INFORMATION TO USERS

COMPARISON OF PERSONAL VALUES OF HOME ECONOMICS

AND HUMAN ECOLOGY STUDENTS AT MICHIGAN

STATE UNIVERSITY, 1968-1975

By

Susan Elizabeth Parrish

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Family Ecology

1975

ABSTRACT

COMPARISON OF PERSONAL VALUES OF HOME ECONOMICS
AND HUMAN ECOLOGY STUDENTS AT MICHIGAN
STATE UNIVERSITY, 1968-1975

By

Susan Elizabeth Parrish

The general objective of the study was to compare the personal

values of Home Economics and Human Ecology female undergraduate students

at Michigan State University from 1968 to 1975. The specific objectives

of the study were: (1) to determine the difference in personal values

held by Human Ecology students by major, college department, and level

for the block period 1971-1975; (2) to determine the differences in

personal values held by Human Ecology students among majors, college

department, level, and years from 1971 to 1975; (3) to determine the

differences in personal values held by transfer and freshman nontransfer

Human Ecology students in Fall term and Spring term of the years 1971 to

1975; and (4) to determine the differences in the personal values held

by Home Economics and Human Ecology students by major, college depart-

ment, level, and academic years 1968-69 and 1974-75.

The nonrandom sample of female students, n = 2,351 was limited

to freshman nontransfers, transfers, and senior nontransfers, aged 18

to 22 years. Students were represented by the academic major clusters:

(1) Child Development & Teaching; (2) Consumer-Community Services,

Family Ecology; Family Ecology-Communication Arts; (3) Foods, Dietetics,

Susan Elizabeth Parrish

Nutrition; (4) Home Economics Education; (5) Clothing & Textiles;
(6) Interior Design, Human Environment & Design; and (7) Retailing
of Clothing & Textiles.

To obtain student ranking of 36 personal values, the Rokeach
Value Survey, Form D and Form F, was used. The dependent variable,
personal value, was analyzed as a value system, nine values at one time,
using the multivariate analysis of variance. As a single personal value,
the dependent variable was analyzed by the median test. The Kendall
concordance coefficient was used to estimate the homogeneity of ranking
within groups. For rejection of each null hypothesis the chosen alpha
level was .05.

Analysis of the data showed that: (1) From 1968-69 to 1974-75
each major changed significantly on only part of the terminal and instru-
mental value systems. Majors significantly varied on the entire terminal
and instrumental value systems in the block period 1971-1975. Difference
among majors has decreased each academic year from 1971 to 1975. In
1974-75 the one contrast value was *social recognition*.

Freshman level majors differed more than senior level majors
on value systems in the block period 1971-1975. Freshman majors varied
significantly on three-fourths of the terminal and instrumental value
systems while senior majors varied on one-half of the terminal and
instrumental value systems.

(2) From 1968-69 to 1974-75, freshmen have changed more than
seniors. Freshmen varied on the entire terminal and instrumental value
systems with 19 contrast values. Seniors varied on the entire terminal
value system with 8 contrast values.

Freshmen were significantly different from seniors on the entire terminal and instrumental value systems in the block period 1971-1975. Value differences between freshmen and seniors from 1971 to 1975 have decreased, respectively, from 12 to 7 personal values.

Freshmen significantly differed from transfer students from 1971 to 1975 on three-fourths of the terminal and instrumental value systems. Neither freshmen nor transfers were significantly different in Fall and Spring term of each academic year from 1971 to 1975. Freshmen and transfers significantly varied over the years 1971 to 1975 in Fall and Spring terms.

(3) From 1968-69 to 1974-75, the four college departments varied in significant change on the terminal and instrumental value systems. The Human Environment & Design department changed significantly on 11 values, Family Ecology on 8 values, Food Science & Human Nutrition on 6 values, and Family & Child Sciences on 3 values. The departments significantly varied on the entire terminal and instrumental value systems in the block period 1971-1975. The departments decreased in variance from 1971 to 1975 with only significant difference on the personal value *family security* in 1974-75. Department homogeneity was greatest in Family Ecology and least in Human Environment & Design in 1974-75.

