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**UNIVERSITY OF ALBERTA**

**VALUE ORIENTATIONS OF HUTTERIAN WOMEN IN CANADA**

**BY**

**E. T. GUSHULIAK** 

**A THESIS**

**SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF NURSING**

**FACULTY OF NURSING**

**EDMONTON, ALBERTA**

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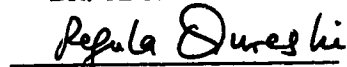
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## ABSTRACT

The purpose of this study was to elicit information which could enable nurses to better care for Hutterian clients. Because values are the most fundamental, enduring key to understanding a culture, describing Hutterian values was considered essential for provision of culturally appropriate, effective nursing care.

A cross-sectional descriptive survey was conducted to examine the relationships among: Value orientation, age and Hutterian *Leut* (lineage subsect) membership. Gender was held constant; biological age was documented.

The instrument used was the Value Orientation Profile (VOP) questionnaire developed by Kluckhohn and Strodtbeck (1961) for rural populations. This twenty three item, fixed alternative, standardized ordinal scale questionnaire, related a life situation, then suggested three potential solutions. Respondents completed the questionnaires manually during group interviews, rank ordering the preferred and alternate solutions for each problem.

The sample consisted of all consenting women of one available colony from each of the *Schmiedeleut*, *Lehroleut*, and *Dariusleut* subsects. Subjects consisted of forty eight women from the three Hutterian *Leuts* as follows: 17 *Dariusleut* women ranging in age from 15 to 49 years; 14 *Lehroleut* women ranging in age from 24 to 59 years; and, 17 *Schmiedeleut* women ranging in age from 15 to 54 years.

Results included a distinct Hutterian women's value orientation profile. Preferences were: Collateral > Lineal > Individual in the Relational modality; Present > Past > Future in the Time modality; Subjugation > Harmony > Mastery in the Man-Nature modality; and, Doing  $\geq$  Being in the Activity modality significant at the  $p = .05$  level of probability and better. Similarities among *Leuts* were striking. Differences among *Leuts* were minor. Only subtle differences were found between age groups within *Leuts*. The Hutterian

women's VOP was found to vary in every modality but one (Activity) from the dominant "core American" VOP established by Kluckhohn and Strodtbeck (1961), but compared with other Canadian women's VOP's (Burke, 1988). Areas of potential harmony and discord between nurses with Hutterian clients were identified.

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## CHAPTER I

If anything is at stake in our time, it is the notion of values in connection with the momentous changes, the restructuring and revaluation of all aspects of social, political, and cultural life (Kuypers, 1972, p. 12).

The Canadian nursing client population is multicultural in nature. Nurses seeking to promote health must be aware if values related to health behavior are a priority for their clients. As health and illness are so integrally and intricately interwoven with one's cultural values, beliefs and practices, nurses must gain a greater understanding of the many factors involved in delivery of culturally appropriate nursing care. The systematic study of cultural values will allow the development of generalizable theories of cultural universals as well as culturally specific phenomena (Kaplan & Manners, 1972).

Because health care values and norms are significantly influenced by one's cultural value orientations, systematic transcultural research is critical to enable nurses to understand behavior and responses to health and illness in different cultures (Brink and Saunders, 1976; Lanara, 1988; Milio, 1967; Morse, 1988; Tripp-Reimer and Dougherty, 1985). If Canadian nurses are to fulfill their responsibility for provision of quality care, nursing services must be provided in a form consistent with the values of the client population.

### Problem

In a multicultural nation such as Canada, nurses are continually encountering clients with variant values from those of the dominant society. Some minority group values are understood by most nurses, such as the Jehovah Witness client's refusal of blood transfusions. Other religious minority groups' values may be less familiar to Canadian nurses, yet may similarly conflict with common nursing practices. Value orientation

research with minority cultural groups, such as the Hutterian Brethren, will provide information to guide development of culturally appropriate nursing care.

Much of the written Hutterian literature available was published in decades past, leading one to question current relevance. Because values are dynamic, the primacy of values may change over time, influenced by exposure to different subcultures, changes in social values, and individual and family maturation (Friedman, 1986; Steele and Harmon, 1983).

Information collected on Hutterian health care reflects a focus on genetics, fertility rates, specific disease patterns, and childrearing practices. Little research has been done to identify current belief systems and values of the Hutterian culture (Gross, 1965; Simpson-Housley, 1978; Simpson-Housley and Moore, 1982; Stephenson, 1978, 1979).

Of the Hutterian value literature available, information collected suggests Hutterian value variance and potential value conflict with dominant Canadian health care values. Two authors (Adams and Leverland, 1986) reported that Anabaptist religious values forbid contraception and abortion. These authors also found that this population: "(does) not practice preventive medicine due to their religio-cultural beliefs" (p. 63). One author of note (Stephenson, 1983) who studied the Hutterian religion found that: "Hutterian values and behavior surrounding death appear to reverse our own. Hutterians prize the death of children while we abhor it and they regard a long death as desirable while we regard it as unfortunate, particularly if painful" (p. 129). The implications for nursing in the care of terminally ill Hutterians and Hutterian women and children are readily apparent. A study describing current Hutterian value orientations was critical to provide Canadian nurses with an Hutterian value data baseline on which to develop culturally appropriate nursing care to the Hutterian client.

### Leut Membership

Communal living and common sharing of goods distinguishes Hutterians from other Anabaptist groups such as the Mennonites and Old Order Amish. However, two periods of non-communal living occurred in Hutterian history, the last being from 1819 to 1859. In 1859, thirty-three Hutterian families resumed communal living and formed a *Bruderhof* (brotherhood), or religious community, of wedded couples with their offspring, practising common ownership of possessions, under the leadership of their preacher, Michael Waldner (known as "*Schmied-Michel*" because he was a blacksmith). A second *Bruderhof* was formed in 1860 under the leadership of Darius Walter. As '*Leut*' is German for 'people', these congregations came to be named the *Schmiedeleut* and the *Dariusleut* after their founding preachers. These two groups emigrated to America in 1874, (Friedmann, 1961; Gross, 1965; Hostetler and Huntington, 1965; Peters, 1965; Sommer, 1953), setting up separate *Bruderhofs* which came to be called colonies in rural America. In 1877, thirteen Hutterian families headed by Jacob Wipf who was a "*Lehrer*" or teacher, emigrated to America and established a third colony. These people came to be called the *Lehroleut* (Gross, 1965). By 1879 all other Hutterians except for two families emigrated and settled as individual homesteaders in America. These noncolony Hutterians, known as the *Prairieleut*, gradually affiliated with other congregational groups such as the Mennonites (Helling, 1978; Hostetler, 1974; Lewis, 1976; and Palmer, 1973).

A colony is a domestic group of Hutterians practising total Christianity through communal living, forming a biological, economical, ceremonial, self-sustaining unit. Growing colonies branch into daughter colonies, redistributing capital and authority, and adjusting kinship and work patterns. The three founding colonies developed into separate people (*Leuts*) with few formal relationships between them. Despite a common doctrine, language and life style, each *Leut* has its own senior elder and discipline (Hostetler, 1974).

Differences between the *Leuts* are reported to be increasing, and change occurring at different rates, with the *Dariusleut* reported to be the most traditional (Clark, 1977; Hostetler, 1974), and the *Schmiedeleut* reported to be most liberal and tolerant of worldly values (Boldt, 1978; Flint, 1975). One example of possible value change reported by Peter and Whitaker (1983), is in the work patterns, changing from work-cooperation in small groups toward operation of machines. These authors contend that such practices may contribute to increased individualization and decreased collaboration.

### Gender

Gender membership and gender-role socialization are widely accepted as influencing specific cultural values and meanings (Brown, 1986). Feminist influences have led nurses to consider both their own and their clients' behaviors, beliefs and values (Burke and Maloney, 1986). Feminist researchers have reported greater changes in gender norms and roles for women than for men (Block, 1974; Meissner, 1975). In that the continuation of any culture is contingent upon people valuing one thing over another, human values are learned (frequently within the family and/or social setting). However, most studies addressing values have focused on men, although research done on male subjects alone has been found to have little relevance for women (Bernard, 1972; Cronkite, 1977). Research of women's values is necessary in order to attain a better understanding of the other half of human values.

Most academic investigation of Hutterian culture has focused on Hutterian males (Bennett, 1967; Lee and Bratrud, 1976; Lewis, 1976; Palmer, 1973; Stephenson, 1978). Due to a belief that Hutterian women also influence the maintenance and



transmission of Hutterian culture, the focus of this study was an examination of the value orientations of Hutterian women in Canada.

Of the available Hutterian literature discussing Hutterian women, several authors suggest that traditional spiritual values require the Hutterian woman to be submissive to God and her husband in all things (Thompson and Hostetler, 1970; Peter, 1983). Two authors contend that the religiously legitimated Hutterian male authority has recently been challenged in some colonies by the concept of Christ as personal Savior, and that Hutterian women accept this egalitarian shift more rapidly than do Hutterian men (Peter and Whitaker, 1983). Material changes in colony life brought about by Hutterian acceptance of technology (Dempsey, 1978; Ryan, 1977), have resulted in greater convenience, more time in the home or visits to other colonies. The result of these changes, Peter and Whitaker (1983) reported has been a trend toward individuality rather than the collective ideology upon which Hutterian communalism is based. Such important value changes, although slow, would have vast implications for health care provision.

### **Age**

An important demographic variable influencing values and norms is age (Friedman, 1986). Individuals of a similar age or life stage have frequently experienced similar life events or histories.

For Hutterians, age determines peer group membership and one's place and behavior in the group. Hostetler (1974) described: "the Hutterian human life span is divided into a series of discrete age-sets that serve as impartial means not only for maintaining social order but for teaching the young how to become responsible adults" (p. 206). Transition to physical adulthood is recognized at the fifteenth birthday, upon which date Hutterian youth leave the English school, join the colony labor force, and sit in

the adult dining hall. Full colony membership is achieved only after a person has demonstrated religious maturity, and has willingly and humbly requested baptism. The age of baptism can vary from about nineteen years for women to twenty to twenty six years for men (Hostetler, 1974).

Generational value changes among Hutterians have frequently been suggested as contributing to declining birth rates, increased disobedience, factionalism, defection, and acquisition of worldly goods (Boldt and Roberts, 1980; Peter, 1980; Ingoldsby and Stanton, 1988). Such changes, if they exist, could suggest a change toward individualism, and could have great significance for health care.

### Purpose

The purpose of this study was to elicit information which could enable nurses to better care for Hutterian clients.

### Research Question

The research question was: "What is the relationship among value orientation, *Leut* membership, and age of Hutterian women in Canada?"

### Definition of Terms

Value Orientation: One's position in relation to personally held principles of worth, and one's awareness of these value principles, as measured ordinally on four dimensions of Time, Relational, Man-Nature, and Activity value orientation scores as measured by the Kluckhohn and Strodtbeck Value Orientation Profile questionnaire.

***Leut* Membership:** Historically separate administrative and endogenous branches of the Hutterian Federation, measured nominally as one of three potential values - the *Schmiedeleut*, *Dariusleut*, or *Lehroleut*.

**Age:** Biological length of time a person has lived, measured intervally by years.

## **CHAPTER II**

### **Value Orientations**

A review of the literature pertaining to value orientations of Hutterian women in Canada was conducted, encompassing all available literature on the research topic at hand. This literature review was based on literature addressing values, value orientations, and women belonging to the Hutterian Brethren Federation.

To obtain publications addressing these topics, a computerized literature search was conducted. The following data bases were accessed: (1) Cumulative Index to Nursing and Allied Health Literature (CINAL) from December 1983 to June 1990; (2) Medical Literature Analysis and Retrieval System on Line (MEDLINE) from December 1966 to September 1990; Psychological Information (Psych Info) from January 1967 to June 1990; (4) The Canadian Clearing House for Ongoing Research in Nursing (CORN); (5) The Canadian Directory of Completed Masters Theses in Nursing (CAMN); and (6) Sociological Abstracts (SOCIOFILE) from June 1983 to April 1990. In addition, a manual search was done that included hard and soft cover books and magazines. Published and unpublished thesis and dissertations were also reviewed for possible inclusion.

No documents on Hutterian value orientation were found in the literature review to this point, so the selection criterion for inclusion was expanded to include literature which: (a) dealt with Hutterian Brethren or closely associated Anabaptist group, (b) was written or translated into English, (c) had a focus related to cultural values and/or health issues, and/or (d) utilized the Value Orientation Schedule (Kluckhohn, 1950, 1951, 1953, 1961) with one or more groups.

### Values

Values are complex, personally held, and culturally shared principles regarding the quality of worth. Many writers have concerned themselves with the topic of basic values, debating the questions of aspiration and endeavor, as people seek to endow reality with meaning. One's personal values influence both perceptions and behavior (both stimulating and constraining), and are subject to change over time. Humans hold many values simultaneously (Steele & Harmon, 1983, Rokeach, 1969), and these values are organized into hierarchical, competing structures (Ross, 1973, Steele & Harmon, 1983). Understanding what is important to a client is vital in terms of nursing assessment, diagnosis, intervention, evaluation and revision, to enable the nurse to work within the client's value system and relate nursing services to the client's goals (Friedman, 1986). Axiology (the study of values), apart from its accomplishments in philosophy, projected the value point of view into the social sciences, and initiated enquiry into the theory of value assessment (Rescher, 1969).

Interpreting and understanding basic values and the influence these have on human behavior has been a time-consuming question for those concerned with the lives of others including nurses, historians, psychologists, sociologists, anthropologists and philosophers. Today an interdisciplinary approach is widely accepted as necessary to aid understanding of the concrete situations in which individuals behave. Recognition of the amazing variability observed in human lives led to attempts to discover what factors determine personality and behavior. Absolutist thinking and conceptions of universals gave way to a theory of cultural relativity, and peoples' differences became more of a focus than peoples' similarities. Both are necessary to understand human behavior. Anthropology identified concepts of cultural relativity which are central to the study of values and value orientations. These concepts included: a central core of meanings (or core

values), basic personality type, and world view (Kluckhohn,1950). Clyde Kluckhohn described the concept of basic values as:

a philosophy behind the way of life of each individual and of every relatively homogeneous group at any given point in their histories. This gives, with varying degrees of explicitness or implicitness, some sense of coherence or unity both in cognitive and affective dimensions. Each personality gives to this philosophy an idiosyncratic coloring and creative individuals will markedly reshape it. However, the basic outlines of the fundamental values, existential propositions, and basic abstractions have only exceptionally been created out of the stuff of biological heredity and peculiar life experience. The underlying principles arise out of, or are limited by, the givens of biological human nature and the universalities of social interaction. The specific formulation is ordinarily a cultural product. In the immediate sense, it is from the life-ways which constitute the designs for living of their community or tribe or region or socioeconomic class or nation or civilization that most individuals derive their mental-feeling outlook (1953, pp. 409-410).

Florence Kluckhohn defined the basic personality type as: "that personality configuration which is shared by the bulk of the society's members as a result of the early experiences which they have in common" (1950, p. 375).

World view refers to that set of beliefs which constitute an outlook on the world, characteristic of a specific cultural or social group such as a social class, generation, or religious sect. Redfield (1953) made further distinctions regarding world view: the difference of focus of attention upon the ideal or the real, and the issue of whose point of view is under consideration, the observer or the observed.

Kluckhohn (1961) recognized that many researchers who had identified distinctions in particular value systems ignored the fundamental universality of certain human problems, and the fact that for some human problems, different societies have found

similar answers. She further criticized earlier theories of values in her observation that only dominant values were stressed, and alternate or variant values ignored, contributing to an oversimplified, static representation of a complex, dynamic reality

These variant, substitute, or alternate values of individuals within subgroups within societies were of central interest to Kluckhohn in her research on values. Her most basic assumption was that what actually exists is: "a systematic variation in the realm of cultural phenomena which is both as definite and as essential as the demonstrated systematic variation in physical and biological phenomena" (Kluckhohn, 1961, p. 3). Kluckhohn criticized the previous tendency to search for "a picture of cultural integration in one - dimensional terms and then regard all variance as deviance" (1950, p. 383). Kluckhohn differentiated between outright deviation and variance which is choice in accord with alternative orientations. However important dominant values are to a society, Kluckhohn emphasized that variant values are essential to the maintenance of a society, and that such variant values are not only permitted, they are required. Kluckhohn stated: "the dynamic interplay of the dominant and the variant is one of the outstanding features of society, but as yet it has been little analyzed or understood" (1951, p. 105). The greatest contribution of Kluckhohn's work on values and value orientations has been identification of a conceptual scheme and assessment tool which permit a systematic ordering of cultural value orientations within a framework of common-universal-problems. Because of her delineation of the central types of value orientations and the potential ranges of variability in them, others can now make systematic comparisons of either single orientations or the total value orientation profiles of whole societies or portions of them (Kluckhohn, 1950).

### Kluckhohn's Value Orientation Construct

Value orientation as a construct relates to one's position in relation to principles considered worthy. In addition, value orientation relates to the level of one's

consciousness or awareness of those principles held to be of worth. Kluckhohn defined value orientation as :

complex but definitely patterned (rank ordered) principles, resulting from the transactional interplay of three analytically distinguishable elements of the evaluative process - the cognitive, the affective, and the directive elements - which give order and direction to the ever-flowing stream of human acts and thoughts as these relate to the solution of "common human" problems (1961, p. 4).

Kluckhohn developed the construct of value orientations, proposed a theory of variation in value orientation, and developed a Value Orientation Profile (VOP) questionnaire. Kluckhohn's original study has become the classic in value orientation research. Kluckhohn's definition treats variability in value orientations as existing only in the patterning of otherwise universal solutions to universal human problems. Her definition includes the view that value systems are on an implicit- explicit continuum, and the view that the elements of the evaluative process (which is transactional) include cognitive, affective, and directive aspects. In Kluckhohn's formulation of the value orientation concept the directive aspect takes prime importance. With an emphasis on the *process* of evaluation, Kluckhohn saw particular value orientation rankings as only a static representation of the dynamic reality. The cognitive and the affective aspects provide the value system with its content; the directive aspect aids in selection between alternatives, integrates the entire value system, and provides order and continuity through time (Kluckhohn and Strodtbeck, 1961).

### Classification of Value Orientations

"Human behavior mirrors at all times an intricate blend of the universal and the variable" (Kluckhohn, 1950, p. 67). In developing the Value Orientations construct and



Value Orientations Profile (VOP) questionnaire, Kluckhohn hypothesized that despite amazing variability in the life ways people fashion for themselves, humans as social beings experience certain common life problems arising out of the human situation. This first assumption can be seen in Kluckhohn's (1961) statement: "there is a limited number of common human problems for which all peoples at all times must find some solution" (p. 10). Further, Kluckhohn assumed that variability in solutions to these life problems is both finite and variable within a range of alternatives. This second assumption can be seen in her statement that : "while there is variability in solutions of all the problems, it is neither limitless nor random but is definitely variable within a range of possible solutions" (1961, p. 10). Lastly Kluckhohn postulated that: "all solutions are present in all societies at all times but are differentially preferred" (1961, p. 10). The ordering of these solutions forms the value orientation profile of a culture, and serves to distinguish one group from another. In the original study, Kluckhohn and Strodtbeck (1961) identified five common human life problems of key importance. Kluckhohn saw these problems as constant, arising inevitably out of the human situation. For each of these five identified common human problems, three alternative solutions were proposed. A description of these life problems and their solutions follows.

1. Human Nature Orientation looks at the innate goodness or badness of mankind, and may be Good, Neutral/Mixed, or Evil. The Good modality suggests that the human is designed for goodness, but may be corrupted. The Neutral modality suggests the human is neither good nor bad but is molded by life experiences. The Mixed modality suggests that the human naturally tends toward both good and bad. The Evil modality suggests that the human is born with an inclination to do evil, but may control such tendencies through the will. Because Kluckhohn was unable to establish

construct validity of the human nature orientation, this value orientation was not tested and will not be discussed further.

2. Man Nature Orientation focuses on the relation of mankind to nature and supernature. Variations include Mastery-over-Nature, Harmony-with-Nature, or Subjugation-to-Nature. This three-point range of variation in the concept of the relation of mankind to nature and supernature is quite familiar to most people. In the Mastery-over-Nature modality, the human is perceived as rightful conqueror of the universe to suit personal purposes. Natural forces are something to be overcome, controlled and harnessed for the use of humans. The Subjugation-to-Nature modality assumes a fatalistic view of the human position in nature, where little can be done to alter fate or the nature of things. This position is one of accepting the inevitable. The Harmony-with-Nature modality bases human wholeness on communion with nature and supernature. This orientation sees no separation of human, nature, and supernature. One is an extension of the other, and wholeness derives from their unity (Kluckhohn & Strodtbeck, 1961).
  
3. Time Orientation addresses the temporal focus of human life, and the modalities are Present, Past, or Future. The Present position emphasizes today because the past is over and unalterable and the future is as yet unknown, and, therefore, unpredictable. The Present position looks at the here and now as being most important. The Past position focuses on times gone by. In this position, history, ancestry, and traditions are seen as being very important. The Future modality emphasizes the value of the future as being an improvement over either the Past or Present. In this

position, both past and present are seen as preparatory for planning future activities.

In her development of the Time modality, Kluckhohn agreed with Spengler's (1926-8) Time and Destiny conception in the distinction between a "timeless, traditionless, future-ignoring present and a realizable future" (1961, p. 12). Kluckhohn also partially incorporated Max Weber's treatment of moral authority and his consideration of the traditions of the past as something to be maintained or recaptured.

4. Relational Orientation addresses the question of human relationships to other humans. Although any society will contain all three Relational alternatives (in varying rank-order patterns) within the society as a system, identification of the ordering of the preferred patterning can provide some insight into one's responsibility in society and one's place in it in terms of roles and goals. Positions on the Relational dimension include the Individual, Collateral, and Lineal. The Individual modality values individual autonomy and independence as much as, or even more than, group rights and goals. In this position, individual goals take precedence over the goals of particular Collateral or Linear groups. The Collateral modality subordinates individual goals to those of the larger, laterally-extended group such as family or village. In this position, the important roles and goals for the individual are those that are representative of the Collateral group. The Lineal modality assumes a vertical hierarchy of roles and status which orders relationships and behavior. In this position continuity of the group over time and "ordered positional succession" are crucial issues.

5. Activity Orientation addresses the nature of people's mode of self-expression in activity. Variations include Doing, Being-in-Becoming, or Being. The Doing orientation emphasizes production and is measured by external achievement standards. Kluckhohn and Strodtbeck (1961) describe this position as a focus on: "measurable accomplishment achieved by acting upon persons, things or situations" (p. 17). The Being-in-Becoming modality focuses on self growth or actualization of potential. In this position, the idea of development is paramount. The Being modality emphasizes a preference for activity which is the spontaneous expression of that which is given in the human personality. This position is a non-developmental conception of activity, and constitutes more an expression of that which is.

