heritage - Children	16.2
15 Education - Cultural heritage	16.3
16 Cultural heritage - Life experience - Good	17.4
17 Oneida - Cultural heritage - Life experience - Parents	17.7
18 Headstart - Oneida - Jobs - Children	17.7
19 Oneida - Life experience - Parents - Children	17.7
20 Oneida - Cultural heritage - Children	17.7
21 Headstart - Oneida - White people - Good	17.7
22 Oneida Tribal School - White people - Cultural heritage	17.9
23 Headstart - Oneida - White people - Parents	18.1
24 White people - Cultural heritage - Parents	18.1
25 Headstart - Education - Life experience - Parents	18.3
26 Oneida - Cultural heritage - Good	18.8
27 White people - Cultural heritage	18.8
28 Cultural heritage - Life experience - Children	18.9
29 Oneida - Children	18.9
30 Indian - Cultural heritage - Children - Tribe	19.1
31 Indian - Cultural heritage - Parents	19.2
32 Headstart - Oneida - Indian - Life experience	19.6
33 Oneida - Cultural heritage - Children - Good	19.2
34 Headstart - Indian - Life experience - Good	19.7
35 Indian - Cultural heritage - Parents - Children	19.8
36 Indian - Cultural heritage - Parents - Good	19.9

D. Goal: EDUCATION

Start: Education
Target: Yourself
Distance: 35

1 Oneida Tribal School - Headstart - Jobs - Tribe	8.1
2 Oneida Tribal School - Headstart - G.R.D. - Life experience	6
3 Oneida Tribal School - Cultural heritage - Life experience	14.9
4 Oneida - White people - Life experience - Good	27.6
5 Oneida - White people - Children - Good	28.9

*Percent column identifies the percent distance remaining between the goal and the self-concept, given the persuasive message would be successful. E.g., the original distance of 89 between the Tribal School and the Self would potentially be reduced to a 9.6, if Message 1 is utilized.

TABLE III. POTENTIAL MESSAGES TO MOVE
TOWARD GOALS IN EDUCATION

	Percent*
14 Indian - cultural heritage - Children	16.2
15 Education - Cultural heritage	16.3
16 Cultural heritage - Life experience - Good	17.4
17 Oneida - Cultural heritage - Life experience - Parents	17.7
18 Headstart - Oneida - Jobs - Children	17.7
19 Oneida - Life experience - Parents - Children	17.7
20 Oneida - Cultural heritage - Children	17.7
21 Headstart - Oneida - White people - Good	17.7
22 Oneida Tribal School - White people - Cultural heritage	17.9
23 Headstart - Oneida - White people - Parents	18.1
24 White people - Cultural heritage - Parents	18.1
25 Headstart - Education - Life experience - Parents	18.3
26 Oneida - Cultural heritage - Good	18.8
27 White people - Cultural heritage	18.8
28 Cultural heritage - Life experience - Children	18.9
29 Oneida - Children	18.9
30 Indian - Cultural heritage - Children - Tribe	19.1
31 Indian - Cultural heritage - Parents	19.2
32 Headstart - Oneida - Indian - Life experience	19.6
33 Oneida - Cultural heritage - Children - Good	19.2
34 Headstart - Indian - Life experience - Good	19.7
35 Indian - Cultural heritage - Parents - Children	19.8
36 Indian - Cultural heritage - Parents - Good	19.9

D. Goal: EDUCATION

Start: Education
Target: Yourself
Distance: 35

1 Oneida Tribal School - Headstart - Jobs - Tribe	8.1
2 Oneida Tribal School - Headstart - G.E.D. - Life experience	6
3 Oneida Tribal School - Cultural heritage - Life experience	14.9
4 Oneida - White people - Life experience - Good	27.6
5 Oneida - White people - Children - Good	28.9

*Percent column identifies the percent distance remaining between the goal and the self-concept, given the persuasive message would be successful. E.g., the original distance of 89 between the Tribal School and the Self would potentially be reduced to a 9.6, if Message 1 is utilized.