(4) Home Economics students in 1968-69 significantly differed from Human Ecology students in 1974-75 on the entire terminal and instrumental value systems with 23 contrasting personal values. Highest five priority terminal values were the same over the years: *happiness, mature love, self respect, inner harmony,* and *freedom.*

Highest five priority instrumental values were the same over the years: *honest, loving, responsible, forgiving,* and *broadminded.* While the values remained in the highest six ranked positions, the rank position of the value shifted over the years.

By 1974-75 the College of Human Ecology became for the most part homogeneous in personal value orientation. Curriculum development and revision can be implemented according to the variance in department and academic major concern for the family, the focal social group for the college. Variance in idealism by freshmen, transfers, and seniors suggests an increase in realistic and relevant experiences for freshmen and transfers. Continued value assessment of students and faculty is recommended.

ACKNOWLEDGMENTS

* * * * *

TABLE OF CONTENTS

Page

LIST OF TABLES

viii

LIST OF FIGURES

CHAPTER I

THE PROBLEM

Statement of the Problem

> We may be on the verge of one of the great discontinuities
> in human history. Those who think the final quarter of
> this century will merely be an extrapolation of the third
> will be seriously disillusioned [p. 32].

Lester Brown's[1] (U.S. News & World Report, March 3, 1975) quote

is a reaction to the same point that observers, such as Alvin Toffler,

have noted--the current transforming American culture.

The American culture is transforming into what is known as a

prefigurative culture. A prefigurative culture is one in which parents

learn also from their children (Mead, 1970, p. 1). In such a setting

the youth culture acts not only as a symptom of the new culture but also

as an agent of change. Hence, when a university is attempting to modify

programs and keep pace with social change, knowledge of current student

orientations is helpful when making adjustments.

While knowledge of the present youth orientation of self ful-

fillment and humanitarianism (Flacks, 1971; Lystad, 1973; Yankelovitch

and Clark, 1974) is helpful as a guide in university decision making,

the broadness of information may not be specific enough to a particular

---

[1]Lester Brown is an American agricultural economist and a
leading authority on food problems on a worldwide level.

college within the university. Thus, an assessment of student orientation within the university college may be of value to that college when making decisions and adjustments such as in curriculum development and revision.

Since a descriptive study of female students enrolled in the College of Human Ecology at Michigan State University has not been done since 1968-69 (Lorenz, 1970), an updating of the descriptive student study gains merit in being done in order to provide useful information for curriculum revision and development. The study of 1973 alumni of three Michigan State University colleges (Human Ecology, Agriculture, Sociology) (Marcus, 1974, 1975) does not qualify as a current assessment of students enrolled in the College of Human Ecology.

Hence, out of the broad picture of the transforming and subsequently adjusting society, the problem for study is an identification and comparison of personal value trends of Home Economics and Human Ecology undergraduate female students at Michigan State University from 1968 to 1975. An up-to-date description of campus youth is part of the baseline data necessary for decision making and continuous adjustment in an educational institution with a specific preprofessional orientation.

Objectives

For the study of personal values of female students at the undergraduate college level the objectives are:

1. To determine the difference in personal values held by under-graduate Human Ecology students at Michigan State University by major and level for the one block period 1971-1975.

2. To determine the differences in the personal values held
by undergraduate Human Ecology students at Michigan State
University among majors, levels, and years 1971-1975.

3. To determine the differences in personal values held by
transfer and freshman nontransfer undergraduate Human Ecology
students at Michigan State University in Fall term and Spring
term during the academic years 1971-1975.

4. To determine the differences in the personal values held by
undergraduate Home Economics students and undergraduate Human
Ecology students at Michigan State University by major, level,
and two academic years 1968-69 and 1974-75.

Purpose and Importance of the Study

The framework of the study is a comparison of personal values
of Home Economics and Human Ecology undergraduate woman students at
Michigan State University over the time 1968 to 1975 and by student
academic major and level status.

The updating, from 1968 to 1975, of a description of the College
of Human Ecology student body is done as there has not been an overview
of the undergraduate students since Lorenz' (1970) 1968-69 study entail-
ing background, attitudes, and values. This study on the comparison of
student personal values goes beyond the annual description of students
by demographic variables.

Further, a current inventory of the Human Ecology student is
appropriate since the College of Human Ecology student mix varies with
the annual increase in student enrollment. Similarly, over the past

decade (1962-1973) on a national level, Home Economics in higher education has grown. Just undergraduate enrollment alone has increased by 96 percent. The rate of increase is greater than the national growth trend for undergraduate education over the same period of time (Harper, 1975, p. 7).