In her development of the Activity modality, Kluckhohn incorporated aspects of the work of the philosopher Charles Morris (1942) in his classification of personality components. Kluckhohn stated: "The abstractly conceived component which he labels the *Dionysian* - the personality component type which releases and indulges existing desires - is somewhat what is meant by the Being orientation. His *Apollonian* component - the component type that is self-contained and controls itself through a meditation and detachment that brings understanding - is to some extent the Being-in-Becoming. His active, striving *Promethean* component is similar to the Doing orientation" (1961, p. 16). Kluckhohn differed from the philosophical treatment of value clusters, however, by recognizing that time value orientations differ independently from values regarding the relation of humans with nature, and from relational or activity values.

Kluckhohn (1961) used 40 years in her original questionnaire to distinguish generational preferences in the second Time question. Because I wanted to provide

consistency throughout all the questions and not just one, I decided to select less than 40 years to be the younger age group, and 40 years and greater to be the older group, although 40 has the possibility of being an arbitrary number for the Hutterians. However, by age 40, most women are beyond childbearing, and this may be a logical reason for choosing this age to test for possible generational variations in value orientations.

### Value Orientations Research

Many studies on Value Orientations have been done. A review of all Value Orientation research utilizing Kluckhohn's VOP schedule indicated that, given an adequate sample size, all cultures were found to have a Value Orientation Profile that could be tested. Kluckhohn's VOP schedule remains a valid method with which to assess values. In all the VOP studies, the VOP schedule was found to be an effective, efficient, and relatively easy to use method with which to determine the values of an individual or group. It is necessary, however, for the researcher to have an understanding of the culture under study in order to interpret and explain the findings in a meaningful manner. Kluckhohn's VOP schedule proved to be very versatile and can be used in many different ways. Some researchers (Friedl & Tripp Reimer, 1977) used the VOP tool to test only dominant values, without addressing variant values. Other researchers modified the tool in an attempt to test specifically for health values (Egeland, 1978), or for women's values (Burke & Maloney, 1989). Some researchers did studies of single populations; others did comparative studies with multiple populations. Some studies were conducted in rural areas, others in urban centers, and still others were conducted in international settings. Therefore, in situations of forced contact such as that between nurses and clients (individuals or groups), Kluckhohn's VOP schedule has been found to be a versatile and valid tool with which to easily and efficiently identify cultural value orientation profiles, thereby identifying potential agreement or potential discord between nurse and client(s).

A summative review of each available research study on Value Orientations follows. A comment on the particular contribution of each piece to the Value Orientation literature has been included.

### The Original Value Orientations Study

In Kluckhohn and Strodtbeck's (1961) original study, five variant ethnic groups from the American Southwest (Mormons, Texans, Zuni, Navaho, and Spanish American) were chosen for the first testing of the value orientation theory. These five communities had for five years been the research ground for the Harvard University Comparative Study of Values in Five Cultures Project and had also been intensely studied by social scientists previously. Thus a great deal of ethnographic data had already been collected on these five groups.

The research instrument was created for the testing of similarities and differences in the rank ordering of the value-orientation alternatives (Kluckhohn, 1961). The 22 item VOP questionnaire was divided by orientation into seven Relational questions, five Time questions, five Man-Nature questions, and six Activity questions (one has two parts). All but the Activity orientation items test for ordering of three alternatives. Time and funding restrictions did not allow for the testing of the Being-in Becoming alternative, or for the testing of the Human Nature orientation. Four main objectives guided the "generalized life situation" type of questions: 1) to construct items of inquiry clearly the expression of a single value orientation and not contaminated by influences of other orientations; 2) to select situations of equal significance in culturally disparate communities; 3) to minimize defensive responses; 4) to develop a standardized general instrument for use in developing testable hypotheses (Kluckhohn & Strodtbeck, 1961).

The total culturally stratified sample in the five communities consisted of 106 persons. From twenty to twenty five adults in each community were stratified by sex, then interviewed by five different interviewers with only one uniform requirement: the method of presenting the schedule questions was to be the same at each time of administration. Field notes were collected and reported (Kluckhohn & Strodtbeck, 1973).

The data collected was then analyzed using the recommended non parametric statistical methods described in Chapter Four of this study. Findings were interpreted and validated within the context of the wealth of ethnographic information available from the Harvard University Comparative Study of Values in Five Cultures Project. The Value Orientation Profile of the Mormons and Texans came to represent the core "Yankee American" norm against which other value orientation profiles could be compared.

Table 1

Mormon, Texan, Navaho, Zuni, and Spanish American Value Orientation Profiles

GROUP	RELATIONAL	TIME	ACTIVITY	MAN-NATURE
Mormons	Ind > Coll > Lin	Fut ≥ Pres > Past	Do > Be	Mast ≥ Harm > Subj
Texans	Ind > Coll > Lin	Fut ≥ Pres > Past	Do > Be	Mast > Harm ≥ Subj
Navaho	Coll > Lin ≥ Ind	Pres > Past ≥ Fut	Do > Be	Harm ≥ Mast ≥ Subj
Zuni	Coll > Lin ≥ Ind	Pres ≥ Past > Fut	Do ≥ Be	Harm ≥ Subj ≥ Mast
Sp. Amer	Ind ≥ Lin ≥ Coll	Pres > Fut > Past	Be > Do	Subj > Mast > Harmony

- \*\*Key:**       $A > B > C$  (A over B, A over C, and B over C - all significant at  $p = .05$  or better)
- $A \geq B > C$  (A over C, and B over C significant at the  $p = .05$  level or better; A > B is preferred but not significant)
- $A > B \geq C$  (A over B, and A over C significant at  $p = .05$  or better; B over C is preferred, but not significant)
- $A \geq B \geq C$  \* (Only A over C is significant at  $p = .05$  or better)
- $A \geq B \geq C$  (None of the preferences are statistically significant)
- $A > B = C$  (One preference is significantly preferred as dominant choice, equal preference exists between the other two choices)

Results of this study were an exposition of Kluckhohn's theory of variations in value orientations and a method for cross-cultural testing of the research instrument. Results of this research were sufficiently conclusive to "warrant according the value-orientation theory an independent status in studies of human behavior. (The theory's) analytic value reaches far beyond a study of cultural factors in and for themselves" (Kluckhohn & Strodtbeck, 1961).

This study has become the precedent in the area of value orientation research and forms the standard against which others are compared (Brink, 1984). In addition, certain gender differences were observed in this first testing of the value orientation theory as follows: It was observed that Mormon men chose the Collateral position more frequently than did Mormon women. Kluckhohn and Strodtbeck (1961) suggested that perhaps this gender difference in role values was facilitated by the influence of the Mormon church (in which men are simultaneously members of a priesthood as well as individuals) as well as the Mormon tradition of male ownership of land. Certain gender differences were found also among the Navaho in regard to the Man-Nature and Time orientations. The female second-order Time preference was Future; the male second-order Time preference was Past. The female Navaho were more fatalistic than the male Navaho who preferred



Harmony with Nature. Such differences were thought to reflect the lack of a formal role for women in traditional Navaho cultural ceremonies. Such gender differences support a need for value research to be conducted on women as well as men in order to provide a more complete understanding of values held by a particular culture.

#### A Single Population Study on Generational Values

Caudill and Scarr's (1962) study utilized portions (Time, Relational, and Man-Nature) of the Kluckhohn and Strodtbeck work and compared children with their parents, focusing on each individual item in a sample of 619 Japanese. They examined intracultural variation with regard to gender, generation and psychiatric illness. Caudill and Scarr (1962) selected the Kluckhohn VOP because, given that psychiatric symptoms are believed to be culture-bound, they wanted to gain an understanding of Japanese value orientations in order to provide a cultural perspective on symptoms of psychiatric patients and types of treatment in Japan. Secondly, Caudill and Scarr wished to test for change (if any) in Japanese value orientations between generations. Their findings are summarized in Table 2. They found no significant difference between generations.

Table 2  
Japanese Value Orientation Profiles

RELATIONAL	TIME	MAN-NATURE
Coll > Lin > Ind	Fut > Pres > Past	Mast > Harm > Subj

This study demonstrated the adaptability of the VOP tool by substituting one question on bridge building for the question on well arrangements. This study also demonstrated the versatility of Kluckhohn's VOP schedule, in testing for changes between different generations of Japanese. Caudill and Scarr(1962) found that Kluckhohn's theory

development enabled them to analyze subtleties in Japanese values which had been described by earlier writers who lacked both the theoretical construct to consider value variation and the instrumentation with which to measure values.

**An Urban, Multi Population, Cultural Assimilation Study**

Papajohn and Spiegel (1975) studied three immigrant families in crises (from three cultural groups: Greek, Italian, and Puerto Rican) as well as 34 Greek-American families undergoing the acculturation process to determine change from traditional cultural values to core American patterns. Papajohn & Spiegel contrasted each family's VOP findings with the dominant rural VOP of the family's country of origin. Findings for value orientations among the respondents can be seen in Table 3.

Table 3

**Puerto Rican, Italian, and Greek Value Orientation Profiles**

<b>GROUP</b>	<b>RELATIONAL</b>	<b>TIME</b>	<b>ACTIVITY</b>	<b>MAN-NATURE</b>
Puerto Rican	Coll > Lin > Ind	Pres > Fut > Past	Be > Do > Bec	Subj > Harm > Mast
Italian	Coll > Lin > Ind	Pres > Past > Fut	Be > Bec > Do	Subj > Harm > Mast
Greek	Lin > Ind > Coll	Pres > Past > Fut	Be > Do > Bec	Subj > Harm > Mast

**\*\*Key: See page 20**

This urban, comparative study utilized the urban schedule, and demonstrated again that different cultures have definite value orientation profiles to be tested. The purpose of this study was to measure changes in values during acculturation, not to simply identify core value orientations. Nursing relevance for utilization of the VOP tool was demonstrated in

that this study suggested important implications for the nurse-patient relationship particularly when the value orientations of the nurse and those of the patient differ.

#### A Single Population, Dominant Values Study

The purpose of Tripp-Reimer and Friedl's (1977) study was to contrast the value orientations of American nurses with an analysis of value orientations of the Appalachian American client. They described the differences between dominant core American value orientations (as established by Kluckhohn & Strodtbeck, 1961) and dominant value orientations of Appalachian Americans. Tripp-Reimer and Friedl assumed that "health behaviors are congruous with the value orientations of the subcultural group, (and) nurses have derived their values as members of the middle class " (p. 45). They described dominant value orientations of the Appalachians to be at variance with those of core Americans (as established by Kluckhohn & Strodtbeck, 1961) in all categories as indicated by findings reported in Table 4. No information was reported regarding sample size, or which VOP tool had been used in this study.

Table 4

#### Dominant Appalachian Value Orientation Preferences

RELATIONAL	TIME	ACTIVITY	MAN-NATURE
Lineal	Present	Being	Subjugation

This study examined only dominant values without addressing variant values, but did allow for contrast between the dominant core American value orientations and dominant Appalachian value orientations. Measurement of dominant values only, however, provided a static representation of dominant Appalachian values measured at the time of the study. Information regarding tolerated, alternate values, and/or areas of potential change was not

collected. This study, then, emphasized the wisdom of Kluckhohn's theory of value variability and the need to collect data on value orientation rankings.

#### An Urban, Multi Population, Health Values Study

Egeland (1978) modified the VOP by devising and incorporating more health belief items. Egeland altered five Relational questions: R1, R2, R4, R5, and added R8; one Time question: T1; and three Man-Nature questions: MN1, MN5, and MN6. She then tested this Health Value Schedule on 5 groups of residents (Bahamian, Cuban, Haitian, Puerto Rican, and Southern Black) in inner city Miami. The purpose of this urban study was to delineate values related specifically to health behavior. The Egeland health schedule has not been tested in rural or international settings at this time. Findings may be seen in Table 5.

Table 5

Bahamian, Cuban, Haitian, Puerto Rican, Southern Black Value Orientation Profiles

GROUP	RELATIONAL	TIME	ACTIVITY	MAN-NATURE
Bahamian	Ind>Lin>Coll	Pres≥Past≥Fut	Do ≥ Be	Subj ≥ Mast ≥ Harm
Cuban	Ind≥Coll≥Lin	Pres≥Past≥Fut	Do ≥ Be	Mast ≥ Subj ≥ Harm
Haitian	Lin>Ind≥Coll	Pres>Past≥Fut	Do > Be	Subj > Mast > Harm
P. Rican	Ind>Coll≥Lin	Pres≥Fut≥Past	Do ≥ Be	Harm ≥ Subj > Mast
S. Black	Lin≥Coll≥Ind	Pres≥Fut≥Past	Be ≥ Do	Subj ≥ Mast > Harm

**\*\*Key:** See page 20

This study utilized a tool developed by Egeland patterned after Kluckhohn's VOP tool. Although other researchers (Caudill and Scarr, 1962) had translated the tool into other languages and slightly modified individual questions, the VOP tool had been used virtually as it had been designed and tested by Kluckhohn. This study supported the need to establish reliability and validity of any substantially modified version of the VOP tool. The results of this study are valuable in cautioning that health related behavior is not always the logical consequence of specific values.

#### An Urban, Multi Population Study of Health Professionals' Values

DeMay (1982) used the urban schedule (developed in 1974 by Kluckhohn) in an international setting to contrast the value orientations of (7 male and 19 female) United States Air Force Officers who were licensed health care professionals, and (14 female) Pilipino nurses in the Philippines. The purpose was to test for value similarity within the health profession as well as value differences between cultures. Findings for the United States Air Force Officers and for the Pilipino civilian respondents can be read in Table 6.

Table 6

#### American & Pilipino Value Orientation Profiles

GROUP	RELATIONAL	TIME	ACTIVITY	MAN-NATURE
U.S.A.F.	Ind > Coll > Lin	Pres ≥ Fut > Past	BIB ≥ Do ≥ Be	Mast > Harm ≥ Subj
Pilipino civilian	Ind ≥ Coll ≥ Lin	Pres = Fut > Past	Do ≥ BIB > Be	Mast ≥ Harm ≥ Subj

This study demonstrated that similar values were held by health professionals regardless of gender, status, or ethnicity. In addition, these values closely resembled the values of the

core American culture (Kluckhohn & Strodtbeck, 1961) although the American Time value orientation had changed to present > future > past in contrast to Kluckhohn's (1961) finding of future> present > past. DeMay's findings lent support to the understanding of health professionals' socialization into dominant American middle class values.

#### A Rural, Single Population Study Examining Status, Role, Gender and Ethnicity

Brink (1984) translated the original rural Kluckhohn tool and studied 28 rural Annang villagers in Nigeria. The focus of this study was to identify, describe, compare and contrast the value variations of the Afaha Annang Clan of Nigeria, including the traditional healer and Western trained health care practitioners serving them. The original rural version VOP was translated by two Annang interpreters during interviews. Findings for the Annang can be read in Table 7.

Table 7  
Annang Value Orientation Profiles

GROUP	RELATIONAL	TIME	ACTIVITY	MAN-NATURE
Annang	Coll>Ind>Lin	Pres>Fut>Past	Be>Do	Subj>Mast>Harm
Male & Female	Coll>Ind>Lin	Pres>Fut>Past	Be>Do	Harm>Subj>Mast (M) Mast>Subj>Harm (F)
Trad. Healers	Ind>Coll>Lin	Pres>Fut>Past	Be>Do	Harm>Subj>Mast
Nurses	Lin>Coll>Ind	Fut>Pres>Past	Do>Be	Mast>Subj=Harm
Educ.Males	Lin=Coll=Ind	Pres>Fut>Past	Be>Do	Subj=Mast=Harm
Educ.Females	Lin=Coll=Ind	Pres=Fut=Past	Be=Do	Mast>Harm>Subj

**\*\*Key:** See page 20

This comparative study demonstrated additional support for Kluckhohn's theory of value variations. It was the first study using Kluckhohn's theoretical concept and VOP tool to examine status, role, gender and ethnicity on an intracultural sample. This study supported the literature on socialization of nurses toward particular core American value orientations (as established by Kluckhohn & Strodtbeck, 1961). Brink also studied other health care workers as did Papajohn & Spiegel (1975).

#### A Multi Population, Canadian Women's Values Study

Burke and Maloney (1986) developed a woman's version of the VOP, and called this tool the Women's Value Orientation Profile (WVOP). The WVOP contains five of the original Kluckhohn & Strodtbeck (1961) VOP items. Eight questions were changed, and six question situations were altered. In addition, three questions were deleted. They tested over 100 maternal and child health nurses, Euro-Canadian women, rural Cree Indian women, and urban Cree Indian women. The purpose of this study was to describe, compare, and identify areas of disagreement and agreement among these groups in order to identify areas of potential conflict between nurses and clients. Areas of agreement were to be used to plan health interventions, and areas of slight divergence were to alert nurses and clients of the need for more communication. Findings for the respondents can be viewed in Table 8.

Table 8

**MCH Nurses, Euro/Canadian Women, Rural Cree, & Urban Cree Women's Value Orientation Profiles**

<b>GROUP</b>	<b>RELATIONAL</b>	<b>TIME</b>	<b>ACTIVITY</b>	<b>MAN-NATURE</b>
MCH Nurses	Ind>Coll>Lin	Pres>Fut>Past	Do>Be	Subj > Harm > Mast
Euro/Can. Women	Ind>Coll>Lin	Pres>Fut>Past	Do>Be	Harm > Subj > Mast
Rural Cree	Coll>Ind>Lin	Pres>Past>Fut	Do>Be	Harm > Subj > Mast
Urban Cree	Coll>Lin>Ind	Pres>Past>Fut	Do>Be	Harm > Subj > Mast

Key: See page 20

Although the tool used in Burke and Maloney's study was a modification of Kluckhohn's VOP tool, their study provided the first Canadian value orientation data. This study (similar to the Hutterian women's study), looked only at women's value orientations. Nurses were a focus of this study as in both DeMay's (1982) and Brink's (1984) studies.

**Summary and conclusions.**

The VOP tool developed by Kluckhohn and Strodtbeck (1961) has been widely used in social science research and has yielded extensive cross cultural data, as well as valuable information on gender roles, ethnicity, professional roles, and change. Studies using the VOP tool contrast on a variety of levels. However, they all used Kluckhohn's basic value orientation theoretical construct. These studies contrast in relation to samples: varying both in relation to ethnic group, sample sizes, gender, and age. These studies contrast on purpose, methodology, and utilization. Some studies used an urban schedule, others used



the original rural schedule, still others devised modified versions of Kluckhohn's VOP tool. Some studies used the original English version, others translated the tool into various languages. In some cases the only commonality was the value orientation theoretical construct (Egeland, 1978; Burke and Maloney, 1989). In other cases the commonalities between studies were limited to the theoretical construct and the VOP tool (Value Orientations of Hutterian Women in Canada). Although this Hutterian women's study was limited to one gender (as was the study by Burke and Maloney, 1989), all the value orientation studies recognized that values differ by gender. In each of these studies, the Value Orientation concept and VOP questionnaire contributed to a relatively fast, efficient, and effective method of determining the basic values of a cultural group.

There are criticisms of the attempt to measure an abstraction such as human values. However, Kluckhohn's theory of value variations goes beyond other theories of values in recognizing both the universality of human values and the necessary variation within that universality. Within the time and financial constraints of Kluckhohn's initial study and development of the questionnaire, representation of the universe of human values in the VOP was not possible (the ideal tool to measure human values has not yet been developed). Although the VOP questionnaire may not represent the whole of human values, it clearly was the most appropriate tool available. Kluckhohn's framework has provided a technique which has permitted, with accuracy and certainty, identification of particular value orientations existing in a culture or sub-culture at any given time (Kluckhohn, 1950).

Although at present there has not been an identified core Canadian value orientation profile, rectifying this gap in the knowledge is beyond the scope of this research study. The value orientation analysis of this study was confined to an examination of women belonging to the three branches of one large and rapidly multiplying cultural minority group in Western Canada, the Hutterian Brethren.

**In this study, the original rural English language questionnaire was selected for use with the Hutterian women because of the relevance of the rurally-based situations in the questions for Hutterian women. Although English is a second language for Hutterians, all Hutterian women have attended English speaking public school to the eighth grade and speak English whenever in contact with non-colony people. Therefore, the tool was not translated.**

## CHAPTER III

### The Hutterian Brethren

Reported to have the highest birth rate in the world for over eighty years (Eaton and Mayer, 1953), the Hutterian Brethren (also called Hutterians or Hutterites) form a rapidly growing cultural minority in the Canadian West (Boldt, 1983; Peter, 1980, 1983). Statistics Canada (1973) showed the total Canadian Hutterian population in 1971 to be 13,600; Statistics Canada (1983) showed the total 1981 Canadian Hutterian population to be 16,530, a growth rate of 2.63%. The Canadian rate of population growth by natural increase was 0.83% for 1980-1981 by comparison (Boldt, 1983).

### Geography

The Hutterian Brethren live on large, isolated, rural, self-sufficient, agricultural, communal colonies in Western Canada and the United States (Converse, Buker and Lee, 1973). Hostetler (1974) reported that the *Schmiedeleut* are located in Manitoba (52 colonies), South Dakota (35 colonies), and North Dakota (4 colonies); the *Lehroleut* are located in Alberta (31 colonies), Montana (16 colonies) and Saskatchewan (14 colonies); while the *Dariusleut* are located in Alberta (54 colonies), Saskatchewan (13 colonies), Montana (6 colonies), and Washington (2 colonies). Lists of colonies according to *Leut* membership are available either in Hutterian texts such as those written by Hostetler (1974), or Flint (1975), or from Hutterian *Leut* elders.

### History

The Hutterites (or Hutterian Brethren) in North America are one of three surviving Anabaptist groups which originated during the sixteenth century Protestant Reformation in Europe. The other two groups include the Mennonites and the Old Order Amish

(Friedmann, 1961; Hostetler, 1974). Under the leadership of men such as Jacob Hutter and Peter Riedemann, the Hutterians established the basic tenets of their faith. These beliefs continue to the present day with minimal change. Communal living, communal ownership of all property, passivity and opposition to war, refusal to assume civil authority, adult baptism, and fundamental Christianity set them apart. Retaining the dress, customs, language, and austere life styles of the sixteenth century, the Hutterians have maintained tradition by seclusion on self-sufficient rural colonies (Ryan, 1977).

Religious persecution in Europe resulted in flights from Nikolsburg to Moravia, where the Hutterians enjoyed two decades of peace and prosperity (Sommer, 1953). Later intolerances led to execution and flights to Slovakia, Transylvania, Wallachea, and the Ukraine between 1622 and 1770 (Friedmann, 1961). By 1872, Russia's nationalization policies precipitated the Hutterian exodus to South Dakota. The *Schmiedeleut*, *Lehroleut*, and *Dariusleut* colonies were founded by 1874, with some Hutterians settling in the United States as non-colony people (*Prairieleut*). Conscription during World War I led to Hutterian migration to the Canadian West. Since 1930, the American colonies have been repossessed by the *Schmiedeleut*.