**APPENDIX A: DEMOGRAPHIC INFORMATION
PHASE 1 AND 2 INTERVIEWS**

		PHASE 1	PHASE 2	TOTAL
1. SEX				
	Male	9	12	21
	Female	14	33	47
	No Answer	1	0	1
2. AGE	Range:	21 - 74	18 - 72	18 - 74
	18 - 20	0	4	4
	21 - 30	9	14	23
	31 - 40	4	6	10
	41 - 50	4	11	15
	51 - 60	0	4	4
	61 - 70	2	2	4
	71 - 80	4	2	6
	No Answer	1	2	3
3. OCCUPATIONS				
	Homemaker	5	8	13
	Laborer	0	0	0
	Service Worker	3	6	9
	Operative/Machine Operator	0	1	1
	Craftsmen & Foremen	3	0	3
	Retail Sales & Office Work	4	7	11
	Manager/Self-Employed	0	2	2
	Business Exec./Professional	8	17	25
	Student	0	4	4
	Retired	1	2	3
	Unemployed	0	2	2
	No Answer	1	3	4
4. YEARS RESIDENCE IN ONEIDA				
	Range (YRS in Oneida/AGE=x)	4 - 100	1 - 100	1 - 100
	Average % of Life in Oneida	55	62	59
	0 - 10%	2	2	4
	11 - 25%	5	3	8
	26 - 50%	3	8	11
	51 - 75%	4	4	8
	76 - UP%	9	16	25
	No Answer	1	13	14

**APPENDIX A: DEMOGRAPHIC INFORMATION
PHASE 1 AND 2 INTERVIEWS**

	<u>PHASE 1</u>	<u>PHASE 2</u>	<u>TOTAL</u>
5. MARITAL STATUS			
Married	15	23	38
Single	5	14	19
Widowed	2	2	4
Divorced/Separated	1	6	7
No Answer	1	0	1
6. NUMBER OF CHILDREN			
Range	0 - 14	0 - 14	0 - 14
Average (WITH Children Only)			4.3
Average (W/WO Children)	4.3	3.1	3.5
No Answer	1	1	2
7. RELIGIOUS AFFILIATION			
Assembly of God	1	0	1
Church of Christ	1	1	2
Episcopalian	6	9	15
First Congregational	0	1	1
Longhouse	0	3	3
Lutheran	2	0	2
Methodist	5	9	14
Mormon	1	1	2
Other Protestant	0	1	1
Roman Catholic	1	1	2
None	5	14	19
No Answer	2	7	9
8. NUMBER OF ONEIDA SPEAKERS IN FAMILY			
Range	0 - 6+	0 - 10	0 - 10
No Speakers	8	11	19
1 - 2 Speakers	9	17	26
3 - 5 Speakers	4	6	10
6 or more Speakers	2	2	4
No Answer	1	6	7

**APPENDIX A: DEMOGRAPHIC INFORMATION
PHASE 1 AND 2 INTERVIEWS**

	<u>PHASE 1</u>	<u>PHASE 2</u>	<u>TOTAL</u>
(8.) SPEAKERS:			
Self	5	10	15
Parents	5	15	20
Siblings	4	4	8
Aunts-Uncles	7	1	8
Cousins	0	1	1
Spouse	4	2	6
Children	9	6	15
Grandparents	6	6	12

9. RESPONDENTS' EDUCATIONAL EXPERIENCE

HIGHEST EDUCATIONAL LEVEL:

Range	6th-DOC	8th-DOC	8th-DOC
Less than High School	4	11	15
G.E.D.	3	2	5
High School	6	10	16
Less than 2 Yrs College	2	6	8
2 Years College	4	7	11
2+ Years College	2	8	10
Bachelors' Degree	1	1	2
Masters Degree	0	0	0
Doctoral Degree	1	1	2
No Answer	1	0	1

NUMBER SCHOOLS ATTENDED:

(PRIOR TO H.S. GRADUATION)

Range	1 - 7	1 - 10	1 - 10
Average	3	3	3
Lapses in Attendance	6	6	12
No Answer	1	15	16

10. RESPONDENTS' CHILDREN'S SCHOOLS

Oneida Tribal School	5	8	13
Oneida Headstart	5	4	9
Oneida G.E.D. Program	0	1	1

**APPENDIX A: DEMOGRAPHIC INFORMATION
PHASE 1 AND 2 INTERVIEWS**

	<u>PHASE 1</u>	<u>PHASE 2</u>	<u>TOTAL</u>
(10.) Seymour	7	9	16
Pulaski	1	1	2
West DePere	1	14	15
Freedom	1	5	6
Green Bay	7	5	12
Out-Of-Town/State	6	17	23
College	0	16	16
None	0	11	11
No Answer	1	4	5