In short, the increase of women attending institutions of higher education, the increase in women's studies, and a greater consciousness of women's rights and roles are all indicators of a local, national, and international human rights focus and priority within societies. Hence, a comparison of women's personal values in higher education and in a predominantly female professional area (Harper, 1975, p. 10) is in accordance with expanding the knowledge on the status of women.

Value change of youth in general is a second new area of current study to which comparison of personal values of Human Ecology students is additive. While youth value change studies (Flacks, 1971; Lystad, 1973; Mead, 1970; Yankelovitch, 1974a) have shown that in general the 1973-1975 group is different from that of 1968-69; the focus of the studies has been more on attitudes toward current social issues and institutions (but called values) and with broad university academic discipline samples. The broadness in scope as a major feature in the studies does not inherently lend itself to a microscopic examination of youth value change. Hence, in general over the 1968-1975 period there has been little study of personal value orientation in academic (preprofessional) disciplines and female students per se.

The little study that has been done on personal values of college youth and specifically with the Rokeach value survey has been

been aimed at some specific academic disciplines or majors and only at one point in time. For example, Lorenz (1970) did a descriptive one-year study of freshmen and sophomore to senior Home Economics students by background, attitudes, and personal values in 1968-69. Feather (1970) compared three academic majors (Humanities, Social Sciences, Sciences) of first year university students in Australia.

During the late 1960's, the value study (Rokeach, 1973, p. 140) of Michigan State University students in ten majors did not provide meaningful results primarily because of insufficient numbers in each case.

Thus, the pursuance of a descriptive study of undergraduate Home Economics and Human Ecology student personal values from 1968 to 1975 would help to fill in specific gaps on youth value change in the country and at Michigan State University. Further, this study on female youth values, using the Rokeach value survey, would have the largest known sample size, $N = 2,351$, and be the longest longitudinal assessment (7 years) of university student values in one academic major or preprofessional area (Human Ecology). The Human Ecology student value study could improve upon the weakness of small numbers by providing sufficient cell sizes and upon the lack of longitudinal assessment of personal value orientations of college youth.

The determination of personal value positions of Home Economics and Human Ecology students by seven majors in the college can help reveal the differences, if any, among the different prevocational value orientations. When done over the years the patterns of value commitment

by major may appear. Approximate comparisons to college youth as a whole group and to the American culture could then be made.

Also, the ascertaining of the overall personal value position of Human Ecology female students can provide a description of enrolled students and students ready to enter the Human Ecology profession. Further, the student value orientation may provide evidence that the college program is preparing Human Ecology students to enter the profession with a unique philosophy and value orientation.

Given the national two-pronged direction of the Home Economics field (Yankelovitch, 1974b, p. 3), this study on the Human Ecology value orientation at Michigan State University gives evidence of a Human Ecological professional direction. This student description then could be incorporated into the overall assessment of the College of Human Ecology if the college is reviewed by the American Home Economics Association for accreditation.

One set of inputs needed for continual educational curriculum development and revision decisions is a general description of student characteristics. Although a study of student personal values is not encompassing of student characteristics, the inclusion of values as one variable gains merit because of the central nature of values in human behavior and its permeation at almost all levels--cultural, institutional, group, and individual. The current change of youth values has already shown that students still value education but want to be "an integral part of the process" (Stout, 1972, p. 248). In meeting the challenge of changing values on campus, consideration has been given

to evaluation of traditional methods and programs, e.g., change of College of Home Economics to College of Human Ecology in 1970, small group discussions in class, group process, instructional modules, student representation and input to administration and curriculum and program planning.

Lastly, by means of identifying student personal values over time, further contribution to value research may be made. To date, value instruments have been varied and often based upon different assumptions and definitions which thus provide a lack of continuity of a systematic study of values. Use of the Rokeach Value Survey over time, in this study on Home Economics and Human Ecology student personal values, may help to determine the strength of the instrument and add depth to value measurement.

Background

The description of personal values of Home Economics and Human Ecology students from 1968 to 1975 represents, first, a picture of value orientations of both a preprofessional social group, and a female youth group, within the larger setting of the society or culture. Second, the study focuses not only on value orientation at one time but also over time and hence captures possible movements and trends in value orientations of the dual female youth and preprofessional social groups.