### Religion

Hutterians derive their beliefs from the Hebrew-Christian Bible and the Apocrypha (Hostetler, 1974). Religion permeates all aspects of Hutterite life. Originating as one of three Anabaptist sects in 1528, Hutterian church doctrine is similar to that of other fundamentalist Protestant Christian churches. Like the Mennonites and Old Order Amish, the Hutterians practice adult baptism, nonresistance, refusal to take the oath, and avoidance of the world (Hostetler, 1974). Hutterians also practice communal ownership of goods.

Adult baptism, essential for adult participation in colony life, occurs after the age of eighteen following a period of probation and intense instruction. At this time a desire for personal ownership of material goods is renounced (Hostetler, 1974). Nonresistance, or passivity, follows the Biblical admonition in Luke 6:29 and the commandment: "Thou shalt not kill" as found in Exodus 20:13 (Good News Bible, 1976). War is believed to be sinful. Non-confrontation in all relationships is encouraged (Brednich, 1981). Refusal to take the oath is a Biblical injunction taken from Mathew 7:33-37 (Good News Bible, 1976). Legally, Hutterians use affirmations rather than sworn statements. Avoidance of the world through segregation on rural colonies is seen as obedience to 1 John 16 (Good News Bible, 1976). The Hutterians believe they are God's chosen people with a mandate to demonstrate the common life (Gross, 1965).

For an Hutterian, absence of worldliness indicates the presence of the Holy Spirit (Stephenson, 1978). Important aspects of Hutterian life have no symbolic presence or icons; symbolism is considered idolatrous. The very absence of symbolism resonates meaning. Worship services are held in the schoolhouse, not a separate church building. The colony bell, which regulates all other colony activities, does not ring when it is time for worship. Superstitious beliefs such as the Evil Eye, co-exist with orthodox Hutterian faith (Mahoney, 1976). Red strings tied on to infants attest to the persistence of such superstitions (Stephenson, 1979).

Canadian nurses may not be familiar with the religious values of Hutterians of any age. One relevant Hutterian religious value is that of "turning the other cheek" (non-confrontation) in all relationships. Have Hutterian clients been passively tolerating well-intentioned but ethnocentric nursing care?

### Economy

Hutterian society is communal in production, in consumption, and in distribution (Hostetler, 1974). All colonies in North America depend upon agriculture for subsistence. Acreage operated by the colonies varies according to climatic and geographic conditions, but colonies generally expand as population and productive capability increase (Hostetler, 1974). Primary crops harvested on the colonies include: oats, wheat, barley, flax, rye, field peas, rapeseed, and sugarbeets. In addition, thousands of head of beef and dairy cattle as well as sheep are raised each year. Hog production is very mechanized and colonies are equipped with high technology equipment to maximize yield. Secondary crops include: ducks, geese, chickens, turkeys, eggs, vegetables, honey and wool. Several manual skills and handicrafts have remained common to Hutterian culture, some of which are: bookbinding, clock repairing, furniture building, shoemaking, tailoring, rug making, wool spinning, knitting, quilting, and toy making.

Communality of goods is controlled through an elected steward in each colony. The humility expected by Hutterian anti-materialist communalism is little understood by the outside world, which often reacts with ignorance and prejudice (Brock, 1970; Byfield & Ogle, 1983; Orr & Weatherbe, 1984). The motives for this Christian communism include: brotherly love, yielding absolutely to the will of God, forsaking all selfishness, and obedience to the divine commandments (Friedmann, 1961).

Work serves to integrate and unify colony members. Work patterns are clearly defined by age and sex. The labor force is comprised of all people fifteen years or older. Married men hold the most important leadership positions (Hostetler, 1974).

Consumptive austerity is the Hutterian strategy of meeting legitimate needs, but limiting individual and colony consumption. Needs are defined by consensus within the

colony and are reflected in the way the colony distributes its resources (Hostetler, 1974). Goods are distributed equally on the basis of age and sex. There is a standard for every socially sanctioned need and all goods are calculated and distributed according to the standard rule book. For example, fabric is measured out for each person annually, just as food is distributed equally. This austerity, simplicity and frugality results in savings and accumulation of colony capital, to be used for the welfare of the whole colony.

Various colony economic enterprises are evaluated at the annual colony meeting. Decisions regarding expansion, mechanization, or diversification are influenced by factors such as agreement between young and old men, ability of the person in charge of the enterprise, and group consensus.

Personal property for Hutterians means the right to use but not possess (Hostetler, 1974). Some colonies provide a small allowance for members; others do not. Sharing is encouraged, with both individuals and families exchanging goods and favors. Pocket money is sometimes earned from the sale of hand made crafts (by women), or working on neighboring farms (by men).

### Kinship and Residence Patterns

Hutterians recognize the nuclear family (married couples with their children), the patrnomial family (members with the same surname), and clans (family lines tending to intermarry). Although members of each *Leut* marry internally, thereby forming an endogamous, closed kinship group, Hutterians do not consider the *Leut* a kinship group, but rather an historical branch of a common Hutterian brotherhood with different customs (Hostetler, 1974). Descent is traced bilaterally, but patriarchal authority patterns and patrilocal residence contribute to patrilineal loyalty.

Because Hutterians marry outside their colony but within their *Leut*, and because Hutterians are patrilocal, each colony contains women from many other colonies of that *Leut* . However, the colony includes only men from that colony or the parent colony (brothers, cousins, uncles and nephews).

Naming patterns may vary slightly by colony. Children are frequently named after parents, grandparents, aunts or uncles. Most Hutterian first names are Biblical in origin, but some liberal colonies are giving children more modern, Canadian names. Nicknaming varies from one colony to another, with some preachers forbidding this practice on their colonies (Hostetler, 1974).

### Political System

All authority rests with God according to Hutterian belief. Hostetler (1974) described the Hutterian view regarding secular politics and authority thus: "government authority over the secular world is said to be ordained by God in His wrath to take vengeance on evil and to discipline the godless" (p. 162). Baptized colony members make up the church, although only men can hold office or vote. Baptized women attend and participate in church through singing and welcoming new members, but have no formal voice in formulating colony policy.

The colony executive body is made up of a council of from five to seven elected men, led by the Preacher. These council members hold key colony positions such as Preacher, Assistant Preacher, German Teacher, Steward (or Boss), and field manager. This council decides all colony matters from job changes to discipline and judicial matters (Hostetler, 1974).



### Status of Women

Most available literature describes Hutterian women within the context of the family, the division of labor, or childrearing (Hostetler & Huntington, 1965; Lee & Bratrud, 1967). Hutterite women are presented as housewives and mothers first, light laborers second, and colony citizens third. A great influence is the Biblical admonition for women to submit to their husbands. Women have a choice in mate selection, but after marriage move to their husband's colony. By obeying God's command to be fruitful and multiply, women with large families gain religious and social honor. Age and status are nearly synonymous. Women sit at table and in church in descending order of age (Gross, 1965).

The outstanding feature of the Hutterian family is family size and value of children. For the Hutterian woman, few specialized roles exist other than head cook, gardener, tailoress, or midwife (Peters, 1965). The value of work associated with childbirth may be one reason for the mother role being the main Hutterian female role.

The Hutterian transition to adulthood is gradual: moving from childhood, to full time work at age 15, to baptism after age 18, to marriage. Women's duties are confined to food, sewing, gardening, and domestic acts. Work is determined by weekly and daily schedules. Jobs are done by rotating teams except for laundry and cleaning of living quarters. Assignment changes may be influenced by age, illness, or childbirth (Gross, 1965). The nuclear family is the basic social unit, but its function is limited to domestic services and procreation. Maternal-infant responsibility is offset by institutionalized provision of child care by other colony members. The women's formal status is low in the Hutterian patriarchal and patrilocal democracy. With no vote, women's role is officially one of subordination. Informally, however, women influence their husband's vote. On occasion the women group together to lobby for certain decisions (Friedmann, 1961; Gross, 1965; Peters, 1965).

## CHAPTER IV

### Methodology

#### Study Design

The design of this study was a cross-sectional descriptive survey to examine the relationship among the three variables: *Leut* membership, age, and value orientations. Age was a possible intervening variable, therefore, biological age was documented to aid analysis of data.

#### Criteria For Sample Selection

Each Hutterian colony varies in relation to degree of openness to non-colony people, therefore, on the assumption that any given stable colony is representative of its *Leut*, one colony was chosen to represent each *Leut*. These colonies consisted of one *Schmiedeleut* colony in rural Manitoba, one *Dariusleut* colony in rural Alberta, and one *Lehreleut* colony in rural Saskatchewan.

On each of these three Hutterian colonies there were approximately thirty adult women, fifteen years of age or greater. Because Kluckhohn and Strodtbeck's original study (1961) was based on samples of 20 (10 male and 10 female), studies based on Kluckhohn and Strodtbeck's (1961) Value Orientation Schedule can do the same. Thus one colony from each *Leut* was believed sufficient to provide an adequate sample size for this study. All consenting, available women of each of these three colonies were surveyed.

#### Subject Recruitment

Meetings were held with the Preachers and elders of each colony to describe the study and gain permission to access the colony women (see Appendix A). At this time, a

statement of the number of women living on the colony was obtained from the Preacher or the wife of the Preacher. An explanation meeting with all the colony women was negotiated through the wife of the Preacher.

At the subsequent explanation meeting, a description of the study was given (see Appendix B), and a convenient time, date, and venue for conducting the study was arranged. All Hutterian women participating in this study were required to meet the following criteria:

1. Be an Hutterian woman residing on an Hutterian colony in Canada.
2. Be 15 years of age or older.
3. Have attended an information meeting at which the researcher described this study.
4. Have requested to participate in the study by completing a questionnaire.
5. Be able to speak, read and write English.

#### Protection of Human Subjects

The two-step process of sample recruitment and subject selection (seeking permission from the preacher and/or elders, then meeting with the colony women) was an attempt to reduce coercion. This method was thought to allow colony women freedom to consent or refuse to participate with another woman (myself) without challenging the Hutterian norm of male authority

### Sample Description

#### *Dariusleut*

The *Dariusleut* colony was less than five miles from a nearby town, from which the colony has taken its name, and slightly more than an hour's drive from a major city. This colony was seventeen years old, with a population of 31 women aged from 15 to 67 years: 20 married and 11 single.

The sample of *Dariusleut* women participating in this study included seventeen women ranging in age from 15 to 49 years with a mean age of 30 years. Fifteen women were married, and two women were single.

Of the 14 *Dariusleut* women not participating in this study, five were visiting other colonies in either Alberta or in the United States, five had gone to the nearest city for shopping and marketing duties, one was "in house" as she had recently delivered a new baby, one was at home due to recent surgery, and two chose not to participate.

#### *Schmiedeleut*

The *Schmiedeleut* colony was located three miles from the nearest town (from which the colony takes its name) and over two hours drive from the nearest city. Formed fifteen years ago, this colony contained eighty people: twenty five of whom are women aged fifteen years or more. There were no widows, fifteen married women, and ten women (aged fifteen to twenty four years) who were single. All the married women except one (who was married less than one year) had children. Eight of the married women came from other colonies; two of the married women married within this colony.

The sample of *Schmiedeleut* women participating in this study included seventeen women ranging in age from 15 years to 54 years with a mean age of 31 years. There were no widows, ten married women, and seven women who were single. Of the eight *Schmiedeleut* women not participating in this study, four women were away from the colony visiting family, two women were in town, and two women were sick at home.

### *Lehreleut*

The *Lehreleut* colony population totalled 138. This colony was located about twelve miles from the nearest town. The nearest city was at least three hours' drive away. This colony was twenty one years old and was currently in the process of splitting to form a daughter colony about forty miles distant. There was a total of thirty five women on the colony ranging in age from 15 to 70 years. There were 24 married women, 1 widow, and 10 single women. Eight women were from outside colonies. The remainder were from this colony or its parent colony. Of the 21 *Lehreleut* women not participating in this study, 3 chose not to participate and 18 were at the new daughter colony.

The sample of *Lehreleut* women participating in this study included fourteen women aged 24 to 59 years, with a mean age of 36 years. All of these women except one were married; none were widowed. These women shared lunch with me and were informed of the study and request for interviews. They agreed and waited in the dining hall for more than three hours after lunch to fill out a questionnaire.

The cause for the delay was because the colony Preacher showed great interest in the questionnaire questions and asked if the colony leaders (male) could also each complete a questionnaire. Thus, the colony Preacher, German teacher, and Boss each completed a questionnaire, taking three hours to debate the questions and discuss the "Hutterian" answer. During these three hours, women came from the dining hall on

several occasions to ask if the men were finished yet and if they (the women) would be getting the questionnaires soon. The preacher informed the women (and the researcher) that as soon as the men were finished, they would ring the colony bell to call the women back to the dining hall: then the women could answer the questionnaires.

### **Total Hutterian Group**

The total Hutterian sample consisted of 48 women from three colonies from three provinces in Canada. These women were between the ages of 15 to 70 years, with a mean age of 33 years. Thirty eight women were married, 10 women were single, and no women were widowed. All of these women had attended eighth grade in (English speaking) public school, leaving school on their fifteenth birthdays.

### **Data Collection**

Value orientation was measured ordinally in this study by use of the Value Orientations Profile (VOP) questionnaire developed by Kluckhohn and Strodtbeck (1961) from Kluckhohn's theory of value variation. *Leut* membership (the independent variable) was measured nominally and recorded through use of color coded questionnaires: green for *Dariusleut*, pink for *Schmiedeleut*, and orange for *Lehroleut*. Pilot study questionnaires were yellow. Biological age as a possible intervening variable was measured chronologically by years. Age was reported on each questionnaire and recorded on a demographic data sheet.

### **Procedures**

At the time and place established for the group interview appointment, a verbal description of the research study was given to all of the women who attended. All participants were informed of their right to not answer any question unless they chose to,

and all participants were reminded to not mark their names or any identifying marks on the questionnaire (see Appendix B). Any questions posed by colony members regarding the study were answered. Women refusing to consent to the study, and/or not turning in their questionnaires, were not used in this research project.

Each question of the VOP questionnaire was read aloud, and repeated two or three times as necessary. The women read along while listening to the questions being read and manually completed their individual questionnaires. Questions and comments raised by participants were recorded as field notes to assist in understanding the responses given. Demographic data such as biological age and *Leut* membership were also recorded. Following administration of the questionnaire, comments were sought to determine question ambiguity, difficulty, and relevance to the Hutterian experience.

The group method of data collection utilized listening skills as well as reading skills, thereby enhancing comprehension of the questions asked, and also respected Hutterian suspicion of privacy. This approach allowed for larger sample size, proved less expensive in terms of money and time, resulted in a high response and retention rate, and maintained anonymity and a standard question format.

### Instrument

The instrument was the 23-item, fixed alternative, standardized, ordinal scale VOP questionnaire, in which a life problem was related, followed by three potential solutions. There were five problems in the Time and Man-Nature orientations, seven problems in the Relational orientation, and six problems in the Activity orientation.

In an attempt to relate the VOP questions to the Hutterian experience and gain understanding of Hutterian women's relational values regarding inheritance, an additional question (item number 23, question R8) specifically addressing inheritance of personal

belongings was added to the questionnaire. Within the Hutterian norm of communal ownership of property, any personal belongings appear to be confined to a wooden chest. Hostetler and Huntington (1967) explained that after one's fifteenth birthday: "both boys and girls are given a locked wooden chest in which to keep their personal belongings" (p. 75). What happens to this chest later in life has not been reported.

Kluckhohn's original questionnaire was selected as the instrument of choice for this study despite more modern versions being available (Egeland, 1980; DeMay, 1982; Burke, 1988). The original VOP schedule was developed for rural populations, and the life problems recounted in this schedule were perceived to be more realistic for rural Hutterians.

The original, English-language version of the VOP questionnaire was reviewed. Questions containing sexist language were rephrased in neutral terms in an attempt to communicate the meaning of the questionnaire to the Hutterian respondents in an accurate, yet unbiased, manner. A copy of this questionnaire may be seen in Appendix C.

In light of the grade eight education ceiling of the Hutterian population, the VOP questionnaire was analyzed using the IBM WRITE RIGHTER program to assess readability level. The VOP questionnaire was found to require a seventh grade reading level, the use of adjectives and adverbs was found to be normal, and the use of jargon and colloquial words was found to be nil. This readability analysis supported the choice of the VOP questionnaire as an appropriate instrument for this population .

### Reliability and Validity

The literature on the VOP has addressed the issues of establishing reliability and validity. Construct validity (which includes face, content, concurrent and predictive validity) provides : "the highest level of validation and the most complex" (Brink & Wood,



1988, p. 171). Kluckhohn determined that construct validity was attained in the development of the tool, as it was the first measure used to test Kluckhohn's theory of value variation and was tested simultaneously in five different cultures (Kluckhohn and Strodtbeck, 1961).

Content validity was established by basing the tool on known philosophical literature. In addition, the tool was reviewed with experts in anthropology, sociology, and statistics such as Talcott Parsons, G. Homans, John Tukey, R. Solomon and others (Kluckhohn and Strodtbeck, 1961).

Concurrent validity was achieved in that findings from Kluckhohn's (1961) study were supported by anthropological research conducted at the same time. The extensive data available from the Harvard University Comparative Study of Values in Five Cultures conducted on the five different cultural groups (in particular, work done by R. Kluckhohn, C. Kluckhohn, J. Roberts, F. Kluckhohn, F. Strodtbeck, and K. Romney) also supported Kluckhohn's findings (Kluckhohn and Strodtbeck, 1961). Subsequent studies have contributed to concurrent validity by administering different psychological tests measuring perceptual behavior and stress during acculturation concurrently with the administration of the VOP. Papajohn and Spiegel (1971) found intra-group correlations between the measure of cultural change and the measure of psychological stress as measured by Rorschach indices.

Reliability of the VOP tool was more difficult to establish in the original study. Regarding consistency of response over time, Kluckhohn and Strodtbeck (1961) were unable to do repeated questioning. Regarding consistency of response over a range of questions, question numbers in the VOP were not sufficient to permit the reliability check of cross-item comparison for the same person. Reliability tests of equivalence were not possible in 1961 as similar forms of the VOP questionnaire were not available until 1974

when Kluckhohn developed the urban schedule. A test of stability (test-retest) was attempted and has been reported in the following report of the Hutterian Pilot Project.

### Pilot Project

Because samples differ from samples used in other reported studies, it was necessary to attempt to establish the reliability and validity of research tools used (Brink & Wood, 1988). One indicator of an instrument's reliability is stability: "the instrument can be repeated over and over on the same research subject and will produce the same results" (Brink & Wood, 1988, p. 172). VOP questionnaire stability was tested through test-retest by administering the VOP questionnaire to the women of a second *Dariusleut* colony, then readministering the VOP questionnaire two weeks later to the same women. This test-retest was done at the same time data collection from the other colonies was being collected.

The Pilot colony was located about seven miles from the nearest town. This colony was less than five years old with a population of 23 women aged from 15 to 68: 2 widows, 11 married, and 10 unmarried women.

Initial contact was made with the Pilot colony. Although a preacher did reside on the colony, permission to access the colony women needed to be attained through the colony boss. A mutually agreeable time to meet with the colony boss was established to describe and discuss the study.

A meeting was held with all available, interested colony women to describe the study and establish a time, date, and venue for administration of the questionnaire. The women indicated that immediately after lunch in the dining hall was an appropriate time and venue. Therefore, the questionnaire was administered that same day.

The women participating in the study at Visit 1 consisted of ten women ranging in age from 15 to 65 years of age, with a mean age of 32 years. Of these, all but the youngest three women were married. An eleventh woman completed a questionnaire, but chose not to turn it in.

Following completion of the first sitting of the questionnaire, the women present stated that a convenient return date for Visit 2 would be in two weeks' time in order to do the retest of the questionnaire. The women were informed of the need to confirm that date with the boss, but if there were no restrictions, the retest was to be scheduled for two weeks from the first visit.

Further attempts to contact this colony boss were unsuccessful for four weeks for various reasons (he was attending a funeral in British Columbia; then he was away to the Okanagan collecting fruit). After the boss returned from his commitments, a date was set for a return to retest the colony women.

On returning for Visit 2, because the fall work was completed, many of the women were away visiting other colonies. Seven of the original ten women who had completed the first 'test' questionnaire were present on the colony, but two were busy (baking Christmas cookies) and declined to participate. Four other women (ages ranging from 24 to 54, with a mean age of 40 years) who had not been present to complete the first 'test' questionnaire, requested to complete the 'retest' questionnaire. Thus, the women participating in the study at Visit 2 consisted of nine women ranging in age from 15 to 54 years of age, with a mean age of 32.4 years. Of these, all but the youngest three women were married. Only five women completed questionnaires at both Visit 1 and Visit 2.

Data analysis for the Pilot Study followed procedures outlined by Kluckhohn and Strodbeck (1961) and included the Kendall's S statistic, binomial analysis, the t-test,

and analysis of variance. Findings for the Pilot Study are reported in Chapter V, and can be seen in Table 9.

### Data Analysis

The statistical data analysis methods recommended for the VOP questionnaire were reviewed by statisticians at the University of Alberta (T. McGuire and C. Humphries) in order to determine if the outline of statistical tests recommended by Kluckhohn and Strodtbeck (1961) continues to be the most suitable method of analysis to provide the information required. Recommendations from the statisticians included a suggestion that findings reported in proportions could add meaning to the report and that performing a Scheffe test rather than a one-way ANOVA would be a preferable measure of analysis of variance, as more than two groups (three *Leuts* ) were compared. These recommendations were followed by the researcher during data analysis.

### Total Item Patterning

Data analysis followed procedures outlined by Kluckhohn and Strodtbeck (1961, pp. 124-137); Egeland (1978); and Brink (1984). This analysis process involved three steps. The first step was Total Item Patterning, in which "the pattern of responses from each question in each value orientation was examined to determine whether the questions were answered by chance" (Kluckhohn and Strodtbeck, 1961).