APPENDIX B. SAMPLE - PRELIMINARY INTERVIEW
PHASE 1

1. What does being Oneida mean to you?
2. Why do you live in Oneida (the Oneida area)
(or, Why would you)?
3. What would you like to see changed about the community?
...What is good about the community?
4. What part does education play in the community?
5. What is the best way to educate your child(ren)?
6. What is the role of the Tribal School in the community?
7. Tell me what you think about each of these:
...Headstart
...G.E.D. Program

Demographic Questions

1. Sex
 2. Age
 3. Occupation (kind of work)
 4. Educational experience:
 - a) highest educational level attained
 - b) location(s) of schools
 - c) lapses in attendance
 5. Years lived in Oneida (area)
(Note number of years in prior and later residence,
where appropriate)
 6. Marital status
 7. Number of children
 8. Location of children's school(s)
 9. Religious affiliation
 10. Are there Oneida language speakers in your family?
...Who are they (their relationship to you)?
-

**APPENDIX C: SAMPLE - GALILEO QUESTIONNAIRE
PHASE 2**

Instructions

Please estimate how different or "far apart" each of the following words or phrases is from each of the others. The more different, or further apart they seem to be, the larger the number you should write. To help you know what size number to write, remember
AN AVERAGE DISTANCE IS 100.

If two words or phrases are not different at all, please write zero (""). If you have no idea, just leave the space blank.

Thank you very much for your help.

Duplicate 1-5

Card 001 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.				
0102	09-17	TRIBAL SCHOOL	and	HEADSTART
0103	15-26	TRIBAL SCHOOL	and	GED
0104	27-35	TRIBAL SCHOOL	and	ONEIDA
0105	36-44	TRIBAL SCHOOL	and	INDIAN
0106	45-53	TRIBAL SCHOOL	and	WHITE PEOPLE
0107	54-62	TRIBAL SCHOOL	and	PUBLIC SCHOOL
0108	63-71	TRIBAL SCHOOL	and	EDUCATION
0109	72-80	TRIBAL SCHOOL	and	JOBs

Duplicate 1-5

Card 002 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.				
0110	09-17	TRIBAL SCHOOL	and	CULTURAL HERITAGE
0111	15-26	TRIBAL SCHOOL	and	LIFE EXPERIENCE
0112	27-35	TRIBAL SCHOOL	and	PARENTS
0113	36-44	TRIBAL SCHOOL	and	CHILDREN
0114	45-53	TRIBAL SCHOOL	and	TRIBE
0115	54-62	TRIBAL SCHOOL	and	GOOD
0116	63-71	TRIBAL SCHOOL	and	YOURSELF
0203	72-80	HEADSTART	and	GED

Duplicate 1-5

Card 003 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.				
0204	09-17	HEADSTART	and	ONEIDA
0205	15-26	HEADSTART	and	INDIAN
0206	27-35	HEADSTART	and	WHITE PEOPLE
0207	36-44	HEADSTART	and	PUBLIC SCHOOL
0208	45-53	HEADSTART	and	EDUCATION
0209	54-62	HEADSTART	and	JOBs
0210	63-71	HEADSTART	and	CULTURAL HERITAGE
0211	72-80	HEADSTART	and	LIFE EXPERIENCE

Duplicate 1-5

Card 004 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.				
0212	09-17	HEADSTART	and	PARENTS
0213	15-26	HEADSTART	and	CHILDREN
0214	27-35	HEADSTART	and	TRIBE
0215	36-44	HEADSTART	and	GOOD
0216	45-53	HEADSTART	and	YOURSELF
0304	54-62	GED	and	ONEIDA

0305 63-71 GED and INDIAN
0306 72-80 GED and WHITE PEOPLE

Duplicate 1-6
Card 005 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.

0307 09-17 GED and PUBLIC SCHOOL
0308 18-26 GED and EDUCATION
0309 27-35 GED and JOBS
0310 36-44 GED and CULTURAL HERITAGE
0311 45-53 GED and LIFE EXPERIENCE
0312 54-62 GED and PARENTS
0313 63-71 GED and CHILDREN
0314 72-80 GED and TRIBE

Duplicate 1-6
Card 006 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.