This step examined the pattern of responses from each question in each value orientation for all subjects in the sample to determine whether the questions were answered by chance or were distinct preferences. The null hypothesis assumed there was no significant difference in the ordering of responses for each item within the value orientation. In order to test the null hypothesis, the following steps were taken: the respondents' ranked preferences were assigned numbers 1 through 3 for first, second, and

third choices. The numerical sums were then summed across respondents to determine the degree of consensus among them. The null hypothesis was that each of the six ( $A > B > C$ ,  $A > C > B$ ,  $B > C > A$ ,  $B > A > C$ ,  $C > B > A$ , or  $C > A > B$ ) alternate ways of ranking is equally likely to occur. Thus, the sum for A should equal the sum for B, should equal the sum for C. Because the sum of the ranking numbers is always  $(1+2+3=) 6$  for an individual, multiplying by 48 (the number of respondents in the study) gave the total sum of ranks for all alternatives. When this number (288) was divided by 3 (the number of alternatives), the resulting number (96) was the expected sum of ranks for each alternative when all ranking patterns are equally likely to happen (Kluckhohn & Strodtbeck, 1961). The discrepancy between the actual sums and the expected sums, when squared and summed, is Kendall's S, the statistic with which the degree of consensus was tested. This statistic has a known probability distribution which was checked for various levels of significance, allowing determination of the existence or non-existence of a pattern among the value alternatives.

#### Intra - Item Patterning.

The second step analyzed alternative preferences within cultures by analyzing Intra-Item Patterning. This second step answered the question: Between any two of the three potential alternatives within each orientation, which is preferred to the other? The null hypothesis assumed equal preference between any two alternatives. Because there were three sets of alternate preferences ( $A:B$ ,  $B:C$ ,  $A:C$ ), there were three null hypotheses. These were: "(1) alternatives A and B are equally popular; (2), alternatives A and C are equally popular; and (3) alternatives B and C are equally popular" (Kluckhohn and Strodtbeck, 1961, p. 122-123). The favoring of alternatives was tested by examining preferential patterning within pairs of alternatives. For each set of pairs, frequency counts were made of the number of times one alternative was preferred over another. Preferred to

was defined as: "For any pair of alternatives A and B, A is preferred to B if (1) A is assigned rank 1, B rank 2; or (2) A is assigned rank 1, B rank 3; or (3) A is assigned rank 2, B rank 3" (Kluckhohn & Strodtbeck, 1961, p. 130). To assess the probability that these frequencies arose by chance the preferences were evaluated against a normal-curve approximation to a binomial distribution. To determine how many persons out of n=48 must prefer one alternative to another to allow rejection of the null hypothesis, we solved the equation:

$$z = \frac{f_{A > B} - E(f_{A > B}) - .50}{\sqrt{m(p_{A > B})(q_{A > B})}}$$

by setting  $z = 1.96$  (.05 level of significance, two-tailed test) and filling in the values. In this study with 48 respondents,  $E(f_{A > B}) = 24$ ;  $(p_{A > B}) = (q_{A > B}) = .5$ , thus  $f_{A > B}$  must = 33 or greater in order to reject the null hypothesis.

Symbols used to indicate response preferences are as follows:

- > means one alternative is preferred over another at a specific level of significance such as:  $p = .05, .01, .005$ , or  $.001$ .
- $\geq$  means one alternative is preferred over another but not at a .05 level of significance.
- = means one alternative is not preferred over another.

Each question in each value orientation was examined for the pattern of responses of preference of one alternative over others and the probability that the resultant pattern did not occur by chance.

### Total Orientation Patterning

The third step analyzed the patterning of all questions in each value orientation by looking at Total Orientation Patterning. The overall pattern of preference of each alternative within the total orientation was examined for a particular profile. This analysis examined paired alternatives to determine the probability of a pattern emerging within each orientation and to determine if that pattern occurred by chance. The question being answered was: For all respondents, what was the overall preference in an orientation, and what was the sequence of this preference? The null hypothesis assumed no difference in the rank ordering of one alternative over another. Paired alternatives (A:B; A:C; B:C) were examined for all respondents for the entire orientation. Scores could range from 0.0 to 8.0 for orientations with eight items, and 0.0 to 6.0 for orientations with six items. No preference would be indicated by halving the potential score. For example, in an orientation with six items, the score would be  $1/2 \times 6 = 3$ . The difference between the expected mean frequency of preferences and the observed mean frequency of preferences was compared by use of the t-test using the following formula:

$$s = \frac{\sqrt{\sum f(X1 - x)^2}}{\sqrt{N-1}}$$

where:

$X1$  = frequency with which an alternative was chosen over all other alternatives within one orientation.

$f$  = number of times an alternative was selected by all respondents

$fx1$  = frequency with which this alternative was chosen over others

**X = the observed mean frequency**

**N = number of respondents in the sample**

**M = the expected mean frequency, and**

$$S_m = \frac{S}{\sqrt{N}} \quad \text{and} \quad t = \frac{\bar{x} - M}{S_m}$$

The expected mean frequency varied with the number of items per orientation. The observed mean frequency was calculated by averaging all responses for all 48 respondents across all items in one orientation. This provided a profile for the orientation which could be expressed descriptively. The t-test tested the statistical significance of the emerging orientation pattern. The sign of the t indicated the ordering of the preferences. A positive sign indicated the first alternative listed was preferred, while a negative sign indicated the second alternative was preferred.

### **Between Culture Differences**

Between culture differences were assessed to determine differences between Hutterian women's groups and subgroups. The mean values for groups and subgroups were computed and tested for significance using one-way analysis of variance (ANOVA).

Although this research study design was not experimental, the above described statistical tests were recommended by Kluckhohn and Strodtbeck (1961) for analysis of data using the VOP schedule, and have been found to be appropriate in the analysis of value orientation data. Most researchers to date have used the recommended data analysis techniques (DeMay, 1982).



An attempt to analyze variance and interaction among questionnaire scores, age, and Leut membership was unsuccessful due to insufficient numbers in the older cells for all groups. Therefore, between culture differences (*Leut* groups and age subgroups) were calculated as recommended using analysis of variance between mean scores for each question for the two (younger and older) age subgroups, and three (*Dariusleut*, *Lehreleut*, and *Schmiedeleut*) *Leut* groups of Hutterian women. Scheffe tests were conducted to analyze differences between the three *Leut* groups as well as the Pilot group. The University of Alberta Computing Services SPSSx program was utilized for this analysis.

Demographic data such as age and *Leut* membership were used to distinguish groups. Qualitative data such as field notes collected during and following administration of the VOP questionnaire were analyzed using content analysis to facilitate understanding of the responses.

## CHAPTER V

### Findings

#### Pilot Study Findings

Pilot study preference rankings were grouped and reported in Table 9. The five respondents who completed both "test" and "retest" questionnaires showed an overall 63% level of agreement in response to the question from response time #1 to response time #2. Level of agreement by respondent showed 59% agreement for the first respondent, 52% agreement for the second respondent, 73% agreement for the third respondent, 47% agreement for the fourth respondent, and 81% agreement for the fifth respondent. Level of agreement by category of question showed 73% agreement for Activity questions, 55% agreement for Time questions, 58% agreement for Relational questions, and 64% agreement for Man-Nature questions.

Because other researchers using the Value Orientation Profile questionnaire have not reported test - retest reliability, it was difficult to evaluate a 63% level of agreement. In addition, tests of stability assume that the trait being measured (value orientations) will remain constant over time, and we do not know with certainty whether values are static or if they change over time. Further, the number of women completing both "test" and "retest" (five) was very small, and constitutes an inadequate number to accurately determine any degree of reliability.

Observations of the levels of agreement indicate that two respondents in particular showed relatively low levels of agreement from test to retest. Respondents two and four respectively, showed 52% and 47% levels of agreement. Reasons for these low scores are unknown. When the level of agreement was examined by category of question,

the Relational and Time categories were marked by lower levels of agreement from test to retest than the other categories.

Table 9  
Summary of Pilot Test Rankings

***Relational Orientation***

Questions	Visit 1	Visit 2
1 (Well Arrangements)	$\text{Coll} \geq \text{Ind} = \text{Lin}$	$\text{Coll} \geq \text{Ind} = \text{Lin}$
2 ( Help in Misfortune)	$\text{Lin} \geq \text{Coll} \geq \text{Ind}$	$\text{Lin} = \text{Coll} \geq \text{Ind}$
3 (Family Work Relations)	$\text{Coll} \geq \text{Lin} \geq \text{Ind}$	$\text{Coll} \geq \text{Lin} \geq \text{Ind}$
4 (Choice of Delegate)	$\text{Coll} \geq \text{Lin} \geq \text{Ind}$	$\text{Coll} = \text{Lin} = \text{Ind}$
5 (Wage Work)	$\text{Lin} \geq \text{Ind} \geq \text{Coll}$	$\text{Lin} = \text{Ind} = \text{Coll}$
6 (Livestock Inheritance)	$\text{Coll} \geq \text{Ind} = \text{Lin}$	$\text{Lin} = \text{Coll} = \text{Ind}$
7 (Land Inheritance)	$\text{Coll} \geq \text{Lin} \geq \text{Ind}$	$\text{Coll} = \text{Lin} = \text{Ind}$
8 (Inheritance of Personal Chest)	$\text{Ind} = \text{Lin} \geq \text{Coll}$	$\text{Ind} = \text{Coll} = \text{Lin}$
	Sum: $\text{Coll} \geq \text{Lin} \geq \text{Ind}$	Sum: $\text{Coll} = \text{Lin} = \text{Ind}$

***Time Orientation***

Questions	Visit 1	Visit 2
1 (Child Training)	$\text{Past} \geq \text{Pres} \geq \text{Fut}$	$\text{Past} \geq \text{Pres} = \text{Fut}$
2 (Expectations About Change)	$\text{Pres} \geq \text{Past} \geq \text{Fut}$	$\text{Pres} \geq \text{Past} = \text{Fut}$
3 (Philosophy of Life)	$\text{Pres} = \text{Fut} = \text{Past}$	$\text{Past} = \text{Pres} = \text{Fut}$
4 (Ceremonial Innovation)	$\text{Pres} \geq \text{Fut} \geq \text{Past}$	$\text{Pres} \geq \text{Fut} = \text{Past}$
5 (Water Allocation)	$\text{Pres} = \text{Past} = \text{Fut}$	$\text{Past} = \text{Pres} \geq \text{Fut}$
	Sum: $\text{Pres} \geq \text{Past} \geq \text{Fut}$	Sum : $\text{Past} = \text{Pres} \geq \text{Fut}$

(table continues)

## Summary of Pilot Test Rankings

**Activity Orientation**

Questions	Visit 1	Visit 2
1 (Job Choice/Employee)	Do $\geq$ Be	Do $\geq$ Be
2 (Job Choice/Employer)	Be $\geq$ Do	Be = Do
3 (Ways of Living)	Be = Do	Do $\geq$ Be
4 (Care of Fields)	Do $\geq$ Be	Do $\geq$ Be
5 (Housework)	Be = Do	Do $\geq$ Be
6 (Nonworking Time)	Do = Be	Be $\geq$ Do
	Sum: Do = Be	Sum : Do $\geq$ Be

**Man Nature Orientation**

Questions	Visit 1	Visit 2
1 (Livestock Dying)	Subj $\geq$ Mast $\geq$ Harm	Subj $\geq$ Mast $\geq$ Harm
2 (Facing Conditions)	Subj $\geq$ Harm $\geq$ Mast	Harm $\geq$ Subj $\geq$ Mast
3 (Use of Fields)	Harm $\geq$ Mast = Subj	Harm = Subj = Mast
4 (Belief in Control)	Subj $\geq$ Harm $\geq$ Mast	Subj $\geq$ Harm $\geq$ Mast
5 (Length of Life)	Subj $\geq$ Mast $\geq$ Harm	Subj $\geq$ Mast $\geq$ Harm
	Sum: Subj $\geq$ Harm $\geq$ Mast	Sum: Subj $\geq$ Harm $\geq$ Mast

**\*\*Key:** See page 20

When a Scheffe test was performed, the Pilot colony was found to vary significantly from the other colonies (*Dariusleut*, *Lehreleut* and *Schmiedeleut*) used in this study at the 0.05 level on three questions: Man-Nature question 4 (addressing belief in control), Time question 4 (addressing ceremonial innovation), and Activity question 4 (addressing care of fields). Information gained through observations during visits to the Pilot colony indicated

that this colony might have been predicted to vary from other Hutterian colonies in several ways. Firstly, although the colony has a preacher, his role appears somewhat unclear, with the position of the boss seemingly more comprehensive. Also, this colony appears to seek out contact with the outside world for trade purposes: a custom that is contrary to traditional Hutterian custom. In addition, the colony has built a church, although all references emphasize that "churches are not built by Hutterians" (Stephenson, p. 439). Further, the roles occupied by men and women appeared somewhat blurred on this colony, whereas Gross (1965), Hostetler (1974), and Huntington & Hostetler (1980) report the clearly defined work roles traditionally occupied by Hutterian men and women. However, despite the differences observed, the only conclusive result of the Pilot study was that the sample size obtained was too small to accurately determine any degree of reliability.

#### Overall Hutterian Value Orientations

The findings for the total group of Hutterian women were that in the Relational orientation, R1, R2, R3, R5, R6, R7, and R8 were significant at the  $p = .01$  level or better. R4 findings were not significant. The overall Hutterian Relational orientation was Collateral > Lineal > Individual. In both the Time and the Man-Nature orientations, all items were significant at better than the  $p = .01$  level of significance. The overall Hutterian Time orientation was Present > Past > Future, and the overall Hutterian Man Nature was Subjugation > Harmony > Mastery. In the Activity orientation, items A4, A5, and A6 were significant at the  $p = .01$  level of significance. The overall Hutterian Activity orientation was Doing  $\geq$  Being. These findings indicated that patterns found in the answers to the VOP questionnaire by Hutterian women did not occur by chance. A descriptive summation of findings for the overall Hutterian Value Orientations are reported in Table 10.

Table 10  
Summary of Hutterian Rankings for all Value Orientations

Relational	Time	Man Nature	Activity
1 Coll $\geq$ Ind $\geq$ Lin	1 Pres $>$ Past $\geq$ Fut	1 Subj $\geq$ Mast $>$ Harm	1 Do $\geq$ Be
2 Lin $>$ Coll $\geq$ Ind	2 Pres $\geq$ Past $>$ Fut	2 Subj $>$ Harm $>$ Mast	2 Be $\geq$ Do
3 Coll $>$ Lin $>$ Ind	3 Pres $>$ Past $\geq$ Fut	3 Harm $>$ Mast $\geq$ Subj	3 Do $\geq$ Be
4 Lin = Ind = Coll	4 Past $\geq$ Pres $>$ Fut	4 Subj $>$ Harm $>$ Mast	4 Do $\geq$ Be
5 Coll $>$ Lin $>$ Ind	5 Pres $\geq$ Fut $\geq$ Past	5 Subj $>$ Harm $\geq$ Mast	5 Do $\geq$ Be
6 Coll $>$ Lin $\geq$ Ind			6 Do $\geq$ Be
7 Coll $>$ Lin $\geq$ Ind			
8 Ind $>$ Coll $\geq$ Lin			
Sum: Coll $>$ Lin $>$ Ind	Sum: Pres $>$ Past $>$ Fut	Sum: Subj $>$ Harm $>$ Mast	Sum: Doing $\geq$ Being

\*Key: See page 20

The t-test of data revealed that these descriptive findings for the total Hutterian group (N=48) were significant at the  $p = .05$  level of probability and better. In view of the segregated communal lifestyle Hutterians have lived for over one hundred years, evidence of a distinct Value Orientation profile came as no surprise.

#### Comparison by Leut

In addition to the analysis of the overall Value Orientation profile for all Hutterians, data were analyzed according to *Leut* (*Dariusleut*, *Lehroleut*, and *Schmiedeleut*) and age (15 - 39 years, and 40 years and greater), following the statistical recommendations of

Kluckhohn & Strodtbeck (1961) as previously described. Because the sample and size for each group differed, computations based upon subsample sets were recalculated.

Comparison by *Leut* revealed that there were some differences and many similarities between *Leuts*. Findings by *Leut* are reported in Table 11 (*Dariusleut*), Table 12 (*Lehreleut*), and Table 13 (*Schmiegeleut*).

### *Dariusleut* Findings

During the *Dariusleut* women's group interview, none of the women demonstrated any difficulty in understanding or answering any of the VOP questions. On two occasions during the group interview, women stated, "there is no second answer!" Several other women murmured assent with the observation that there was only one Hutterian way of answering the question. In these cases it was found that some women answered with only their first preference rather than a ranking of alternatives. One woman commented that these questions were very important and described particular relevance to their situation in regard to the questions regarding well drilling and water allocation. Reportedly, this colony had experienced real difficulty drilling for water. Indeed, water was rationed in the homes. Each time the colony had drilled for water, they had struck oil!

Another finding was laughter when respondents read and heard question #23 regarding inheritance of a personal chest. One comment following the laughter was: "This question sure is right for Hutterites!" Findings for the *Dariusleut* are reported in Table 11.

Table 11

*Dariusleut*

Relational	Time	Man Nature	Activity
1 Coll > Ind = Lin	1 Pres ≥ Past ≥ Fut	1 Subj ≥ Mast > Harm	1 Be ≥ Do
2 Lin ≥ Coll ≥ Ind	2 Past ≥ Pres ≥ Fut	2 Subj > Harm ≥ Mast	2 Be ≥ Do
3 Coll ≥ Lin > Ind	3 Pres ≥ Past ≥ Fut	3 Harm > Mast ≥ Subj	3 Do ≥ Be
4 Lin ≥ Coll ≥ Ind	4 Past ≥ Pres ≥ Fut *	4 Subj > Harm > Mast	4 Do > Be
5 Coll ≥ Lin ≥ Ind	5 Fut ≥ Pres ≥ Past	5 Subj > Mast > Harm	5 Do > Be
6 Coll > Lin ≥ Ind			6 Do > Be
7 Coll ≥ Lin ≥ Ind			
8 Ind > Coll ≥ Lin			
Sum: Coll ≥ Lin ≥ Ind	Sum: Pres = Past ≥ Fut	Sum: Subj ≥ Harm ≥ Mast	Sum: Doing ≥ Being

\*\*Key: See page 20

*Lehreleut* Findings

During the *Lehreleut* women's group interview, none of the women displayed any difficulty in understanding the questions. One respondent observed aloud that with regard to the Activity questions, there was a need for both Doing people and Being people on an Hutterian colony, as each contributed a different gift. She explained that the colony Preacher position could be interpreted as a Being position and that Being was very important spiritually. However, Doing was more important from a secular, farming, perspective. When asked to select between Doing and Being, this respondent stated that



both were necessary at different times and in different situations. Several other women murmured assent with these comments.

Following completion of the questionnaires, most of the women and several of the men stayed back to discuss the topic of values between cultures. The Preacher stated that the colony had hosted a visiting agriculture student from Asia for several months last year. A lively discussion ensued regarding different values being appropriate for different cultures. The people of this colony requested that this study be expanded to include many other colonies, and that the questionnaire be shared with the *Leut* elders because the topic of values was seen to be so important. Findings for the *Lehreleut* women are reported in Table 12.

Table 12

*Lehreleut*

Relational	Time	Man Nature	Activity
1 Ind $\geq$ Coll $\geq$ Lin	1 Pres > Past $\geq$ Fut	1 Subj $\geq$ Mast $\geq$ Harm	1 Do > Be
2 Lin $\geq$ Coll $\geq$ Ind *	2 Pres $\geq$ Past $\geq$ Fut *	2 Subj = Harm > Mast	2 Be $\geq$ Do
3 Coll $\geq$ Lin > Ind	3 Pres $\geq$ Fut $\geq$ Past *	3 Subj $\geq$ Harm $\geq$ Mast	3 Do $\geq$ Be
4 Lin $\geq$ Coll = Ind	4 Past $\geq$ Pres > Fut	4 Subj > Harm $\geq$ Mast	4 Do > Be
5 Coll $\geq$ Lin $\geq$ Ind	5 Pres $\geq$ Fut $\geq$ Past	5 Subj $\geq$ Mast $\geq$ Harm	5 Do > Be
6 Coll > Lin $\geq$ Ind			6 Do > Be
7 Coll > Lin $\geq$ Ind			
8 Ind > Coll = Lin			
Sum: Coll $\geq$ Lin $\geq$ Ind	Sum: Pres $\geq$ Fut $\geq$ Past	Sum: Subj $\geq$ Mast $\geq$ Harm	Sum: Do > Be

\*\*Key: See page 20

### Schmiedeleut Findings

None of the *Schmiedeleut* women displayed any difficulty in understanding any of the questions. However, one woman commented that for several questions, there was only one possible answer; no second choice possible as obviously, only one answer was correct! In these cases several respondents answered with their first choice only, not a ranking of the choices available. This finding was similar to the comments and experience on the *Dariusleut* colony. Several *Schmiedeleut* women wrote additional comments into the margins, such as: "only B", or "there is no other way".

Two women experienced some difficulty answering the Activity questions. These women showed no hesitation in selecting a response for that portion of the Activity questions dealing with a preference between Doing or Being. However, when asked which they were really more like, one of these women laughingly stated that she could not admit that even to herself. Two of the *Schmiedeleut* women were found to leave this self-reflective portion of the Activity questions blank. Findings for the *Schmiedeleut* women are reported in Table 13.

Table 13

#### *Schmiedeleut*

Relational	Time	Man Nature	Activity
1 Coll = Ind > Lin	1 Pres > Past ≥ Fut	1 Subj ≥ Mast > Harm	1 Do ≥ Be
2 Lin ≥ Coll ≥ Ind *	2 Pres ≥ Past ≥ Fut	2 Subj ≥ Harm > Mast	2 Do ≥ Be
3 Coll > Lin > Ind	3 Pres ≥ Past ≥ Fut *	3 Harm ≥ Mast ≥ Subj *	3 Do ≥ Be
4 Coll ≥ Lin ≥ Ind	4 Pres ≥ Past ≥ Fut *	4 Harm = Subj ≥ Mast	4 Do ≥ Be
5 Coll > Lin ≥ Ind	5 Pres = Fut ≥ Past	5 Subj > Harm ≥ Mast	5 Do ≥ Be
6 Coll > Lin ≥ Ind			6 Do ≥ Be
7 Coll > Lin > Ind			
8 Ind ≥ Coll ≥ Lin			
Sum: Coll > Lin ≥ Ind	Sum: Pres > Past ≥ Fut	Sum: Subj ≥ Harm ≥ Mast	Sum: Do ≥ Be

\*\*Key: See page 20

### Comparison Between Leuts

Comparison between *Leuts* revealed many similarities. Value orientation profiles for the three *Leuts*, particularly the Relational, Man-Nature, and Activity Orientations, are nearly identical. In the Time Orientation it was observed that although the dominant Value Orientation was Present for all three groups, the *Dariusleut* preferred Present equally with Past over Future. This finding supports the literature describing the *Dariusleut* as the most traditional of the three *Leuts*. The *Lehreleut* preference for Present as the dominant Value Orientation, and significant choice of Past as the least preferred alternative, may suggest a move away from the traditional. This colony was in the process of splitting at the time of data collection and much energy was being focused on development of the new daughter colony. The *Schmiedeleut* preference for Present as dominant choice and Past equally with Future as alternate preference supports the literature suggesting that the *Schmiedeleut* are the most liberal of the three *Leuts*. Comparisons and contrasts by *Leut* are reported in Table 14.

Table 14

#### Hutterian Women's Value Orientation By *Leut*

Orientations	<i>Dariusleut</i>	<i>Lehreleut</i>	<i>Schmiedeleut</i>
Relational	Coll $\geq$ Lin $\geq$ Ind	Coll $\geq$ Lin $\geq$ Ind	Coll > Lin $\geq$ Ind
Time	Pres = Past $\geq$ Fut	Pres $\geq$ Fut > Past	Pres > Past = Fut
Man Nature	Subj $\geq$ Har $\geq$ Mast	Subj $\geq$ Har $\geq$ Mast	Subj $\geq$ Har $\geq$ Mast
Activity	Doing $\geq$ Being	Doing > Being	Doing $\geq$ Being

### Comparisons By Age

Regarding the relationship between age and value orientation, the questionnaire answers were sorted by age into two groups: from 15 years to 39 years ( $n = 35$  'younger' women), and 40 years or greater ( $n = 13$  'older' women) in order to analyze subgroup differences. Because the sample and size for each group differed, computations based upon subsample sets were recalculated.

"Within Culture" statistical methods of analysis as recommended by Kluckhohn & Strodtbeck (1961) indicated that the two age groups have many similarities. In an attempt to discern subtle between culture variance within individual question items by age, an ANOVA was conducted.

An attempt to analyze variance among questionnaire scores, age, and Leut membership was unsuccessful due to insufficient numbers in the older cells for all groups. The *Dariusleut* sample contained only 3 women 40 years of age or greater. The *Lehreleut* sample contained 4 women equal to or greater than 40 years. The *Schmiedeleut* sample contained 6 women 40 years or greater. Although the effect of interaction between the three variables was not able to be assessed, Analysis of Variance between mean scores for each question for the two (younger and older) age groups of Hutterian women was conducted. Findings by age are reported in Table 15, (Younger), and Table 16 (Older).

**Table 15**  
**Younger Hutterian Women's Rankings**

<b>Relational</b>	<b>Time</b>	<b>Man Nature</b>	<b>Activity</b>
1 Coll $\geq$ Ind $\geq$ Lin *	1 Pres $>$ Past $\geq$ Fut	1 Mast $>$ Subj $>$ Harm	1 Be = Do
2 Coll = Ind $>$ Lin	2 Pres $\geq$ Past $>$ Fut	2 Subj $\geq$ Harm $>$ Mast	2 Be $\geq$ Do
3 Coll $\geq$ Lin $>$ Ind	3 Pres $\geq$ Past = Fut	3 Harm = Mast $\geq$ Subj	3 Do $\geq$ Be
4 Lin $\geq$ Ind $\geq$ Coll	4 Past $\geq$ Fut $>$ Pres	4 Subj $\geq$ Harm $>$ Mast	4 Do $>$ Be
5 Coll $\geq$ Lin $\geq$ Ind	5 Pres = Past $\geq$ Fut	5 Subj $>$ Harm = Mast	5 Do $>$ Be
6 Coll $>$ Lin $\geq$ Ind			6 Do $>$ Be
7 Coll $\geq$ Lin $\geq$ Ind			
8 Ind = Coll = Lin			
Sum: Coll $\geq$ Lin $\geq$ Ind	Sum: Pres $>$ Past $\geq$ Fut	Sum: Subj $\geq$ Harm $>$ Mast	Sum: Do $>$ Be

Younger Hutterian women indicated Relational ranking preference for Collateral  $\geq$  Lineal  $\geq$  Individual. This finding was the same as the Relational ranking preference of the total Hutterian group. The Younger Hutterian women's Time rankings were: Present  $>$  Past  $\geq$  Future. This finding, also, was the same pattern as that of the total Hutterian group. The Man-Nature ranking for the Younger Hutterian women was Subjugation  $\geq$  Harmony  $>$  Mastery. The Activity preference ranking for the Younger Hutterian women was Doing  $>$  Being: similar to the findings for the total Hutterian group. Subtle differences in response preferences for individual questions were observed, despite the value orientation profile appearing similar to the value orientation profile for the total Hutterian group.

Table 16  
Older Hutterian Women's Rankings

Relational	Time	Man Nature	Activity
1 Coll $\geq$ Ind $\geq$ Lin	1 Pres $\geq$ Past $\geq$ Fut *	1 Subj = Mast > Harm	1 Do $\geq$ Be
2 Lin = Coll $\geq$ Ind	2 Past = Pres = Fut	2 Subj = Mast > Harm	2 Do = Be
3 Coll > Lin > Ind	3 Pres $\geq$ Past $\geq$ Fut	3 Harm $\geq$ Mast = Subj	3 Do $\geq$ Be
4 Coll = Lin $\geq$ Ind	4 Pres = Past $\geq$ Fut *	4 Subj $\geq$ Harm > Mast	4 Do $\geq$ Be
5 Coll > Lin $\geq$ Ind	5 Pres = Past $\geq$ Fut *	5 Subj > Harm $\geq$ Mast	5 Do $\geq$ Be
6 Coll > Lin $\geq$ Ind			6 Do $\geq$ Be
7 Coll > Lin $\geq$ Ind			
8 Ind > Coll = Lin			
Sum: Coll > Lin $\geq$ Ind	Sum: Pres $\geq$ Past $\geq$ Fut	Sum: Subj $\geq$ Harm $\geq$ Mast	Sum: Do $\geq$ Be

Older Hutterian women indicated Relational ranking preference for Collateral > Lineal  $\geq$  Individual. This finding was similar to the Relational ranking preference of both the Younger and the total Hutterian group. The Older Hutterian women's Time rankings were Present  $\geq$  Past  $\geq$  Future. This finding, also, was the same preference ranking as that of the Younger and the total Hutterian group, but the Older women did not show the same statistical strength of preference. The Man-Nature ranking for the Older Hutterian women was Subjugation  $\geq$  Harmony  $\geq$  Mastery. This pattern resembles the Man-Nature ranking preferences for the total Hutterian group. The Activity preference ranking for the Older Hutterian women was Doing  $\geq$  Being: similar to the findings for the Younger and the total

Hutterian group. Subtle differences in response preferences for individual questions were observed, despite the value orientation profile of the Older Hutterian women appearing similar to the value orientation profile for the total Hutterian group.

Table 17  
Hutterian Women's Value Orientations by Age

Orientations	Younger	Older
<b>Relational</b>	Coll $\geq$ Lin $\geq$ Ind	Coll $>$ Lin $\geq$ Ind
<b>Time</b>	Pres $>$ Past $\geq$ Fut	Pres $\geq$ Past $\geq$ Fut
<b>Man Nature</b>	Subj $\geq$ Har $>$ Mast	Subj $\geq$ Har $\geq$ Mast
<b>Activity</b>	Doing $>$ Being	Doing $\geq$ Being

**\*\*Key:** See page 20

Findings for the two age groups differed significantly in their questionnaire responses for questions #1, #2, #5, #7, #12, and #15 at the  $p = .05$  level of significance. Of these seven questions, three (#2 R1, #7 R2, and #12 R5) were Relational questions; three (#1a A1, #1b A2, and #15 A3) were Activity questions; and one (#5 T2) was a Time question.

Question #2 (R1) responses showed the younger group choosing Collateral 14/35 times as a first choice and 17/35 times as a second choice, and Individual 13/35 times as a first choice and 10/35 times as a second choice. The older group was more decisive and selected Collateral 8/13 times as a first choice and never as a second or third choice. Individual was selected 9/13 times as a second choice, twice as a third choice, and never as a first choice. The Hutterian way of making decisions actually combines methods described in the Collateral response ("most people have a part in making the plans; lots

of different people talk until almost everyone comes to agree as to what is to be done") and a portion of the Individual response ("they decide the matter by vote"). The fine distinction between these two potential responses was more clear for older Hutterian women than younger Hutterian women.

Question #7 b (R2) asks for one response regarding help in misfortune. Responses showed a split in the younger group responses with 19/35 selecting Lineal and 13/35 selecting Collateral. The older group responses showed 8/13 selecting Collateral and 3/13 selecting the Lineal response. The use of the word Boss may have served to distract certain respondents, as this term has special meaning on an Hutterian colony to indicate that colony elder is charged with the responsibility of all things secular. Further, the word *brother* has special meaning for the Hutterians in that they are a brotherhood of souls (bruderhof) and consider all other baptized Hutterians their brothers and/or sisters. Both these terms are utilized in the potential responses for this question and may have served to confound respondents' understanding.

Question #12 (R5) dealt with wage work. Responses showed a split in younger group responses with 17/35 choosing the Collateral and 13/35 choosing the Lineal response. The older group showed 10/13 selecting the Collateral response. Again, terminology may have served to cloud the meaning of the potential responses for this question. The Collateral response stated one potentially distracting clause: "without there being one main boss". Also, in this question, the Lineal response included the term, boss. Because of the particular meaning which this term holds for Hutterians, one wonders whether some blurring of meaning may have occurred in the answering of this question.

Question #1 a (A1) dealt with working for a boss. Responses showed 18/35 younger group respondents choosing the Being response and 16/35 choosing the Doing response. Among the older group respondents, 11/13 selected the Doing response. Question #1 b



(A2) dealt with being a boss. Responses showed 22/35 younger group respondents selecting the Being response and 12/35 selecting the Doing response. Among the older respondents, the decision was evenly split with 7/15 choosing Being and 7/15 choosing Doing.

Question #15 b (A3) questions personal ways of living. Younger group responses showed 23/35 selecting the Doing response. Older group responses showed 8/13 respondents choosing the Being response. Two younger respondents and one older respondent did not answer this question. The older respondent stated during the interview that she could not admit this information even to herself. Perhaps this question related to internalization of the Hutterian work ethic, and responses may have been influenced by a degree of social desirability.

Question #5 (T2) deals with expectation about change. Responses showed 20/35 younger respondents choosing the Present response and 11/35 selecting the Past response. Among older respondents, 5/13 chose the Future response and 5/13 chose the Present response. With the Hutterian tradition of respecting age, one wonders if this question might reflect Hutterian age/power hierarchies or whether responses indicate a growing tolerance for change among certain colony elders.

### Comparisons Among the Six Groups

When the data from the six sets of analyses were examined, it was possible to see contrasts between groups of respondents. The dominant Collateral Relational Value Orientation was preferred by all six groups. However, only the results from the whole Hutterian group and the *Schmiedeleut* group reached the  $p = .05$  level of significance in selecting Collateral as the dominant choice. Lineal was clearly the preferred alternate choice and Individual the last choice, for all groups.

When the data from the Time Orientation was contrasted by *Leut* and age, all groups were found to prefer Present over Past over Future, but groups differed in the level of significance of their preference. The *Schmiedeleut* were distinct in that their alternate preference was equally split between Past and Future. The *Dariusleut* preferred Present and Past almost equally over the Future alternative. No differences were seen by age.

When the data from the Man-Nature Orientation was compared by *Leut* and age, all groups indicated a preference for Subjugation over Harmony over Mastery. The only group showing statistical significance with any preference was the Younger group with Subjugation over Mastery significant at the  $p = .005$  level of significance.

For the Activity Value Orientation, all groups preferred Doing over Being. Findings for all six groups are reported in Table 18.

Table 18  
Comparison of Value Orientation for all Hutterian Groups

GROUP	RELATIONAL	TIME	ACTIVITY	MAN-NATURE
Total Hutterian Sample	Coll > Lin $\geq$ Ind	Pres > Fut > Past	Do $\geq$ Be	Subj $\geq$ Harm $\geq$ Mast
<i>Dariusleut</i> Group	Coll $\geq$ Lin $\geq$ Ind	Pres = Past $\geq$ Fut	Do $\geq$ Be	Subj $\geq$ Harm $\geq$ Mast
<i>Lehreleut</i> Group	Coll $\geq$ Lin $\geq$ Ind	Pres $\geq$ Fut > Past	Do > Be	Subj $\geq$ Harm $\geq$ Mast
<i>Schmiedeleut</i> Group	Coll > Lin $\geq$ Ind	Pres > Past = Fut	Do $\geq$ Be	Subj $\geq$ Harm $\geq$ Mast
Older Women Subgroup	Coll > Lin $\geq$ Ind	Pres $\geq$ Past $\geq$ Fut	Do $\geq$ Be	Subj $\geq$ Harm $\geq$ Mast
Younger Women Subgroup	Coll $\geq$ Lin $\geq$ Ind	Pres > Past $\geq$ Fut	Do > Be	Subj $\geq$ Harm>Mast

**\*\*Key:** See page 20

### Findings From Individual Items

Each item of the Value Orientation schedule contained valuable information regarding Hutterian values relevant to common life problems. Each item in and of itself was worthy of individual attention. An analysis of each individual item follows, therefore, grouped by the four Orientations rather than interview schedule sequence.

#### Relational Orientation

Collateral was found to be the dominant value for all six groups. However, only the whole Hutterian group and the *Schmiedeleut* group reached the  $p = .05$  level of significance in selecting Collateral as the dominant choice. Lineal was the preferred alternate choice and Individual the last choice for all groups.

#### R1 well arrangements (Question 2).

This question asks how the community decides how they will drill for water. The Lineal (A) alternative allows the older, or recognized leaders to decide. The Collateral (B) alternative describes a situation wherein everyone has a part in making decisions and talks until a consensus is reached. The Individual (C) alternative describes a democratic state where everyone votes, and the majority rules. The overall Hutterian preference, and the *Dariusleut* preference for R1 was Collateral  $\geq$  Individual  $\geq$  Lineal. The true "Hutterian way" is reported to be a combination of lengthy discussion by all colony members (similar to Collateral) followed by voting by the Hutterian men with the majority ruling (similar to Individual). The *Schmiedeleut* group chose Collateral equally with Individual over Lineal. The *Lehreleut* selected Individual over both Collateral and Lineal, but not at a significant level. When R1 was contrasted by age, the Younger group were observed to strongly

prefer Collateral over both Individual and Lineal, while the Older group preferred Collateral over Lineal over Individual, but not at the  $p = .05$  level of significance.

### R2 help in misfortune.

R2 deals with a family needing help in misfortune in order to survive the winter. Alternatives are to approach a Boss or older, important relative who is used to managing things in the group (Lineal); depend on brothers or sisters to help out (Collateral), or to try to raise the money on one's own outside the community (Individual). The overall Hutterian response was  $\text{Lineal} > \text{Collateral} \geq \text{Individual}$ , with Lineal over Collateral and Lineal over Individual preferences reaching the  $p = .05$  level of significance. Within Hutterian society, all things secular are managed by the Boss. The Lineal choice was strongly significant over all other alternatives in this question. The second preference was Collateral suggesting the supportive, communal, role of the Hutterian colony (*bruderhof*) lifestyle. The *Dariusleut* preference compared with that of the overall Hutterian group. The Younger, *Lehreleut* and the *Schmiedeleut* preferences were dominantly Lineal, with Collateral and Individual being selected equally as alternate choice. The Older group chose Lineal over Individual at the .05 level of significance. The Individual preference was definitely the last choice and is not surprising in view of the lack of opportunity for individual Hutterian women to earn money off the colony.

### R3 family work relations.

R3 deals with family work relations, reflecting desirable leadership in extended family situations. The Individual alternative suggests each family (husband, wife, children) be separate and independent. The Collateral alternative suggests families of close relatives work together and appoint a manager as necessary. The Lineal alternative suggests the oldest able person of the family manage family affairs. The overall Hutterian

choice was clearly Collateral > Lineal > Individual significant at the  $p = .001$  level. All groups agreed with this overall Hutterian ranking of alternatives. Many respondents strongly identified the Collateral choice as the Hutterian way of living with "all things common". Although Hutterian leaders are not selected on the basis of being "the oldest able relative", age is greatly respected on the Hutterian colony (in harmony with the junior/senior principle) resulting in the Lineal choice understandably being second choice for the respondents. The Individual choice, as described, exemplifies the worldly way of non-colony people, and therefore, is not surprisingly the last choice for Hutterians to describe family work relations.

#### R4 choice of delegate.

R4 deals with the choosing of a delegate to represent the community. Methods of choosing include group consensus (Collateral), majority vote (Individual), or elder decision (Lineal). The overall Hutterian Profile showed no preference among alternatives. This profile was similar for all groups. Respondents reported that the true Hutterian way of selecting a delegate is actually a combination of the alternatives presented. This was reflected in the relatively equal preference of the alternatives available. Reportedly, potential people may be recommended by colony elders. Discussion on the suitability of these candidates then ensues, followed by majority vote (by the men). Certain important issues, like the division of a colony during branching, are decided by lot, following Biblical tradition.

#### R5 wage work.

In this question the Hutterians were asked how they would prefer to earn their living. The Lineal alternative exemplifies the employee/employer relationship; the Collateral typifies the collective, communal lifestyle; and the Individual alternative suggests

the self-employed business person. The overall Hutterian preference was Collateral > Lineal > Individual, significant at the  $p = .005$  level. All groups agreed with these rankings, differing only with regard to level of significance.

#### R6 inheritance of livestock.

In this question the situation is that a parent dies leaving livestock. The decision is how to administer the estate. Alternatives are for the oldest able person to be manager (Lineal); each to take their portion of the inheritance and administer it separately (Individual); or to pool the inheritance and that person most capable would manage the estate collectively as needed (Collateral). The overall Hutterian preference and the preference of all the other groups was: Collateral > Lineal > Individual, with different groups reaching varying levels of significance. This clear Collateral dominant preference and Lineal alternate preference were expected as they most truly reflect the communal Hutterian lifestyle.

#### R7 land inheritance.

This question is similar in format to R6, dealing with inheritance from a parent, but this question alters the inheritance from livestock to a land inheritance. Alternatives are the same as for R6: for the oldest able person to be manager (Lineal); each to take their portion of the inheritance and administer it separately (Individual); or to pool the inheritance and that person most capable would manage the estate collectively as needed (Collateral). The overall Hutterian group preferences were: Collateral > Lineal  $\geq$  Individual at the  $p = .001$  level of significance. All other groups agreed with this preference. Because of the Hutterian norm of communal ownership of property, these findings were no surprise, and merely served to validate the expectation of Collateral as the dominant Hutterian Relational Value Orientation.

### R8 Inheritance of personal property.

This question is similar in format to R6 and R7, dealing with inheritance from a parent, but this question alters the inheritance from livestock or land inheritance to inheritance of a personal chest. This question was added in an attempt to access information regarding personal property within the communal Hutterian colony setting. Alternatives are the same as for R6 and R7: for the oldest able person to take charge and dispose of the chest (Lineal); each to take their share of the chest and manage it separately (Individual); or to pool the inheritance and that person most capable would manage the chest inheritance collectively as needed (Collateral). The overall Hutterian group preferences were: Individual > Collateral  $\geq$  Lineal at the  $p = .01$  level of significance. Individual was the clearly dominant preference for all groups, although different groups reached varying levels of statistical significance. The Younger group showed the least degree of differentiation with nearly equal preferences among alternatives. This clearly dominant Individual preference regarding a personal chest stands in stark contrast to the Hutterian Collateral norm.

### Time Orientation

#### T1 child training.

This question addresses the correct way to raise children, with the Past alternative suggesting children should be brought up steeped in tradition. The Present alternative pragmatically states children should be taught whatever will help them when they become adults. The Future alternative suggests children learn problem solving to be able to discover new techniques to use in the future. The overall Hutterian preference was Present > Past = Future. The *Dariusleut* and the older group preferences were Present = Past over Future. The *Lehreleut* and the *Schmiedeleut* preferences were Present over Past

over Future. The younger group preference was Present over Future over Past. The interesting variation with the younger group was the choice of Future (21) over Past (14) which indicates a preference despite non significance.

### T2 expectations about change.

This question divided the women into two groups: younger, including all women 15 to 39 years; and older, including all women 40 years of age or more. This particular differentiation by age may not be the most appropriate for the Hutterian sample, because of the unique treatment of age in Hutterian culture. Although the original Value Orientation schedule divided the sample into an older age group of 40 years and up and a younger age group of 20 -39 years, the apparent reason for this differentiation was to distinguish between generations. The age of 20 was insignificant in Hutterian culture, and the age of 15 years was substituted because this is the age at which an Hutterian woman leaves school and joins the work roster.

This question tries to discern what the respondent desires for her children in terms of worldly goods. The Future alternative suggests that for those who work hard, the Future will be better. The Present alternative suggests that due to vacillation over time, one cannot predict. The Past alternative suggests things should be as they have been in the past. Findings indicated an overall Hutterian preference for Present > Past  $\geq$  Future. The *Dariusleut* and the *Schmiedeleut* preferred Past > Present > Future, although these preferences were not significant. The *Lehreleut* and the younger group preferred Present = Past  $\geq$  Future. The older group was unique in showing no preference whatsoever, selecting Past, Present, and Future alternatives exactly equally. Perhaps these findings reflect more of the Hutterian disregard for worldly goods than a time preference.



### T3 philosophy of life.

This question asks about optimal lifestyle considering what has gone on in the past and what we can expect in life. Alternatives include: following traditional ways (Past), living according to what is occurring now (Present), and working and planning to improve things in times to come (Future). The overall Hutterian preference was  $\text{Present} > \text{Past} \geq \text{Future}$ . The *Schmiedeleut*, *Dariusleut*, and the older group indicated a preference for  $\text{Present} \geq \text{Past} \geq \text{Future}$ . The *Lehreleut* preference was  $\text{Present} \geq \text{Future} \geq \text{Past}$ . The younger group rankings were similar to those of the *Lehreleut*. This widespread acceptance of not worrying about the future, and not being overly concerned with the past might be a reflection of the Hutterian fundamentalist Christianity.

### T4 ceremonial innovation.

This question asks about changes in worship. A positive view of change would suggest a Future ranking. Displeasure with the changes would suggest a Past ranking; and tolerance for the change would suggest Present ranking. The overall Hutterian preference was  $\text{Past} > \text{Present} \geq \text{Future}$ . All groups indicated the same ranking preferences at varying levels of statistical significance. These findings suggest a high degree of stability in Hutterian faith and religious expression.

### T5 water allocation.

This question asks for a decision as to allocating water once the well is dug. The three alternatives include: Past - dividing the water as it has been previously; Present - deciding how to divide the water only after it actually arrives; and Future - planning a water sharing scheme in advance. The overall Hutterian Profile was  $\text{Present} \geq \text{Future} \geq \text{Past}$ . The *Dariusleut* varied in their preference for Future over Present over Past, but this

preference did not reach significance. The *Dariusleut* voiced a very real identification with this problem as they had been unable to reach water despite numerous drilling attempts on the colony. The *Lehreleut* preference was the same as that of the total group. The *Schmiedeleut* preference was for Future  $\geq$  Present  $\geq$  Past. No difference was seen by age.