0315 09-17 GED and GOOD
0316 18-26 GED and YOURSELF
0405 27-35 ONEIDA and INDIAN
0406 36-44 ONEIDA and WHITE PEOPLE
0407 45-53 ONEIDA and PUBLIC SCHOOL
0408 54-62 ONEIDA and EDUCATION
0409 63-71 ONEIDA and JOBS
0410 72-80 ONEIDA and CULTURAL HERITAGE

Duplicate 1-6
Card 007 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.

0411 09-17 ONEIDA and LIFE EXPERIENCE
0412 18-26 ONEIDA and PARENTS
0413 27-35 ONEIDA and CHILDREN
0414 36-44 ONEIDA and TRIBE
0415 45-53 ONEIDA and GOOD
0416 54-62 ONEIDA and YOURSELF
0506 63-71 INDIAN and WHITE PEOPLE
0507 72-80 INDIAN and PUBLIC SCHOOL

Duplicate 1-6
Card 008 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.

0508 09-17 INDIAN and EDUCATION
0509 18-26 INDIAN and JOBS
0510 27-35 INDIAN and CULTURAL HERITAGE
0511 36-44 INDIAN and LIFE EXPERIENCE
0512 45-53 INDIAN and PARENTS
0513 54-62 INDIAN and CHILDREN
0514 63-71 INDIAN and TRIBE
0515 72-80 INDIAN and GOOD

Duplicate 1-6
Card 009 7-8 Remember, AN AVERAGE DISTANCE IS 100.

COL.

0516 09-17 INDIAN and YOURSELF
0607 18-26 WHITE PEOPLE and PUBLIC SCHOOL
0608 27-35 WHITE PEOPLE and EDUCATION

0609 39-64 WHITE PEOPLE and JOBS
0610 45-53 WHITE PEOPLE and CULTURAL HERITAGE
0611 54-62 WHITE PEOPLE and LIFE EXPERIENCE
0612 63-71 WHITE PEOPLE and PARENTS
0613 72-80 WHITE PEOPLE and CHILDREN

Duplicate 1-4

Card 010 7-8 Remember, AN AVERAGE DISTANCE IS 100.

CPL.

0614 09-17 WHITE PEOPLE and TRIBE
0615 18-26 WHITE PEOPLE and GOOD
0616 27-35 WHITE PEOPLE and YOURSELF
0708 36-44 PUBLIC SCHOOL and EDUCATION
0709 45-53 PUBLIC SCHOOL and JOBS
0710 54-62 PUBLIC SCHOOL and CULTURAL HERITAGE
0711 63-71 PUBLIC SCHOOL and LIFE EXPERIENCE
0712 72-80 PUBLIC SCHOOL and PARENTS

Duplicate 1-5

Card 011 7-8 Remember, AN AVERAGE DISTANCE IS 100.

CPL.

0713 09-17 PUBLIC SCHOOL and CHILDREN
0714 18-26 PUBLIC SCHOOL and TRIBE
0715 27-35 PUBLIC SCHOOL and GOOD
0716 36-44 PUBLIC SCHOOL and YOURSELF
0809 45-53 EDUCATION and JOBS
0810 54-62 EDUCATION and CULTURAL HERITAGE
0811 63-71 EDUCATION and LIFE EXPERIENCE
0812 72-80 EDUCATION and PARENTS

Duplicate 1-6

Card 012 7-8 Remember, AN AVERAGE DISTANCE IS 100.

CPL.

0813 09-17 EDUCATION and CHILDREN
0814 18-26 EDUCATION and TRIBE
0815 27-35 EDUCATION and GOOD
0816 36-44 EDUCATION and YOURSELF
0910 45-53 JOBS and CULTURAL HERITAGE
0911 54-62 JOBS and LIFE EXPERIENCE
0912 63-71 JOBS and PARENTS
0913 72-80 JOBS and CHILDREN

Duplicate 1-6

Card 013 7-8 Remember, AN AVERAGE DISTANCE IS 100.

CPL.

0914 09-17 JOBS and TRIBE
0915 18-26 JOBS and GOOD
0916 27-35 JOBS and YOURSELF
1011 36-44 CULTURAL HERITAGE and LIFE EXPERIENCE
1012 45-53 CULTURAL HERITAGE and PARENTS
1013 54-62 CULTURAL HERITAGE and CHILDREN
1014 63-71 CULTURAL HERITAGE and TRIBE
1015 72-80 CULTURAL HERITAGE and GOOD

Duplicate 1-6

Card 014 7-8 Remember, AN AVERAGE DISTANCE IS 100.

CPL.

1016	09-17	CULTURAL HERITAGE	and YOURSELF	-----
1112	18-26	LIFE EXPERIENCE	and PARENTS	-----
1113	27-35	LIFE EXPERIENCE	and CHILDREN	-----
1114	36-44	LIFE EXPERIENCE	and TRIBE	-----
1115	45-53	LIFE EXPERIENCE	and GOOD	-----
1116	54-62	LIFE EXPERIENCE	and YOURSELF	-----
1212	63-71	PARENTS	and CHILDREN	-----
1214	72-80	PARENTS	and TRIBE	-----

Duplicate 1-6
Card C15 7-8 Remember, AN AVERAGE DISTANCE IS 170.

COL.				
1215	09-17	PARENTS	and GOOD	-----
1216	18-26	PARENTS	and YOURSELF	-----
1314	27-35	CHILDREN	and TRIBE	-----
1315	36-44	CHILDREN	and GOOD	-----
1316	45-53	CHILDREN	and YOURSELF	-----
1415	54-62	TRIBE	and GOOD	-----
1416	63-71	TRIBE	and YOURSELF	-----
1516	72-80	GOOD	and YOURSELF	-----

Duplicate 1-6
Card C17 7-8
PLEASE CHECK THE SCHOOLS /PROGRAMS BELOW IN WHICH YOU
OR ANYONE IN YOUR HOUSEHOLD ARE NOW INVOLVED:

Oneida Education Ofc	Public Schools:
JTPA (CETA)	Freedom
E-E-D.	Pulaski
Oneida Headstart	Seymour
Oneida Language Progs	W. DePere
Oneida Tribal School	Green Bay

YOUR SCHOOL DISTRICT?

- | | |
|-------------|---------------|
| (1) Freedom | (4) Seymour |
| (2) Pulaski | (5) Green Bay |
| (3) Seymour | |

ADMINISTRATOR: PLEASE CIRCLE APPROPRIATE NUMBER FOR ANSWER

TO RESPONDENT: I'd like to ask you several questions
about yourself, which we use for
statistical purposes. Is that alright?

(1) SEX (1) Male (2) Female

(2) NUMBER LIVING IN HOUSEHOLD?
(1) one (5) 7 to 10
(2) two (6) over 10
(3) three (9) DNA

(4) 4 to 6

NUMBER OF SCHOOL-AGE CHILDREN AT HOME?

- # in Pre-school
- # in K-through 8
- # in Grades 9-12
- DNA

ARE MEMBERS OF HOUSEHOLD?

- (1) All Oneidas
- (2) Oneida & non-Indian
- (3) Oneida & other Indian
- (4) Oneida, non-Indian & other Indian
- (5) DNA

HOUSEHOLD GROUP INCLUDES (CHECK ONES THAT APPLY, IN THEIR RELATIONSHIP TO YOU):

- | | |
|------------------------|-------------------------|
| --- Great-grandparents | --- Cousins |
| --- Grandparents | --- Children |
| --- Parents | --- Nieces/Nephews |
| --- Aunts/Uncles | --- Grandchildren |
| --- Sisters/Brothers | --- Grandnieces/nephews |
| --- Other: | ----- |

(3) WHAT IS YOUR MARITAL STATUS?

- (1) married
- (2) living as a couple
- (3) widowed
- (4) divorced/separated
- (5) never married
- (6) DNA

(4) WHAT IS THE HIGHEST GRADE YOU COMPLETED IN SCHOOL?

- (1) below H.S.
- (2) H.S.Grad/GED
- (3) some coll/tech sch
- (4) Bachelors
- (5) Masters
- (6) Ph.D.
- (7) DNA

What is the highest grade your FATHER completed in school? -----

What is the highest grade your MOTHER completed in school? -----

(5) YOUR YEAR OF BIRTH? (4 digits) -----

(6) DO YOU WORK?