### Man-Nature Orientation

The overall Hutterian Man-Nature Value Orientation profile was found to be Subjugation to Nature > Harmony with Nature > Mastery over Nature. Brink (1980) stated:

this orientation specifies the direction of the human relationship to the natural law or nature and shows the assumed relationship of the farmer to nature. The farmer would be hard pressed to feel powerful over nature after a natural disaster wipes out the season's crops. The farmer, by vocation, needs to work in harmony with nature, using every technology to improve the crop but accepting the damage wrought by flood, earthquake, tornado, drought which can never be fully controlled by human beings (p. 51).

These statements seem particularly apt in reference to the Hutterians who as a group, depend upon agriculture for subsistence. In addition, as a fundamentalist, Anabaptist, religious group, the Hutterians believe in the necessity for the human will to be broken in order to gain the divine order of the one corporate body. Thus, only self-surrender, or subjugation to God's will can lead to God's grace (Hostetler, 1974).

### MNI livestock dying.

This question dealt with reasons for livestock dying. Alternatives included: the deaths being beyond the owner's control (Subjugation); the deaths being an indication of

poor farm management (Mastery); and the deaths being due to the owner not having lived life in harmony with nature (Harmony). The overall Hutterian preference was Subjugation > Mastery  $\geq$  Harmony. Both the *Dariusleut* and the older group selected Subjugation and Mastery equally as dominant preference for this question, with last choice being Harmony. The *Lehreleut* and the *Schmiedeleut* rankings were similar to that of the total Hutterian group. The younger group was distinctive in their strength of preference for Subjugation > Mastery > Harmony. Preferences were: Subjugation > Mastery at the .05 level of significance; Subjugation > Harmony at the .001 level of significance, and Mastery > Harmony at the .01 level of significance.

#### MN2 facing conditions.

This question addresses the way God is related to people, weather and other natural conditions. Alternatives include: Subjugation, in which God's ways cannot ever be known, leaving humans at the mercy of God; Harmony, in which God and people work together, if people maintain harmony with God and nature; and Mastery, in which nature is perceived as controllable. The overall Hutterian response was Subjugation  $\geq$  Harmony > Mastery at the .001 level of significance. Mastery was clearly not a viable alternative in this question for Hutterian respondents! Many women stated this comment aloud, others wrote it on their questionnaire, and others crossed out this alternative totally on their questionnaire. The *Schmiedeleut* and the *Dariusleut* women had the same rank order of preferences as the total Hutterian group, reaching different levels of significance. Both age groups and the *Lehreleut* preferred Subjugation equally with Harmony over Mastery, with both Subjugation > Mastery, and Harmony > Mastery preferences significant at the .05 level of significance for both groups.

### MN 3 use of fields.

This question describes three ways of seeding and caring for crops. The Subjugation alternative describes the fate of the crop once seeded in God's hands. The Mastery alternative describes the fate of the seeded crop as the farmer's responsibility, using science and technology to prevent inclement weather and improve the crop. The Harmony alternative describes the fate of the planted crop as depending on the harmonious relationship between the farmer and God. The overall Hutterian preference was Harmony over Subjugation over Mastery, with Harmony over Subjugation and Harmony over Mastery significant at the .05 level. The younger group were like the overall Hutterian group in preferring Harmony over Mastery over Subjugation, with Harmony preferred over Subjugation at the .05 level of significance. The *Dariusleut* preference was Subjugation over Harmony and Mastery, but this preference was not statistically significant. The *Lehreleut* and the older group selected equally, showing no preference for any alternative in this question. The *Schmiedeleut* preferred Subjugation over both Harmony and Mastery, with Subjugation preferred over Harmony at the .05 level of significance.

### MN 4 belief in control

This question describes three views on control of the weather and nature. The Subjugation alternative states that people have never controlled nature; one must accept fate. The Mastery alternative states that it is the human responsibility to find ways to control nature to human will. The Harmony alternative states that people help nature by living in correct ways. The overall Hutterian preference was Subjugation > Harmony > Mastery. Both age groups, the *Lehreleut*, and the *Dariusleut* profiles were the same as that of the

Total Hutterian group. The *Schmiedeleut* preferred Harmony equally with Subjugation over Mastery.

#### MN 5 length of life.

This question describes three people debating whether people can extend their life expectancy. The Harmony alternative stated that if people live in accordance with the plan for life, they will live longer. The Subjugation alternative states that each person has a fixed time to live, and nothing done can change that time. The Mastery alternative states that people can and do extend their lives by following new scientific advice. The overall Hutterian preference was Subjugation > Harmony  $\geq$  Mastery. The *Dariusleut*, *Schmiedeleut* and the older group agreed with the rankings of the Total Hutterian group. The *Lehroleut* preferred Subjugation equally with Harmony over Mastery, with no preference statistically significant. The Younger group preferred Subjugation over both Harmony and Mastery, with preference Subjugation over Harmony significant at the .01 level, and Subjugation over Mastery significant at the .01 level.

#### Activity Orientation

The dominant Hutterian Activity Value Orientation profile was Doing over Being, although several respondents stated that on an Hutterian colony, there was a need for Being people too. These respondents gave examples such as the Preacher, Assistant Preacher and others, who had an important colony value just in being, thus reminding other Hutterians of the spiritual realm.

#### A1 and A2 job choice.

This question describes two employers. One paid well, but demanded that workers produce (Doing). The other employer paid less, but was less demanding of

employees (Being). Question A1 asked which employer it would be best to work for, and question 2 asked which employer it would be better to be. The overall Hutterian, *Lehreleut*, and the younger group preferences for A1 were an equal preference for Doing and Being. In A2, the overall Hutterian, *Lehreleut*, and the younger group preferences were for Being over Doing. The *Dariusleut* preferred Being over Doing for both A1 and A2. The *Schmiedeleut* preferred Doing over Being for A1 and A2. The older group preferred Doing over Being for A1, and no preference for either alternative in A2.

### A3 ways of living.

This question asks for a preference between the values of accomplishing things (Doing), and enjoying life (Being). Overall the Hutterian preference was Doing over Being at the .01 level of significance. The *Lehreleut*, *Schmiedeleut*, *Dariusleut*, and the older group preferred Doing over Being, but these preferences were not statistically significant. The younger group preferred Doing over Being at the .05 level of significance.

### A4. care of fields.

This question contrasts two farmers. One works extra hard doing more than necessary (Doing); the other does the minimum and enjoys leisure time (Being). The overall Hutterian preference was Doing over Being at the .005 level of significance. The *Lehreleut*, *Dariusleut*, and both age group preferences were Doing over Being. The *Schmiedeleut* showed no preference for either alternative in this question.

### A5. housework.

This question describes ways women might live. One woman enjoys doing extra work (Doing); the other prefers leisure (being). All groups preferred Doing over Being.

**A6 non-working time.**

This question addresses leisure time specifically. Options include socializing with friends (Being) and learning things to help the work (Doing). All groups preferred Doing over Being, with different groups achieving different levels of statistical significance.

## CHAPTER VI

### Discussion

The purpose of this study was to answer the question: "What is the relationship among value orientations, *Leut* membership, and age of Hutterian women in Canada?" The findings of this study indicate that Canadian Hutterian women have a distinct value orientation profile. Similarities among Hutterian *Leuts* were found to be striking, while differences between *Leuts* were found to be minor. Only subtle differences were found between age groups within *Leuts*.

The identified problem giving rise to this study was a lack of research literature documenting Hutterian women's values. Descriptive literature documenting Hutterian behavior suggested differences between Hutterian and dominant North American ways of doing things. An understanding of value orientations underlying Hutterian women's behavior contributes to a greater understanding of why Hutterians do things the way they do. Nurses and other health care workers, being socialized products of North American society (Tripp-Reimer and Friedl, 1977; DeMay, 1982), may be expected to reflect the values of their parent society to a greater or lesser degree. During interactions with variant cultural groups, therefore, value orientations of the nurse or health care worker may be expected to either conflict or conform with the value orientations of members of the variant cultural group.

The findings of this study indicate that Hutterian women have a strong, distinct value orientation profile. The Hutterian women's dominant value orientation profile (Collateral, Present, Subjugation, Doing) varies in every orientation (Relational, Time, Man-Nature) but one (Activity) from the dominant "core American" profile (Individual, Future, Mastery, Doing) as established by Kluckhohn and Strodtbeck (1961). This study of Hutterian



women's value orientations provides insight into areas of potential harmony as well as areas of potential discord between nurses and other health care workers with Hutterian clients. Understanding the value orientation rankings of Hutterian women contributes to a greater understanding of their behavior.

### Relevance of Hutterian Value Orientations to Health Care

#### Relational Orientation

The Hutterian women's Relational value orientation was Collateral > Lineal > Individual. Thus, Hutterian women relate firstly as members of the Hutterian communal group, secondly as members of a familial line, and lastly as individuals. For an Hutterian, to be individualistic is anathema. One must conform. The whole Hutterian purpose is to lose the individual in the group. This value orientation finding contributes to a greater understanding of how decisions regarding Hutterian health care need to be made at a communal level rather than at an individual level, even after the (Hutterian) client enters a health institution as an individual. Within our health institutions we frequently rush individuals through the decision-making process, thinking that power rests in the individual. For Hutterians, power resides in the group, and perhaps decision-making is the responsibility of the group as well.

Hutterian norms regarding authority patterns are also influenced by this dominantly collateral, alternately lineal, Relational value orientation. These Relational orientation findings provide insight for administrators determining institution/hospital policy in relation to visitation privileges as well (perhaps many members of the colony need to visit their colony member in hospital).

The Relational value orientation findings provide information regarding who Hutterian clients will approach when they need assistance and may indicate appropriate

channels of communication within the Hutterian communities. Health care workers seeking to provide health care to these Hutterian clients must realize that Hutterians may not directly approach the health worker with their health related concerns, but likely will first go to peers within the colony and secondly to an older family member with their concerns. This information also has implications for dissemination of health promotion literature. Perhaps senior members of Hutterian colonies could be provided with health promotion literature to disseminate to colony members as deemed appropriate. Any questions or concerns also could be dealt with through similar appropriate channels of authority within the Hutterian relational value system. Such a strategy may meet with greater success than traditional, individualistic, Canadian health promotion strategies.

### Time Orientation

The Hutterian women's Time value orientation was Present > Past > Future. Thus, Hutterian women focus temporally on: "today". The "here and now" is seen as most important. Their alternate temporal choice is Past, with Hutterian history, ancestry and traditions being held important. The very last Hutterian temporal focus is the Future. This Time orientation finding for Hutterians fits logically with their fundamentalist Christianity. With the future belonging with God, the present is their time to fulfill God's plan for them on earth. The past is valued for establishing the basic tenets of Hutterian faith and lifestyle which have held them in good stead for four hundred years.

This study provides information regarding when Hutterian clients will approach health professionals. With a Present orientation, Hutterians may logically choose to treat illness when they become ill, rather than attempt to prevent something (an illness that may never happen) from occurring. Canadian health promotion strategies are futuristic and have traditionally been poorly incorporated into the Hutterian culture. The Hutterian dominant Time orientation of Present also has significance for nurses and other health care workers

caring for Hutterians during birth and death. The alternate choice of Past as the Hutterian temporal focus provides insight for potential health care methodologies that may be acceptable to Hutterian clients. Perhaps traditions have special meaning for Hutterian clients during particularly vulnerable times like birth, illness or death. Rather than attempt to convert Hutterian clients to the dominant Canadian way of doing things, Canadian nurses need to accept variation and diversity at both personal and program levels.

### Man-Nature Orientation

The Man-Nature orientation findings provide insight for health workers attempting to understand what value health holds for the Hutterian client as well as guidelines for those who attempt to identify health goals and means with Hutterian clients. With subjugation their dominant Man-Nature value orientation, Hutterians are expected to be somewhat fatalistic regarding health/illness, and birth/death. This position may reflect Hutterian religious conviction of God's infinite power over all things. Thus, although they may be expected to participate in their health care through Doing, they may not necessarily expect to master or totally control their health state. Harmony was the alternate choice for Hutterian women in this orientation, indicating that Hutterians are likely to accept and tolerate health and illness conditions and work toward harmony with God and nature in the treatment of health related conditions, but are unlikely to believe they can master or control their health state. Health workers attempting to identify health goals and means need to understand that Hutterians (with mastery over nature as their last choice in the relational orientation) are more likely to value health strategies that accept some degree of uncertainty of outcome, and work toward harmony with God's will and nature.

### Activity Orientation

The Hutterian women's Activity value orientation was Doing  $\geq$  Being. Thus health workers can expect that although Hutterian clients may not expect to ever totally control their health state (because of their Man-Nature orientation), Hutterian clients are likely to choose to become actively involved in self-care. Potential health promotion strategies that may be congruent with these values may include contracting with Hutterian clients to work toward a mutual goal of optimal wellness.

### Relevance to Value Orientation Research

This most recent testing of Kluckhohn's value orientation concept and use of the value orientations profile tool adds to the literature on value orientations by providing value orientation data on another group of Canadian women. In addition, this study served to evaluate the current utility of the tool.

### Hutterian Findings Compared with Other Value Orientation Literature

The Hutterian findings differ from Kluckhohn and Strodtbeck's (1961) findings for the (core American) Mormons and Texans in every dominant orientation preference except Activity. In the Activity orientation, both the core American value orientation (Mormons and Texans) and that of the Hutterians was Doing  $>$  Being.

The Navaho, Zuni, and Hutterian findings for the Relational, Time and Activity orientations were identical in ranking preferences. The only area of difference between these groups was in the Man-Nature orientation where subjugation was first choice for the Hutterians, second choice for the Zuni, and last choice for the Navaho.

The Spanish American findings varied from the Hutterian findings in all but the Man-Nature orientation, with both groups preferring subjugation as their dominant choice.

Caudill and Scarr's (1962) findings for Japanese value orientations compared with Hutterians in the Relational orientation, but varied in both the Time and Man-Nature orientations.

Papajohn and Spiegel's (1975) findings for Puerto Ricans, Greeks, and Italians compared with Hutterians in the Relational orientation where all groups but the Greeks chose Collateral > Lineal > Individual. In the Time orientation, all chose Present as first choice, but groups varied on second and third rankings. All groups chose Subjugation > Harmony > Mastery rankings in the Man-Nature orientation.

Tripp-Reimer and Friedl (1977) tested dominant Appalachian value orientations. Their findings compare with the Hutterian findings for the Time orientation, with both groups selecting present as first choice, and for the Man-Nature orientation, with both groups selecting subjugation as dominant choice.

Egeland's findings (1978) for the Bahamians, Cubans, Haitians, Puerto Ricans, and Southern Blacks all compare with Hutterian findings of Present as first preference in the Time orientation. Second time preferences varied. All groups selected Doing > Being as their Activity preference except for the Southern Blacks. The Bahamians, Haitians, and Southern Blacks compared with the Hutterians in choosing Subjugation as their first preference in the Man-Nature orientation; other groups contrasted. None of the groups studied by Egeland compared with the Hutterians in the Relational orientation.

DeMay's (1982) findings for U.S.A.F. Officers and Pilipino residents compared with the Hutterian findings in the dominant choice of Present as first Time preference and in the

selection of Doing > Being in the Activity orientation. Other orientation findings for the three groups differed.

Brink's (1984) findings for the Annang compared with the Hutterian findings for the dominant choice of Collateral in the Relational orientation for the Annang, male and female groups, and the Hutterians. Second preferences in this orientation differed. Present was the first Time choice for the Annang as well as the Hutterians and Man-Nature preference rankings of Subjugation > Harmony > Mastery compared for the Annang and the Hutterians.

Burke and Maloney (1986) studied four groups of Canadian women: Maternal & Child health (MCH) nurses, European/Canadian women, rural Cree women, and urban Cree women. The value orientation findings for these four groups of Canadian women show interesting similarities with the value orientation findings for the Canadian Hutterian women. Both the rural and urban Cree women compare with Hutterian women in preferring Collateral > Lineal > Individual for the Relational value orientation modality. Collateral was also the MCH nurses' and Euro/Canadian women's alternate Relational choice. All groups preferred Present as the dominant preference for Time. All groups favored Doing > Being in the Activity orientation. All of the Canadian women's groups chose Mastery as the last choice in the Man-Nature orientation, with Hutterians and MCH nurses selecting Subjugation as first choice, and the other three groups selecting Harmony as first choice. The similarities between the findings of these two Canadian studies gives rise to new questions. Do these value orientation profile similarities hold true for other Canadian women as well? Do these findings indicate that there is something special about being a woman in Canada that distinguishes one and one's values from others? What is the Canadian women's value orientation profile? Do Canadian women's values differ from Canadian men's values? Are Canadian value orientations different from the core American

value orientations as established by Kluckhohn and Strodtbeck (1961)? These and other questions such as effect of place of residence, and context (Burke, Kisilevsky, and Maloney 1989) can only be answered through further value orientation research with other groups. Only then will we be able to better understand reasons underlying people's behavior, and be better able to work within people's value systems toward optimal health care.

### Utility of the VOP Tool

Findings from this Hutterian study support the utility of Kluckhohn's concept of value orientation and the VOP tool. The generality of the questions posed no threat to Hutterian propriety, nor did questions induce defensive resistance. The third person wording of both situations and solutions in the tool was found appropriately projective to elicit Hutterian value orientations.

The VOP tool was found to identify a strong core Hutterian value orientation profile which accurately reflected the Hutterian reality suggested in descriptive Hutterian literature. The VOP tool was able to identify not only the obvious similarities, but also subtle differences among and between Hutterian *Leuts* and age groups.

The VOP was developed and tested in North America and may reflect certain unintentional American ethnocentricities in either phraseology or meaning. Certain terms or phrases used in the VOP may hold special meaning for certain minority cultural groups. Examples of such words are "Boss" and "brother" for the Hutterians. The word Boss is the English word used to refer to that person on the colony charged with the responsibility of secular things. The word brother is the English translation for "*bruder*" and is a term used by Hutterians in reference to "spiritual brothers in Christ" as well as males of the same parentage. When using the VOP tool, in either an English version or in translated form the

researcher must be aware of such special word meanings for the research population. Despite such terminology concerns, however, the Hutterian findings did not indicate any confusion on the part of Hutterians as to intended meanings. Findings of this study validated previous descriptive studies and suggested possible reasons underlying Hutterian behavior in certain situations (Schludermann & Schludermann, 1971; Hostetler & Huntington, 1965).

Certain concepts may be interpreted differently in different cultures and variant cultures may not perfectly fit the VOP classification scheme. One possible example is that of Time: which has Past, Present, and Future dimensions in the VOP tool. For Hutterians, Time is also viewed dually. Secular things (created and material objects) are temporal and transitory; they pass away. Sacred things (God, God's word, and people's souls) are eternal and never-ending (Hostetler & Huntington, 1965). Thus, if the respondent's true response should reflect timelessness, questions requiring a ranking of Past, Present or Future might not reflect all the complexities of Time as a value for the respondent. Although the ideal tool has not yet been created, researchers need to be aware of cultural ethnocentricities inherent in the tools they use.

This VOP tool was found to present little or no difficulty in participant comprehension in a population with a grade eight education ceiling. These findings support the use of the VOP tool in other populations with a low reading level.

This study needs to be replicated with other Hutterian colonies as well as other cultural groups (especially Canadian women) to ascertain similarities. Cultural assessment tools such as the VOP need to be continually used to determine current relevance, reliability, and validity with variant populations.



### Relevance of Hutterian Value Orientations to Other Hutterian Literature

This Hutterian study provides a deeper understanding of previous descriptive Hutterian literature. One example was Adams and Leverland's (1986) report that Anabaptists forbid contraception and abortion. An understanding of collateral Hutterian Relational values clearly helps us to recognize that Hutterians would place individual, personal, needs last, and the needs of the group for procreation first. In addition, understanding that Hutterians' Man-Nature value orientation ranking was Subjugation > Harmony > Mastery helps us understand that the Hutterian client is working within a fatalistic value system. If it is God's will that one should become pregnant, then the only thing to do is to comply with God's will. Anything else would oppose the will of God!

The clear preference for Present > Past ≥ Future Time value orientation ranking supports the published literature describing Hutterian persecution, passivity, and religious identity. Hutterian lifestyle, although strongly rooted in the past, is also very pragmatic with the strongly Present oriented agriculture-based economy reported in the literature (Ryan, 1977). Hutterians, although very conscious of God's will in their lives, also know their place within God's plan, and actively do all they can to fulfill His will. Thus, work truly integrates and unifies colony members by uniting Hutterians in actively living out their values (Hostetler, 1974). This study then, has served to add understanding to previously published, descriptive, Hutterian literature by serving to quantify underlying values influencing Hutterian behavior.

Subtle differences were found between the *Leuts* regarding Time preferences. These differences included: the *Dariusleut* chose Present equally with Past as dominant preference over Future and the *Schmiedeleut* chose Present as dominant preference, but

chose both Past and Future equally as alternate preference. This finding supports the descriptive literature reporting variation in *Leut* acceptance of modernity.

### Accessing the Hutterians as a Research Population

The Hutterian Relational orientation findings provide valuable information regarding gaining access to Hutterian clients. In order to approach Hutterian colony members, one needs to go through the proper channels. Within the male dominated Hutterian society, senior male colony members need to be consulted first. For secular matters, access must be gained through the colony steward or Boss. For matters considered sacred, access must be gained through the colony Preacher, who may confer with the Assistant Preacher and German Teacher. Importantly, to access Hutterian women, one must gain permission through Hutterian men! In this study I was delayed access to the *Lehreleut* women until I had gone through all the proper male channels of authority on the colony. The *Lehreleut* women interpreted this delay as totally appropriate. Community health nurse educators attempting to access Hutterian clients through culturally appropriate channels could develop more effective access strategies with a better understanding of Hutterian Relational values.

In addition, within Hutterian society, relationships are influenced by concepts of time, life stage, age, junior, and senior. I was allowed access to all the women because of my marital status and age. Had I been single and/or younger, I may not have had the same ease of access to married and/or older women. The Hutterian tendency to relate to the collateral group resulted in the need to classify me somewhere within a group, rather than to relate to me as an individual. Hence, I was introduced to women of my age group and was accorded a place at table with the women according to my age. Determining which women's age category I belonged to was done deliberately by both the male elders as well as the female elders, by direct questioning about both my own and my children's ages.

Ease of access was also facilitated by sensitivity to accepted Hutterian dress codes. Wearing a long dark skirt and dark jacket brought approving comments from numerous women and stimulated other topics of conversation: those of sewing and choice of fabrics. Indeed, at the *Schmiedeleut* colony, during the group interview, a travelling fabric merchant arrived for his annual colony visit to sell his fabrics. He was made to wait until we had finished. After the interviews had all been completed, we had coffee and pastries; then I was invited to peruse the fabrics for possible selection along with the colony women.