- (1) Full-time
- (2) Part-time
- (3) Work in home
- (4) Unemployed/laid off
- (5) Retired
- (6) disabled
- (7) Student
- (8) DNA

TYPE OF WORK YOU DO (OR DID DO):

- (1) Laborer
- (2) Service work/Transport
- (3) Machine operator
- (4) Clerical/Detail/Sales
- (5) Manager/Own Business
- (6) Professnl/Technical/Bus.Exec.

(4) Farm worker

(9) DNA

(7) RESIDENCE:

HOW MANY YEARS HAVE YOU LIVED IN ONEIDA (GREEN PAY)?
(INCLUDE ONLY LATEST CONTINUOUS RESIDENCE)

- (1) 1 to 7 years (4) 10+ years
(2) 8 to 4 years (9) DNA
(3) 7 to 9 years

DO YOU LIVE (1) ON the Reservation (65000 acres)
(2) OFF the Reservation

IS YOUR LAND/PROPERTY:

- (1) tribal trust (4) taxable (non-tribal)
(2) individual trust (5) rental unit
(3) fee-owned (9) DNA

(9) WHAT RELIGION DO YOU FOLLOW?

- (1) Episcopalian (5) Longhouse
(2) Methodist (6) Other: _____
(3) Lutheran (9) DNA
(4) Roman Catholic

(10) WHAT IS YOUR HOUSEHOLD INCOME (BEFORE TAXES)?

- (1) Less than \$5000 (6) \$30-40,000
(2) \$5000-10,000 (7) \$40-50,000
(3) \$10-15,000 (8) \$50,000+
(4) \$15-20,000 (9) DNA
(5) \$20-30,000

(11) ARE THERE ONEIDA SPEAKERS IN YOUR FAMILY?

- (1) Yes
(2) No

IF YES, WHAT IS THEIR RELATIONSHIP TO YOU?

- (1) Great/Grandparent (5) Grandchildren
(2) Parent/Aunt/Uncle Grandniece/nephew
(3) Sister/Brother/Cousin (6) Other: _____
(4) Children/niece/nephew (9) DNA

Duplicate 1-6

Card C1S 7-8

ADMINISTRATOR:

PLEASE RECORD THE FOLLOWING

Your initials _____

Date of Interview in YYMMDD format _____

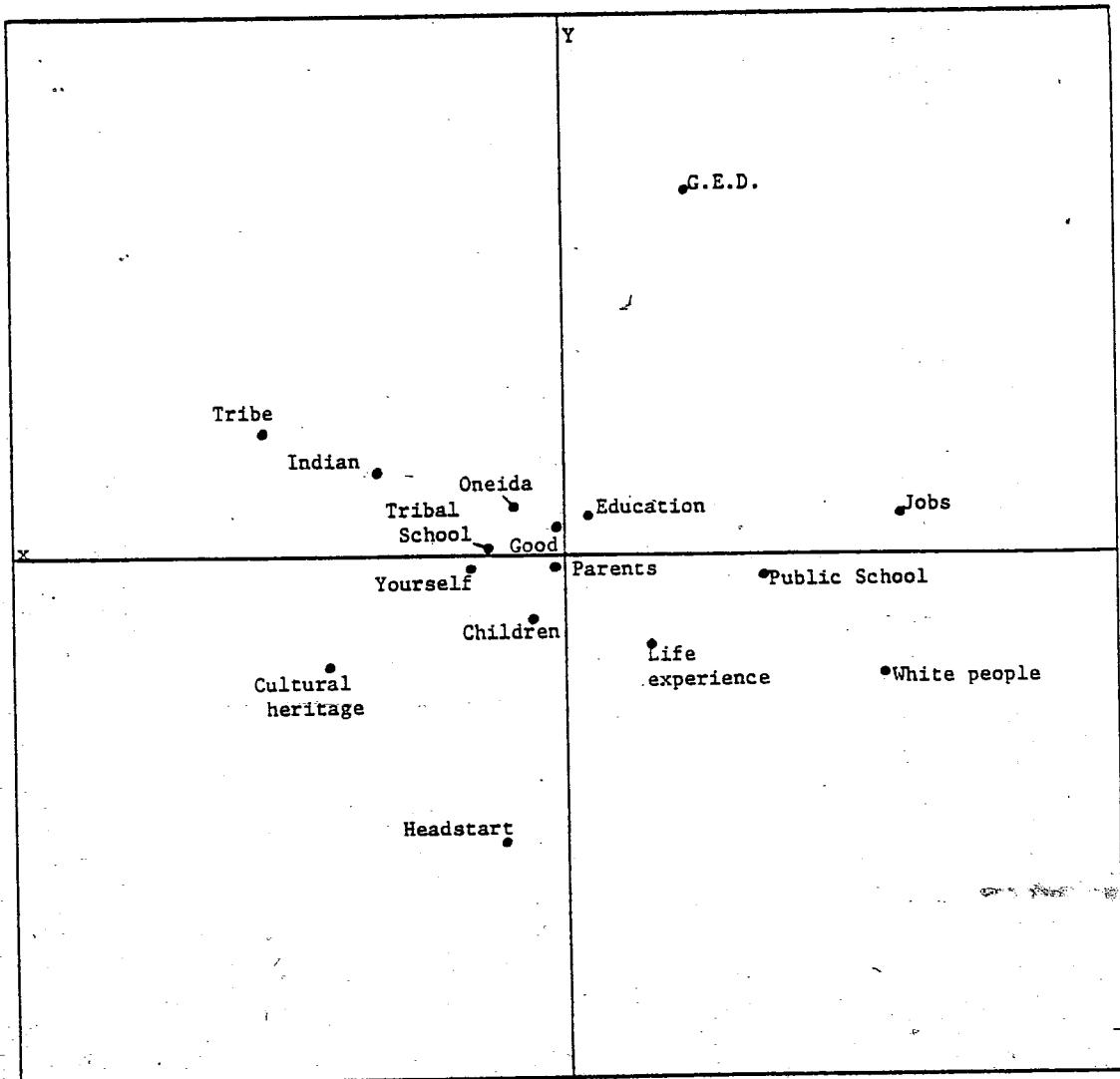
Time of Interview in HHMM format _____

Length of Interview in minutes _____

**APPENDIX D. GALILEO COORDINATES OF 16 CONCEPTS IN A METRIC MULTIDIMENSIONAL SPACE
NORMAL SOLUTION (8 REAL DIMENSIONS)**

Dimensions:	1	2	3	4	5	6	7	8
01 Tribal School	-26.126	1.846	7.895	-40.200	5.566	46.412	-2.391	-0.299
02 Headstart	-24.485	-99.689	8.234	-38.937	-20.743	-10.060	-0.134	-1.469
03 G.E.D.	41.322	123.085	0.149	33.498	6.183	0.259	0.017	0.164
04 Oneida	-18.190	17.489	3.913	-17.993	9.044	-8.794	15.053	-9.443
05 Indian	-64.064	29.446	-3.994	-34.139	36.861	-7.618	-3.165	3.790
06 White people	107.634	-40.933	-14.558	64.127	-16.423	2.126	0.757	0.626
07 Public school	* 66.690	-9.219	106.361	-4.971	5.081	-4.804	0.485	-0.009
08 Education	9.959	12.830	5.784	6.496	-46.113	6.891	-0.759	-2.336
09 Jobs	113.969	12.672	-37.710	-62.320	-6.555	-0.533	-0.828	0.112
10 Cultural heritage	-81.040	-38.070	13.112	-67.467	15.043	9.934	-3.546	-4.050
11 Life experience	28.215	-30.732	-21.024	10.476	57.390	-3.607	0.975	-2.946
12 Parents	-1.749	-4.451	-0.910	-3.396	6.057	-26.871	-10.801	0.125
13 Children	-13.693	-22.455	8.629	12.965	4.134	6.447	10.803	13.601
14 Tribe	-102.285	43.835	27.992	-2.496	-36.345	-12.368	1.482	0.757
15 Good	-2.027	8.512	0.662	-0.787	-5.043	5.064	-10.555	-1.882
16 Yourself	-34.129	-4.166	-104.536	10.210	-14.136	-2.478	1.806	.470
% Variance:	37.838	22.595	17.342	12.736	6.467	2.394	0.402	0.227

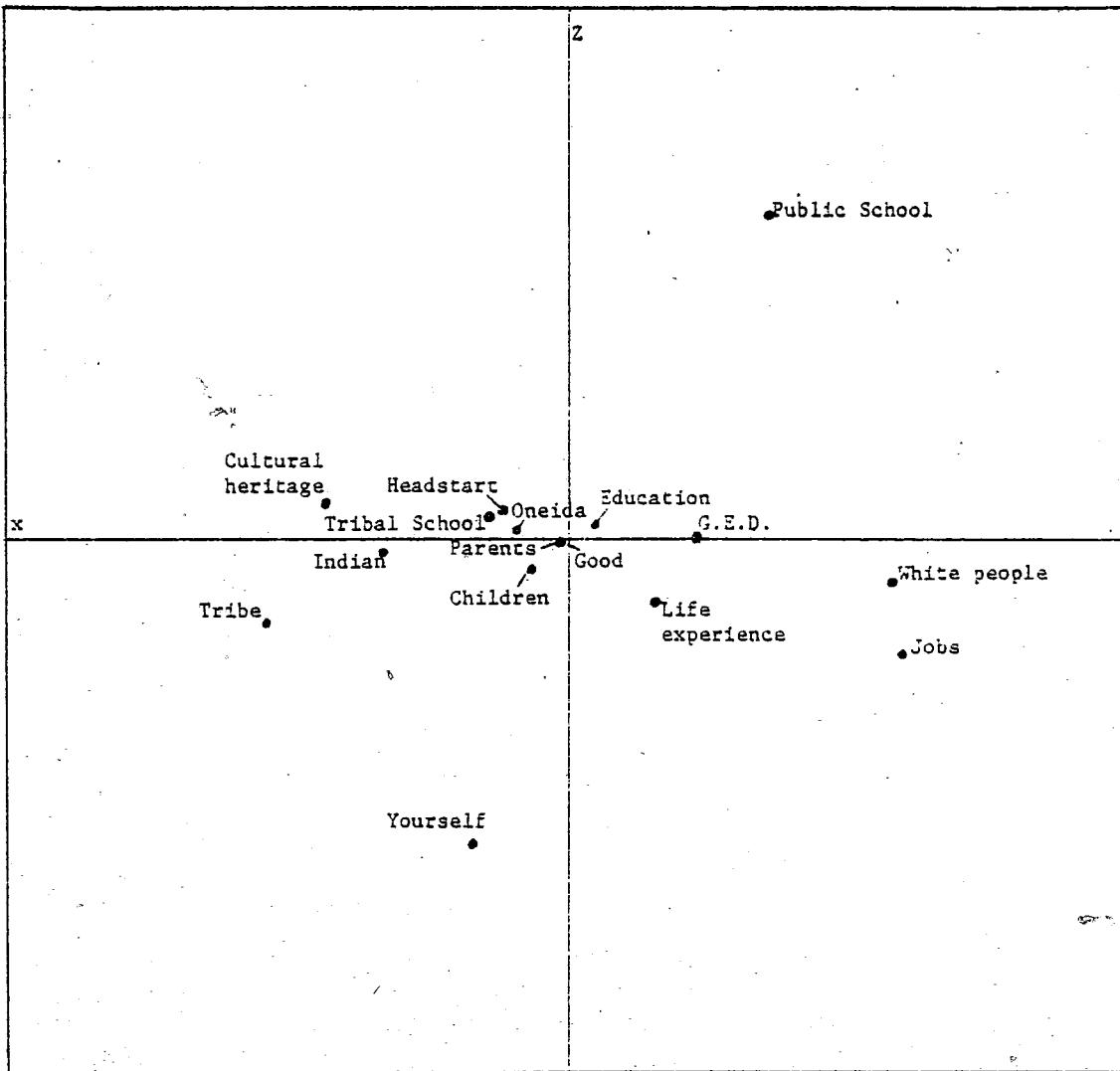
MAP I. Conceptual Map of Oneida Education
(Two-Dimensional Cross-Section)



source: Galileo plot of normal solution, 1st principle plane (Appendix D has values).

NOTE: 60.43% of variance is accounted for by these first two dimensions. The relationships of the concepts are much like a photograph: some values are misrepresented because of the angle of the "picture," which is 8-dimensional. For accurate distances between the concepts, refer to Table I. (means matrix).

MAP II. Conceptual Map of Oneida Education
(Dimension 1 and 3 Cross-Section)



source: Galileo plot of normal solution, dimensions 1,3 (see Appendix D for values).

NOTE: 55.18% of variance is accounted for in these two dimensions. The relationships of the concepts are much like a photograph: some distances are misrepresented because of the angle of the "picture," which is 3-dimensional. For accurate distances between the concepts, refer to Table I (means matrix).