Religious sensitivity was also a bond. Biblical quotations are frequently used in everyday Hutterian conversation, perhaps to admonish children, or to comment on some observation. Faith and familiarity of scripture brought greater acceptance and trust than any other personal qualification in gaining and maintaining access. One Hutterian woman called Susie stated, "You know, trust is one of the most important things in the world today. But we have to be really careful. You never know now a days; we've had some bad experiences". For this religious minority, religious sensitivity was crucial for a researcher interested in a study on value orientations.

Similarity of interests and hobbies, like cooking and sewing, also contributed to greater openness and sharing with Hutterian women. Conversations regarding sewing quickly led to visits to Hutterian women's homes and bedrooms to view their current and recently completed sewing projects. At another visit, conversations centered on cooking, recipes, and baking for religious festivals. Exchanges of favorite recipes resulted in gifts of baking and proud tours of loaded pantries and storehouses full of the colony's harvest, carefully preserved and packed away by the colony women. Once clearance through the prescribed colony access channels had been achieved, I was very warmly welcomed as simply another woman.

### **Implications of Hutterian Value Orientations for Nurses**

At an individual level, nurses and other health professionals sense a need to clarify their own value orientation as they gain an increased understanding of the Hutterian approach to values. An awareness of one's own value orientation contributes to a greater awareness, and easier recognition, of others' value orientations as well. Recognition of similarities can lead to identification of cultural kin, while identification of contrasts can provide insight into areas of potential conflict between individual nurses and their clients. Information by itself, however, means little until it is used in nursing practice. Increased personal awareness of one's own value orientation should hopefully develop into cultural sensitivity. Value orientations as a concept and as an assessment tool provides a structure which can provide an orderly understanding of peoples' values, rather than mere well-intentioned, but erratic individual attempts to understand variant behavior which is based on variant values. A personal awareness of values and value orientation can then develop into cultural sensitivity in nursing personnel as well as nursing programs. Nurse-(Hutterian) client communication regarding client needs could be facilitated by a greater understanding and tolerance of Hutterian values. Nurses need to work toward health programs that are less value-laden. Health programs currently in place also need to be assessed for cultural bias and value ethnocentricity.

At a (nursing profession) group level, cross cultural research in any discipline validates theory building in the discipline. Cross cultural nursing research of values and value orientations allows for comparisons and contrasts of the different aspects of the role played by values in relation to health and health behavior. There is a need for further nursing research of values and value orientations in order to generate hypotheses which could then be tested in different settings. Presently this is done too infrequently.

### **Implications of Hutterian Value Orientations for Society**

Implications at a societal level can also be felt. The Hutterians form a distinct cultural group which is neither less nor more developed than the dominant Canadian culture. One implication for the Canadian health system as well as the larger society, is the need to meet the needs of the community, rather than expect minority groups to convert to the dominant system. Societal leaders need to critically examine Canadian laws influencing Canada's social system, as well as Canada's health care system, to ensure that the principles underlying these institutions are tolerant and accepting of cultural pluralism. Canada is a flagship in holding a national policy on multiculturalism. Being challenged by the values of variant cultural groups such as the Hutterians, provides an ideal opportunity for Canadians to examine Canadian norms and to consider what the Canadian social order is, as well as what it ought to be.

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**APPENDIX A****Permission to Access Colony Women Form**

**PROJECT TITLE: Value Orientations of Hutterian Women in Canada**

The purpose of this study is to record the values and beliefs of Hutterian women. This information will be shared with health workers so that nursing care can better fit the Hutterian way of doing things.

I \_\_\_\_\_ agree to allow Mrs. Gushuliak to enter our colony to do a research study about Hutterian women's values. I understand that Mrs. Gushuliak will talk to colony people about her study. Group interviews will be held with some women who are willing to answer questionnaires.

I understand that the women in the colony may refuse to answer any question, and that they are free to ask any questions at any time. I also understand that I may ask Mrs. Gushuliak to stop the study or leave the colony at any time.

I understand that no colony members need to talk with Mrs. Gushuliak, or answer the questionnaire, unless they want to. Also, colony members can withdraw from the study at any time without penalty. They, or I, simply tell Mrs. Gushuliak that they want to withdraw.

I understand that the information from this study may be published or presented at conferences, but colony names or names of colony people will not be mentioned or written in the publications.

I further understand that the information from this study may be re-examined by Mrs. Gushuliak and/or her assistants at a later date. In that case the names and locations of the

I further understand that the information from this study may be re-examined by Mrs. Gushuliak and/or her assistants at a later date. In that case the names and locations of the colony and the colony people will be protected, and the new project will need to be examined and approved by ethics review committees.

I understand that there will be no harm or direct benefit to me or the colony members by participating in this research.

I have been given the chance to ask any questions I have about the study and all such questions have been answered to my satisfaction.

I have crossed out any part of this form which I do not agree with, and have been given a copy of this form.

_____	_____
Colony Minister	Witness
_____	_____
Researcher	Date

Researcher: Terry Gushuliak, Graduate Student  
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 3-120 Clinical Sciences Building  
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 Edmonton, Alberta  
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## **APPENDIX B**

### **Verbal Explanation of the Research Study**

**My name is Terry Gushuliak. I am doing a research study about Hutterian women's values. The information will help nurses understand how to give better health care to Hutterian women. As part of this study, I would like to ask Hutterian women to complete a questionnaire.**

**This questionnaire is not a test. There are no "right" answers. I would like you to answer the way you feel is best.**

**This questionnaire has 23 questions. Each question has 3 possible answers. You are to choose the best and second best answer. Please do not mark your name or any other identifying marks on the questionnaire.**

**This questionnaire will take about 30 minutes to finish. At any time if you do not wish to answer a question, you may refuse to do so. You may stop any time you wish.**

**Do you have any questions?**

**Would you be willing to answer a questionnaire?**

**Can we continue?**

## APPENDIX C

## Value Orientations Schedule

AGE (in years) \_\_\_\_\_

1. Job Choice \_\_\_\_\_ *activity: Items A1 and A2*

A person needed a job and had a chance to work for two bosses. The two bosses were different. Listen to what they were like and say which you think would be the best one to work for.

A. (Doing) One boss was fair enough, and gave somewhat higher pay than most, but insisted that people work hard, stick on the job. This boss did not like it at all when a worker sometimes just knocked off work for a while to go on a trip or to have a day or so of fun, and thought it was right not to take such a worker back on the job.

B. (Being) The other paid just average wages but was not so firm. The second boss understood that a worker would sometimes just not turn up - would be off on a trip or having a little fun for a day or two. When workers did this the second boss would take them back without saying too much.

Which of these do you believe that it would be better to work for in most cases?

\_\_\_\_\_

Which kind of boss do you believe that it is better to be in most cases? \_\_\_\_\_

2. Well Arrangements \_\_\_\_\_ *relational: Item R1*

When a community has to make arrangements for water, such as drill a well, there are three ways they can decide to arrange things like location, and who is going to do the work.

A. (Lin) There are some communities where it is mainly the older or recognized leaders of the important families who decide the plans. Everyone usually accepts what they say without much discussion since they are the ones who are used to deciding such things and are the ones who have had the most experience.

B. (Coll) There are some communities where most people in the group have a part in making plans. Lots of different people talk, but nothing is done until *almost* everyone comes to agree as to what is best to be done.

C. (Ind) There are some communities where everyone holds to his own opinion, and they decide the matter by vote. They do what the largest number want, even though there are still many people who disagree and object to the action.

Which way do you think is usually best in such cases? \_\_\_\_\_

Which of the other two ways do you think is better? \_\_\_\_\_

### 3. Child Training \_\_\_\_\_ time : Item T1

Some people were talking about the way children should be brought up. Here are three different ideas.

A. (Past) Some people say that children should always be taught well the traditions of the past (the ways of the old people). They believe the old ways are best, and that it is when children do not follow them too much that things go wrong.

B. (Pres) Some people say that children should be taught some of the old traditions (ways of the old people), but it is wrong to insist that they stick to these ways. These people believe that it is necessary for children to learn about and take on whatever of the new ways will best help them get along in the world of today.

C. (Fut) Some people do not believe children should be taught much about past traditions (the ways of the old people) at all, except as an interesting story of what has gone before. These people believe that the world goes along best when children are taught the things that will make them want to find out for themselves new ways of doing things to replace the old.

Which of these people had the best idea about how children should be taught?

\_\_\_\_\_

Which of the other two people had the better idea? \_\_\_\_\_



4. **Livestock Dying** \_\_\_\_\_ *man-nature* : Item MN1

One time a person had a lot of livestock. Most of them died off in different ways. People talked about this and said different things.

A. (Subj) Some people said you just can't blame the owner when things like this happen. There are so many things that can and do happen, and an owner can do almost nothing to prevent such losses when they come. We all have to learn to take the bad with the good.

B. (Mast) Some people said that it was probably the owner's own fault that so many were lost. The owner probably didn't think to prevent the losses. They said that it is usually the case that owners who keep up on new ways of doing things, and really set themselves to it, almost always find a way to keep out of such trouble.

C. (Har) Some people said that it was probably because the owner had not lived life right - had not done things in the right way to keep harmony with the forces of nature.

Which of these reasons do you think is most usually true? \_\_\_\_\_

Which of the other two reasons do you think is more true? \_\_\_\_\_

5. Expectations about Change \_\_\_\_\_time : Item T2

**(a.20 - 40 Age Group )**

Three young people were talking about what they thought their families would have one day as compared with their fathers and mothers. They each said different things.

C. (Fut) The first said: I expect my family to be better off in the future than the family of my father and my mother or relatives if we work hard and plan right. Things in this country usually get better for people who really try.

B. (Pres) The second one said: I don't know whether my family will be better off, the same, or worse off than the family of my father and mother or relatives. Things always go up and down even if people do work hard. So, one can never really tell how things will be.

A. (Past) The third one said: I expect my family to be about the same as the family of my father and mother or relatives. The best way is to work hard and plan ways to keep up things as they have been in the past.

Which of these people do you think had the best idea? \_\_\_\_\_

Which of the other two persons had the better idea? \_\_\_\_\_

**(b. 40 - up Age Group )**

Three older people were talking about what they thought their children would have when they were grown. Here is what each one said.

C. (Fut) One said: I really expect my children to have more than I have had if they work hard and plan right. There are always good chances for people who try.

B. (Pres) The second one said: I don't know whether my children will be better off, worse off, or just the same. Things always go up and down even if one worked hard, so we can't really tell.

A. (Past) The third one said: I expect my children to have just about the same as I have had or bring things back as they once were. It is their job to work hard and find ways to keep things going as they have been in the past.

Which of these people do you think had the best idea? \_\_\_\_\_

Which of the other two persons had the better idea? \_\_\_\_\_

6. Facing Conditions \_\_\_\_\_ *man-nature* : Item MN2

There are different ways of thinking about how God is related to people and to weather and all other natural conditions which make the crops and animals live or die. Here are three possible ways.

C. (Har) God and people all work together all the time; whether the conditions which make the crops and animals grow are good or bad depends upon whether people themselves do all the proper things to keep themselves in harmony with God and with the forces of nature.

B. (Mast) God does not directly control all the conditions which affect the growth of crops or animals. It is up to the people themselves to figure out the ways conditions change and to try hard to find the ways of controlling them.

A. (Subj) Just how God will use power over all the conditions which affect the growth of crops and animals cannot be known. But it is useless for people to think they can change conditions very much for very long. The best way is to take conditions as they come and do as well as one can.

Which of these ways of looking at things do you think is best? \_\_\_\_\_

Which of the other two ways do you think is better? \_\_\_\_\_

7. Help in Misfortune \_\_\_\_\_ *relational* : Item R2

A person had a crop failure, or, let us say, had lost many sheep or cattle. The family had to have help from someone if they were going to get through the winter. There are different ways of getting help. Which of these three ways would be best?

B. (Coll) Would it be best if people depended mostly on brothers or sisters or other relatives all to help out as much as each one could?

C. (Ind) Would it be best for people to try to raise the money on their own outside the community from people who are neither relatives nor employers?

A. (Lin) Would it be best to go to a boss or to an older important relative who is used to managing things in the group, and ask for help until things get better?

Which way of getting help do you think would usually be best? \_\_\_\_\_

Which way of getting help do you think is next best? \_\_\_\_\_

Which way do you think you yourself would really follow? \_\_\_\_\_

8. Family Work Relations \_\_\_\_\_ *relational* : Item R3

I'm going to tell you about three different ways families can arrange work. These families are related and they live close together.

C.(Ind) In some groups (or communities) it is usually expected that each of the separate families (by which we mean just husband, wife, and children) will look after its own business separate from all others and not be responsible for the others.

B. (Coll) In some groups (or communities) it is usually expected that the close relatives in the families will work together and talk over among themselves the way to take care of whatever problems come up. When a boss is needed they usually choose (get) one person, not necessarily the oldest able person, to manage things.

A.(Lin) In some groups (or communities) it is usually expected that the families which are closely related to each other will work together and have the oldest able person be responsible for and take charge of most important things.

Which of these ways do you think is usually best in most cases? \_\_\_\_\_

Which of the other two ways do you think is better? \_\_\_\_\_

9. Choice of Delegate \_\_\_\_\_ *relational: Item R4*

A community like yours is to send a delegate - a representative - to a meeting away from here (this can be any sort of meeting). How will this delegate be chosen?

\_\_\_\_\_

B. (Coll) Is it best that a meeting be called and everyone discuss things until almost everyone agrees so that when a vote is taken almost all people would be agreed on the same person? \_\_\_\_\_

A. (Lin) Is it best that the older, important, leaders take the main responsibility for deciding who should represent the people since they are the ones who have had the long experience in such matters? \_\_\_\_\_

C. (Ind) Is it best that a meeting be called, names be put up, a vote be taken, then send the person who gets the majority of votes even if there are many people who are still against this person?

Which of these ways of choosing is usually best in cases like this? \_\_\_\_\_

Which of the other two ways is usually better? \_\_\_\_\_

10. Use of Fields \_\_\_\_\_ *man-nature* : Item MN3

There were three people who were farmers. The three people had quite different ways of planting and taking care of crops.

C. (Har) One put in crops, worked hard, and also tried to live in right and proper ways. This first person felt that it is the way a person works and tries to keep in harmony with the forces of nature that has the most effect on conditions and the way crops turn out.

A. (Subj) The second put in crops, then worked on them sufficiently but did not do more than was necessary to keep them going along. This person felt that it mainly depended on weather conditions as to how crops would turn out, and that nothing extra that people do could change things much.

B. (Mast) The third put in crops and then worked on them a lot of time, making use of all the new scientific ideas. This person felt that by doing so, in most years many of the effects of bad conditions would be prevented.

Which of these ways do you believe is usually best? \_\_\_\_\_

Which of the other two ways do you believe is better? \_\_\_\_\_

11. Philosophy of Life \_\_\_\_\_ *time* : Item T3

People often have very different ideas about what has gone before and what we can expect in life. Here are three ways of thinking about these things.

B. (Pres) Some people believe it is best to give most attention to what is happening now in the present. They say that the past has gone and the future is much too uncertain to count on. Things do change, but it is sometimes for the

better and sometimes for the worse, so in the long run it is about the same. These people believe the best way to live is to keep those of the old ways that one can - or that one likes - but to be ready to accept the new ways which will help to make life easier and better as we live from year to year.

A. (Past) Some people think that the ways of the past (ways of the old people or traditional ways) were the most right and the best, and as changes come, things get worse. These people think the best way to live is to work hard to keep up the old ways and try to bring them back when they are lost.

C. (Fut) Some people believe that it is almost always the ways of the future - the ways which are still to come - which will be best, and they say that even though there are sometimes small setbacks, change brings improvements in the long run. These people think the best way to live is to look a long time ahead, work hard, and give up many things now so that the future will be better.

Which of these ways of looking at life do you think is better? \_\_\_\_\_

Which of the other two ways do you think is better? \_\_\_\_\_

12. Wage Work \_\_\_\_\_ *relational* : Item R5

There are three ways in which people who do not themselves hire others may work.

C. (Ind) One way is working on one's own as an individual. In this case a person is pretty much their own boss. People decide most things on their own, and how they get along is their own business. People have to take care of themselves and don't expect others to look out for them.



B. (Coll) One way is working in a group where all work together without there being one main boss. Everyone has something to say in the decisions that are made, and all can count on each other.

A. (Lin) One way is working for an owner, a big boss, or a person who has been running things for a long time. In this case, the people do not take part in deciding how the business will be run, but they know they can depend on the boss to help them out in many ways.

Which of these ways is usually best for a person who does not hire others?

\_\_\_\_\_

Which of the other two ways is better for a person who does not hire others?

\_\_\_\_\_

13. Belief in Control \_\_\_\_\_ *man-nature* : Item MN4

Three people from different areas were talking about the things that control the weather and other conditions. Here is what they each said.

A. (Subj) One said: My people have never controlled the rain, wind, and other natural conditions and probably never will. There have always been good years and bad years. That is the way it is, and if you are wise you will take it as it comes and do the best you can.

B. (Mast) The second said: My people believe that it is our job to find ways to overcome weather and other conditions just as they have overcome so many things. They believe they will one day succeed in doing this and may even overcome drought and floods.

C. (Har) The third said: My people help conditions and keep things going by working to keep in close touch with all the forces which make the rain, the snow, and other conditions. It is when we do all the right things - live in the proper way - and keep all that we have - the land, the stock, and the water - in good condition, that all goes well.

Which of these people do you think had the best idea? \_\_\_\_\_

Which of the other two people do you think had the better idea? \_\_\_\_\_

14. Ceremonial Innovation \_\_\_\_\_ time : Item T4

Some people in a community like your own saw that the religious ceremonies (the church services) were changing from what they used to be.

C. (Fut) Some people were really pleased because of the changes in religious ceremonies. They felt that new ways are usually better than old ones, and they like to keep everything - even ceremonies - moving ahead.

A. (Past) Some people were unhappy because of the change. They felt that religious ceremonies should be kept exactly - in every way - as they had been in the past.

B. (Pres) Some people felt that the old ways for religious ceremonies were best, but you just can't hang on to them. It makes life easier just to accept some changes as they come along.

Which of these three said most nearly what you would believe is right? \_\_\_\_\_

Which of the other two do you think is more right? \_\_\_\_\_

15. Ways of Living \_\_\_\_\_ *activity* : Item A3

There were two people talking about how they liked to live. They had different ideas.

A. (Doing) One said: What I care about most is accomplishing things - getting things done just as well or better than other people do them. I like to see results and think they are worth working for.

B. (Being) The other said: What I care about is to be left alone to think and act in the ways that best suit the way I really am. If I don't always get much done but can enjoy life as I go along, that is the best way.

Which of these two persons do you think has the better way of thinking? \_\_\_\_\_

Which of the two do you think you are more like? \_\_\_\_\_

16. Livestock Inheritance \_\_\_\_\_ *relational* : Item R6

Some sons and daughters have been left some livestock (sheep or cattle) by a father or mother who has died. All these sons and daughters are grown up, and they live near each other. There are three different ways they can run the livestock.

A. (Lin) In some groups of people it is usually expected that the oldest able person (son or daughter) will take charge of, or manage, all the stock held by all of them.

C. (Ind) In some groups of people it is usually expected that each of the sons and daughters will prefer to take his or her own share of the stock and run his or her own business completely separate from the others.

B. (Coll) In some groups of people it is usually expected that all the sons and daughters will keep all their cattle and sheep together and work together and decide things among themselves who is best able to take charge of things, not necessarily the oldest, when a boss is needed.

Which way do you think is usually best in most cases? \_\_\_\_\_

Which of the other two ways do you think is better? \_\_\_\_\_

17. Land Inheritance \_\_\_\_\_ *relational* : Item R7

Now I want to ask a similar question concerning farm and grazing land instead of livestock.

Some sons and daughters have been left some farm and grazing land by a father or mother who has died. All these sons and daughters are grown and live near each other. There are three ways they can handle the property.

A. (Lin) In some groups of people it is usually expected that the oldest able person will take charge of or manage the land even if they all share it.

C. (Ind) In some groups of people it is usually expected that each son and daughter will take his or her own share of the land and do with it what he or she wants - separate from the others.

B. (Coll) In some groups of people it is usually expected that all the sons and daughters will make use of the land together. When a boss is needed, they all get together and agree to choose someone of the group, not necessarily the oldest, to take charge of things.

Which of these ways do you think is usually best in most cases? \_\_\_\_\_

Which of the other two ways do you think is better? \_\_\_\_\_

18. Care of Fields \_\_\_\_\_ *activity* : Item A 4

There were two farmers (People with fields). They lived differently.

B. (Being) One kept the crops growing all right but didn't work on them more than necessary, wanting extra time to visit with friends, go on trips, and enjoy life.

A. (Doing) One liked to work in the fields and was always putting in extra time keeping them clean of weeds and in fine condition. Because of this extra work, not much time was left to be with friends, to go on trips, or for enjoyment in other ways.

Which kind of farmer do you believe it is better to be? \_\_\_\_\_

19. Length of Life \_\_\_\_\_ *man-nature* : Item MN5

Three people were talking about whether people themselves can do anything to make the lives of men and women longer. Here is what each said.

B. (Mast) One said: It is already true that people like doctors and others are finding the way to add many years to life by discovering (finding) new medicines, by studying foods, and doing other such things as vaccinations. If people will pay attention to all these new things they will almost always live longer.

A. (Subj) The second one said: I really do not believe that there is much human beings can do to make the lives of men and women longer. It is my belief that every person has a set time to live, and when that time comes it just comes.

C. (Har) The third one said: I believe that there is a plan to life which works to keep all living things moving together, and if men and women will learn to live their whole lives in accord with that plan, they will live longer.

Which of these three said most nearly what you would think is right? \_\_\_\_\_

Which of the other two ways is more right? \_\_\_\_\_

20. Water Allocation \_\_\_\_\_ time : Item T5

The government is going to help a community like yours to get more water by re-drilling and cleaning out a community well. The government officials suggest that the community should have a plan for dividing the extra water, but don't say what kind of plan. Since the amount of extra water that may come in is unknown, people feel differently about planning.

A. (Past) Some say that whatever water comes in should be divided just about like water in the past was always divided.

C. (Fut) Others want to work out a really good plan ahead of time for dividing whatever water comes in.

B. (Pres) Still others want to just wait until the water comes in before deciding on how it will be divided.

Which of these ways do you think is usually best in cases like this? \_\_\_\_\_

Which of the other two ways do you think is better? \_\_\_\_\_

21. Housework \_\_\_\_\_ activity : Item A6

There were two women talking about the way they liked to live.

B. (Being) One said that she was willing to work as hard as the average, but that she didn't like to spend a lot of extra time doing the kind of extra things in her house or taking up extra activities outside. Instead she liked to have free time to enjoy visiting with people - to go on trips - or to just talk with whoever was around.

A. (Doing) The other woman said she liked best of all to find extra things to work on which would interest her. She said she was happiest when kept busy and getting lots done.

Which of these ways do you think it is usually better for women to live? \_\_\_\_\_

Which woman are you really more like? \_\_\_\_\_

22. Nonworking Time \_\_\_\_\_ activity : Item A6

Two people spend their time in different ways when they have no work to do.

(This means when they are not actually on the job.)

A. (Doing) One person spends most of this time learning or trying out things which will help the work.

B. (Being) The other person spends most of this time talking, telling stories, singing, and so on with friends.

Which of these people has the better way of living? \_\_\_\_\_

Which do you think you are more like? \_\_\_\_\_

23. Inheritance of Personal Property \_\_\_\_\_ *relational* :Item R8

Now I want to ask a question concerning personal belongings such as a chest containing one's own things.

Some sons and daughters have been left a personal chest by a father or mother who has died. All these sons and daughters are grown and live near each other. Here are three ways they can handle this personal property.

A. (Lin) In some groups of people it is usually expected that the oldest able person will take charge of, or manage, the disposal of personal property such as this chest - even if all the sons and daughters share it.

C. (Ind) In some groups of people it is usually expected that each son and daughter will take his or her own share in the inheritance (such as the chest) and do with it what he or she wants - separate from the others.



**B. (Coll) In some groups of people it is usually expected that all the sons and daughters will make use of the personal property (such as the chest) together. When a boss is needed, they all get together and agree to choose someone of the group, not necessarily the oldest, to take charge of that personal property.**

**Which of these ways do you think is usually best in most cases? \_\_\_\_\_**

**Which of the other two ways do you think is better? \_\_\_\_\_**

## APPENDIX D

DATA ANALYSIS  
TOTAL HUTTERIAN SAMPLE (3 GROUPS)

KENDAL'S S STATISTIC FOR TOTAL ITEM PATTERNING  
\*\*\*\*\*

FOR HUTTERIAN RELATIONAL TABLE

## OBSERVED SUMS

112 81 95 70 102 116 89 63 136 88 100 199 96 75 117 110 55 123

## EXPECTED SUM = 96

## EXPECTED - OBSERVED

-16 15 1 26 -6 -20 7 33 -40 8 -4 -4 0 21 -21 -14 41 -27

## SQUARED DIFFERENCE

256 225 1 676 36 400 49 1089 1600 64 16 16 0 441 441 196 1681 729

## SUM OF SQUARES

441 1112 2738 96 882 2606

For 48 subjects and: 0.05 level of significance, the critical S = 288.5\*

0.01 level of significance, the critical S = 438.2\*

\*Kluckhohn, F., & Strodtbeck, F. (1973). *Variations in value orientations*. (p. 126).  
Westport, CN: Greenwood Press.

## RAW DATA TABLE

\*\*\*\*\*

ABCABCABCABCABCABC

312231123231123312213231  
 321312213123123312213312  
 312123231132213312312321  
 213132213123213312213321  
 312312123231132123123231  
 213123123132213213213321  
 123123213132321213213132  
 132123213132123213312132  
 123123123123123213132132  
 312132213213123312312321  
 213213321213132123213213  
 312132312213213312010010  
 312231213321321213213231  
 312123213231213312312123  
 312132213213213213213321  
 132123123132321213213321  
 213312123312213213213132  
 132123213123213213213123  
 123123123231321213123213  
 132123312312132123312213  
 321123123123321213213321  
 321132213213123312213001  
 321231213231312321213231  
 123132213231213213321321

321132123321312321213321  
123123123132132213213231  
321312213321312123213213  
321132123123321213321321  
132132312132123312213231  
312213213213213213213231  
312213213123213213213231  
312213213123213213321231  
231132213321312213312312  
312213213123123213213321  
312123213213213213213213  
123213213321213213213213  
321132213321132213213321  
312123213123312321213123  
321213213321213213213321  
321213123321312213123001  
321132213132213312312123  
213132213213213213321231  
321132312132132312001001  
312231213132321312321123  
123132213321213312312321  
312132213213213213213001  
132213213213213312213321  
312213213321312312213321

## HUTTERIAN RELATIONAL TABLE

	XI	F	FXI	(XI-X)	(XI-X) ^2	F(XI-X) ^2
A > B						
0	3	0	-2.187	4.783	14.355	
1	13	13	-1.187	1.409	18.332	
2	15	30	-0.187	.035	0.527	
3	8	24	0.813	0.661	5.281	
4	7	28	1.813	3.287	22.996	
5	2	10	2.813	7.913	15.82	
6	0	0	3.813	14.539	0	
SUM	48	105			77.313	
MEAN 2.188						
SD 1.283						
SEM 0.185						
A > C						
0	0	0	-4.042	16.338	0	
1	1	1	-3.042	9.254	9.252	
2	6	12	-2.042	4.17	25.01	
3	9	27	-1.042	1.086	9.766	
4	12	48	-0.042	2E-03	0.021	
5	14	70	-0.958	0.918	12.858	
6	6	36	1.958	3.834	23.01	
SUM	481	94			79.917	
MEAN 4.042						
SD 1.304						
SEM 0.185						

B.> C

0	0	0	-4.271	18.241	0
1	0	0	-3.271	10.699	0
2	4	8	-2.271	5.157	20.627
3	7	21	-1.271	1.615	11.305
4	16	64	-0.271	0.073	1.174
5	14	70	0.729	0.531	7.444
6	7	42	1.729	2.989	20.93
SUM	48	205		61.479	

MEAN 4.271

SD 1.144

SEM 0.165

T-TEST

A > B T= -4.389

A > C T= 5.632

B > C T= 7.703

# **BINOMIAL ANALYSIS OF HUTTERIAN RELATIONAL TABLE**

## **QUESTION 1**

**A < B AT THE .01 LEVEL**

A CHOSEN OVER B 14 TIMES; B CHOSEN OVER A 34 TIMES

**A = C AT THE .01 LEVEL**

A CHOSEN OVER C 18 TIMES; C CHOSEN OVER A 30 TIMES

**B = C AT THE .01 LEVEL**

B CHOSEN OVER C 29 TIMES; C CHOSEN OVER B 19 TIMES

**QUESTION 2****A > B AT THE .01 LEVEL****A CHOSEN OVER B 34 TIMES; B CHOSEN OVER A 14 TIMES****A > C AT THE .001 LEVEL****A CHOSEN OVER C 40 TIMES; C CHOSEN OVER A 8 TIMES****B = C AT THE .01 LEVEL****B CHOSEN OVER C 28 TIMES; C CHOSEN OVER B 20 TIMES****QUESTION 3****A < B AT THE .005 LEVEL****A CHOSEN OVER B 13 TIMES; B CHOSEN OVER A 35 TIMES****A > C AT THE .001 LEVEL****A CHOSEN OVER C 42 TIMES; C CHOSEN OVER A 6 TIMES****B > C AT THE .001 LEVEL****B CHOSEN OVER C 46 TIMES; C CHOSEN OVER B 2 TIMES****QUESTION 4****A = B AT THE .01 LEVEL****A CHOSEN OVER B 26 TIMES; B CHOSEN OVER A 22 TIMES****A = C AT THE .01 LEVEL****A CHOSEN OVER C 30 TIMES; C CHOSEN OVER A 18 TIMES****B = C AT THE .01 LEVEL****B CHOSEN OVER C 22 TIMES; C CHOSEN OVER B 26 TIMES****QUESTION 5****A < B AT THE .01 LEVEL****A CHOSEN OVER B 14 TIMES; B CHOSEN OVER A 24 TIMES****A > C AT THE .01 LEVEL****A CHOSEN OVER C 34 TIMES; C CHOSEN OVER A 14 TIMES****B > C AT THE .005 LEVEL**

**B CHOSEN OVER C 35 TIMES; C CHOSEN OVER B 13 TIMES**

**QUESTION 6**

**A < B AT THE .001 LEVEL**

**A CHOSEN OVER B 4 TIMES; B CHOSEN OVER A 44 TIMES**

**A = C AT THE .01 LEVEL**

**A CHOSEN OVER C 30 TIMES; C CHOSEN OVER A 18 TIMES**

**B > C AT THE .001 LEVEL**

**B CHOSEN OVER C 45 TIMES; ; C CHOSEN OVER B 3 TIMES**

**QUESTION 7**

**A < B AT THE .001 LEVEL**

**A CHOSEN OVER B 3 TIMES; B CHOSEN OVER A 44 TIMES**

**A = C AT THE .01 LEVEL**

**A CHOSEN OVER C 32 TIMES; C CHOSEN OVER A 15 TIMES**

**B > C AT THE .001 LEVEL**

**B CHOSEN OVER C 40 TIMES; ; C CHOSEN OVER B 8 TIMES**

**QUESTION 8**

**A = B AT THE .01 LEVEL**

**A CHOSEN OVER B 17 TIMES; B CHOSEN OVER A 26 TIMES**

**A < C AT THE .01 LEVEL**

**A CHOSEN OVER C 12 TIMES; C CHOSEN OVER A 32 TIMES**

**B < C AT THE .01 LEVEL**

**B CHOSEN OVER C 13 TIMES; ; C CHOSEN OVER B 35 TIMES**



# **KENDAL'S STATISTIC FOR TOTAL ITEM PATTERNING**

\*\*\*\*\*

## **FOR HUTTERIAN TIME TABLE**

### **OBSERVED SUMS**

106 64 118 89 84 115 104 75 109 71 88 129 117 80 91

EXPECTED SUM = 96

### **EXPECTED - OBSERVED**

-10 32 -22 7 12 -19 -8 21 -13 25 8 -33 -21 16 5

### **SQUARED DIFFERENCE**

100 1024 484 49 144 361 64 441 169 625 64 1089 441 256 25

### **SUM OF SQUARES**

**1608     554   674   1778   722**

### **RAW DATA TABLE**

\*\*\*\*\*

**ABCABCABCABC**

**231321312132213**

**213231312312231**

**312213213132213**

**312123312123312**

**312213321213132**

**213123123123321**

**123213123123132**

**123123123123213**

**321213321123321**

**312132312123321**

**123312213213231**

**123132132123312**

312123123123321  
123132213132321  
213231213123213  
123132231213213  
321213132132132  
312123312213321  
321213312123312  
312123231213123  
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312213312132231  
213213321213213  
213312213123312  
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213213321123312  
123213213123213  
213123312213123  
123312312123321  
213213123123312  
213231213123312  
213231213123312  
213213123123231  
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213213132213321  
213213213123321  
123213213123213  
213213123132312  
213213312123213

213231213123213  
 321213312312132  
 312231231213321  
 312132312321312  
 312312312312213  
 312321213312321  
 312321123213321  
 213213312123312  
 321123132312312

# HUTTERIAN TIME TABLE

XI F FXI (XI-X) (XI-X)^2 F(XI-X)^2

A > B

0	3	0	-1.812	3.283	9.855
1	16	16	-0.812	0.659	10.563
2	19	38	0.188	0.035	0.668
3	7	21	1.188	1.411	9.871
4	3	12	2.188	4.787	14.355
5	0	0	3.188	10.163	0

SUM 48 87 45.313

MEAN 1.813

SD 0.982

SEM 0.142

A > C

0	0	0	-3.042	9.254	0
1	5	5	-2.042	4.17	20.842
2	12	24	-1.042	1.086	13.021
3	11	33	-0.042	2E-03	0.019

4	16	64	0.958	0.918	14.694
5	4	20	1.958	3.834	15.34
SUM	48	146		63.917	
MEAN	3.042				
SD	1.166				
SEM	0.142				
B > C					
0	0	0	-3.677	13.447	0
1	1	1	-2.667	7.113	7.111
2	5	10	-1.667	2.779	13.889
3	13	39	-0.667	0.445	5.778
4	19	76	0.333	0.111	2.111
5	10	50	1.333	1.777	17.778
SUM	48	176		46.667	
MEAN	3.667				
SD	0.996				
SEM	0.144				
T-TEST					
A > B	T= -4.838				
A > C	T= 3.817				
B > C	T= 8.104				

# **BINOMIAL ANALYSIS OF HUTTERIAN TIME TABLE**

## **QUESTION 1**

**A < B AT THE .001 LEVEL**

**A CHOSEN OVER B 10 TIMES; B CHOSEN OVER A 38 TIMES**

**A = C AT THE .05 LEVEL**

**A CHOSEN OVER C 28 TIMES; C CHOSEN OVER A 20 TIMES**

**B > C AT THE .001 LEVEL**

**B CHOSEN OVER C 42 TIMES; C CHOSEN OVER B 6 TIMES**

**QUESTION 2**

**A = B AT THE .05 LEVEL**

**A CHOSEN OVER B 21 TIMES; B CHOSEN OVER A 27 TIMES**

**A > C AT THE .01 LEVEL**

**A CHOSEN OVER C 34 TIMES; C CHOSEN OVER A 14 TIMES**

**B > C AT THE .05 LEVEL**

**B CHOSEN OVER C 33 TIMES; C CHOSEN OVER B 15 TIMES**

**QUESTION 3**

**B > A AT THE .05 LEVEL**

**A CHOSEN OVER B 15 TIMES; B CHOSEN OVER A 33 TIMES**

**A = C AT THE .05 LEVEL**

**A CHOSEN OVER C 25 TIMES; C CHOSEN OVER A 23 TIMES**

**B > C AT THE .005 LEVEL**

**B CHOSEN OVER C 36 TIMES; C CHOSEN OVER B 12 TIMES**

**QUESTION 4**

**A = B AT THE .05 LEVEL**

**A CHOSEN OVER B 31 TIMES; B CHOSEN OVER A 17 TIMES**

**A > C AT THE .001 LEVEL**

**A CHOSEN OVER C 42 TIMES; C CHOSEN OVER A 6 TIMES**

**B > C AT THE .001 LEVEL**

**B CHOSEN OVER C 39 TIMES; C CHOSEN OVER B 9 TIMES**

**QUESTION 5**

**A < B AT THE .001 LEVEL**

**A CHOSEN OVER B 10 TIMES; B CHOSEN OVER A 38 TIMES**

**A = C AT THE .05 LEVEL**

A CHOSEN OVER C 17 TIMES; C CHOSEN OVER A 31 TIMES

B = C AT THE .05 LEVEL

B CHOSEN OVER C 26 TIMES; C CHOSEN OVER B 22 TIMES

# KENDAL'S S STATISTIC FOR TOTAL ITEM PATTERNING

\*\*\*\*\*

## FOR HUTTERIAN ACTIVITY TABLE

### OBSERVED SUMS

69 75 77 67 62 82 60 84 60 84 57 87

EXPECTED SUM = 72

### EXPECTED - OBSERVED

3 -3 -5 5 10 -10 12 -12 12 -12 15 -15

### SQUARED DIFFERENCE

9 9 25 25 100 100 144 144 144 144 225 225

### SUM OF SQUARES

18 50 200 288 288 450

### RAW DATA TABLE

\*\*\*\*\*

ABABABABABAB

121221211221

212112121212

212112121212

121221211212

212112121212

212112122112

212112121212

212112121212

212121122112

212112122112  
122121122112  
122121121212  
211212121212  
212112121212  
121212212112  
212112122112  
121221121212  
122112211212  
122121121212  
122112121212  
212112121212  
212112121212  
212121121212  
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121212121212  
121212121212  
212112121212  
121212121212  
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211212122112

122112211212  
 121212211212  
 121212212121  
 121212212121  
 121212211212  
 211221122112  
 212121211212  
 122121212112  
 121221121221  
 212121122121  
 121212121221  
 121212121212

# HUTTERIAN ACTIVITY TABLE

XI F FXI (XI-X) (XI-X)^2 F(XI-X)^2						
A>B						
0	0	0	-3.979	15.832	0	
1	1	1	-2.979	8.874	8.875	
2	3	6	-1.979	3.916	11.751	
3	10	30	-0.979	0.958	9.588	
4	20	80	0.021	0	9E-03	
5	10	50	1.021	1.042	10.421	
6	4	24	2.021	4.084	16.335	
SUM	48	191		56.979		



MEAN 3.979

SD 1.101

SEM 0.159

T - TEST

A > B T = 6.157

#### **BINOMIAL ANALYSIS OF HUTTERIAN ACTIVITY TABLE**

##### **QUESTION 1**

**A = B AT THE .05 LEVEL**

**A CHOSEN OVER B 27 TIMES; B CHOSEN OVER A 21 TIMES**

##### **QUESTION 2**

**A = B AT THE .05 LEVEL**

**A CHOSEN OVER B 19 TIMES; B CHOSEN OVER A 29 TIMES**

##### **QUESTION 3**

**A > B AT THE .01 LEVEL**

**A CHOSEN OVER B 34 TIMES; B CHOSEN OVER A 14 TIMES**

##### **QUESTION 4**

**A > B AT THE .005 LEVEL**

**A CHOSEN OVER B 36 TIMES; B CHOSEN OVER A 12 TIMES**

##### **QUESTION 5**

**A > B AT THE .005 LEVEL**

**A CHOSEN OVER B 36 TIMES; B CHOSEN OVER A 12 TIMES**

##### **QUESTION 6**

**A > B AT THE .001 LEVEL**

**A CHOSEN OVER B 39 TIMES; B CHOSEN OVER A 9 TIMES**

# KENDAL'S S STATISTIC FOR TOTAL ITEM PATTERNING

\*\*\*\*\*

## FOR TABLE HUTTERIAN MAN NATURE

### OBSERVED SUMS

72 90 126 73 133 82 107 102 79 70 128 90 70 110 108

EXPECTED SUM = 96

### EXPECTED - OBSERVED

24 6 -30 23 -37 14 -11 -6 17 26 -32 6 26 -14 -12

### SQUARED DIFFERENCE

576 36 900 529 1369 196 121 36 289 676 1024 36 676 196 144

### SUM OF SQUARES

1512 2094 446 1736 1016

### RAW DATA TABLE

\*\*\*\*\*

ABCABCABCABC

213321213213231

132231231132132

123132132123132

123132231123132

123132132231132

213231321132123

213132231132231

123213231132123

213132312132132

312231312231132

213312213132213

132132321231132

123231321132123  
132231312231132  
213132231132213  
123132321132123  
213132321132132  
123132321132312  
312132231213132  
132132312231312  
132231213132312  
123132312123213  
132231123132123  
123231132123123  
132132321132312  
123132132132132  
123132123132123  
312123312132312  
123231321132123  
132231132132132  
312231132132132  
312231132132132  
123231231321123  
123321321231123  
123132312132312  
123132321132213  
123132231321132  
213231321321132  
123132312132213

3 1 2 2 3 1 2 3 1 2 3 1 1 3 2

1 2 3 1 3 2 3 1 2 3 1 2 1 3 2

1 3 2 2 3 1 2 3 1 1 3 2 2 3 1

1 3 2 1 2 3 1 3 2 2 3 1 2 1 3

2 1 3 1 2 3 3 1 2 1 3 2 1 3 2

2 1 3 1 2 3 1 3 2 1 3 2 1 3 2

3 1 2 1 3 2 3 1 2 2 1 3 2 1 3

1 3 2 1 3 2 1 3 2 2 3 1 1 3 2

1 2 3 3 2 1 3 2 1 3 2 1 1 3 2

# HUTTERIAN MAN NATURE TABLE

XI F FXI (XI-X) (XI-X) ^2 F(XI-X)62

A > B

0 0 0 -3.583 12.838 0

1 2 2 -2.583 6.672 13.347

2 4 8 -1.583 2.056 10.028

3 17 51 -0.583 0.34 5.785

4 14 56 0.417 0.174 2.431

5 11 55 1.417 2.008 22.076

SUM 48 172 53.667

MEAN 3.583

SD 1.069

SEM 0.154

A > C

0 0 0 -3.25 10.563 0

1 2 2 -2.25 5.063 10.125

2 8 16 -1.25 1.563 12.5

3 18 54 -0.25 0.063 1.125

4	16	64	0.75	0.563	9
5	4	20	1.75	3.063	12.25
SUM	48	156		45	

MEAN 3.25

SD 0.978

SEM 0.154

B > C

0	5	0	-1.854	3.437	17.19
1	12	12	-0.854	0.729	8.755
2	19	38	0.146	0.021	0.404
3	9	27	1.146	1.313	11.816
4	3	12	2.146	4.605	13.814
5	0	0	3.146	9.897	0
SUM	48	89		51.979	

MEAN 1.854

SD 1.052

SEM 0.152

T TEST

A > B T= 7.032

A > C T= 4.87

B > C T= -4.25

# **BINOMIAL ANALYSIS OF HUTTERIAN MAN NATURE TABLE**

## **QUESTION 1**

**A = B AT.05**

**A CHOSEN OVER B 31 TIMES; B CHOSEN OVER A 17 TIMES**

**A > C AT THE .001 LEVEL**

**A CHOSEN OBER C 41 TIMES; C CHOSEN OVER A 7 TIMES**

**B > C AT THE .001 LEVEL**

**B CHOSEN OVER C 37 TIMES; C CHOSEN OVER B 11 TIMES**

**QUESTION 2**

**A > B AT THE .001 LEVEL**

**A CHOSEN OVER B 43 TIMES; B CHOSEN OVER A 5 TIMES**

**A = C AT THE .05 LEVEL**

**A CHOSEN OVER C 28 TIMES; C CHOSEN OVER A 20 TIMES**

**B < C AT THE .001 LEVEL**

**B CHOSEN OVER C 6 TIMES; C CHOSEN OVER B 42 TIMES**

**QUESTION 3**

**A = B AT THE .05 LEVEL**

**A CHOSEN OVER B 22 TIMES; B CHOSEN OVER A 26 TIMES**

**C > A AT THE .05 LEVEL**

**A CHOSEN OVER C 15 TIMES; C CHOSEN OVER A 33 TIMES**

**C > B AT THE .05 LEVEL**

**B CHOSEN OVER C 16 TIMES; C CHOSEN OVER B 32 TIMES**

**QUESTION 4**

**A > B AT THE .001 LEVEL**

**A CHOSEN OVER B 40 TIMES; B CHOSEN OVER A 8 TIMES**

**A > C AT THE .01 LEVEL**

**A CHOSEN OVER C 34 TIMES; C CHOSEN OVER A 14 TIMES**

**B < C AT THE .001 LEVEL**

**B CHOSEN OVER C 8 TIMES; C CHOSEN OVER B 40 TIMES**

**QUESTION 5****A > B AT THE .005 LEVEL****A CHOSEN OVER B 36 TIMES; B CHOSEN OVER A 12 TIMES****A > C AT THE .001 LEVEL****A CHOSEN OVER C 38 TIMES; C CHOSEN OVER A 10 TIMES****B = C AT THE .05 LEVEL****B CHOSEN OVER C 22 TIMES; C CHOSEN OVER B 26 TIMES**