At the broadest level, the case under study is enmeshed in the American culture during 1968 to 1975. At another level there is the

Home Economics and Human Ecology student group immersion in the newly evolved youth culture. At the same level, the case group interfaces locally with the professional orientation of Human Ecology at Michigan State University and nationally with Home Economics. Thus, this specific Home Economics-Human Ecology student group at Michigan State University is interdependently and primarily linked with the values held by the American culture in general, youth, Home Economics profession, Human Ecology philosophy, and the student herself.

At the beginning of the 1968-1975 era, a culmination of social strains burst the seams of the once stable society, e.g., development of black youth movements, campus youth rioting and marching. No longer did the stable American society exist--"a society in which values, institutions and technological requirements were uniquely well meshed . . . a uniquely open society--one responsive both to the aspirations and demands of the people and to the need for change" (Flacks, 1971, p. 18). The Protestant Ethic[2] (Max Weber's term for a set of American value orientations), was also on the decline because of two major social developments, technology and affluence (Flacks, 1971, pp. 21-25; Lystad, 1974, p. 3).

Too, there was dissolution of the ideal of woman being a person who did not seek independence and success in work but rather supported

---

[2]Several values considered as dominant in the American way of life came under change and upheaval by the end of the 1960's. Several of the values were: (1) happiness, (2) independence, (3) faith in progress, (4) goodness of man, (5) helpfulness, (6) law-abiding, (7) freedom, (8) equality, (9) good life--the decent life, (10) cleanliness, (11) pride in achievement (work), (12) family closeness (Flacks, 1971; Lystad, 1974; Schlesinger, 1968; St. Erlich, 1973; Thomas, 1969; and Williams, 1967).

her work-oriented husband, produced an efficient household and raised their male children to be just like their father--hard working, reliable, achieving, and sacrificing (Flacks, 1971, p. 71). Replacing the ideal woman concept was the women's liberation movement which paralleled the "male-centeredness of the youth movement" (Flacks, 1971, p. 117), an expression of inability of certain types of male youth to accept the conventional definitions of the male role.

Gone are the marks of radicalism and revolutionary movements common during 1968-1970 as the social setting has changed. Causes for shifts in youth attitudes between the late sixties and early seventies are: (1) removal of threat to life by stopping of the military draft, (2) increase in cost of living, (3) mass media coverage of more casual sexual relations, and (4) publicity of double standard of Watergate authorities (Robinson, 1975, p. 4).

Now the youth group is isolated, neither child nor adult, and has few actual power positions. However, youth is a distinct stage in the life cycle, with its own set of values and its own institutions such as the university.

The latest confrontation that youth has is an upsurge in unemployment and economic insecurity. Discontentment of noncollege youth is partly a result of the continuance of seeking alternative meaningful opportunities in their lives after formal education. The trickle-down effect of reaction-change has permeated from college youth to noncollege youth to the high school graduate youth.

By 1974 subdued youth have realized their limits of power as a group. There has been a decline in momentum of the youth movement

from the reactionary overtones of 1968-70 era. A willingness to follow certain rules, but with a demand to have everything now, is the current trend. Different priorities are shown by what is being sought and how it is sought. "Instant bourbon society and now" is a contrast from the past "reward of a good life will come with hard work and time" (Yankelovitch and Clark, 1974, pp. 45+).

At the same time the new ferment of discontentment, adjustment, and rearrangement of priority of goals in youth is having a permeating effect as youth move into occupations in increasing numbers. In fact, by 1975 about 50 million (about 25 percent) of the electorate are in the 2 to 35 year age bracket plus an additional 10 million youths in the 18 to 21 year range. Professions are slowly changing their professional identities since a "radicals-in-the-professions" movement is evolving (Flacks, 1971, p. 105). To exemplify, in a congressional house vote to elevate the salaries of cabinet members, senators, and congressmen, 51 freshman representatives voted against the measure and 21 voted for it (State News, August 1, 1975).

It is not only the spirit but the tactics of student protest and other forms of reaction that are being carried through to a new class consciousness. The youth orientation is still present but its clothing is different.

Referent points for the identity of a profession can be derived from the profession's activities or occupations. Thus, when a profession's response changes in accordance with social changes, so does the professional identity change to an extent as a follow-through.

A case in point in profession transformation is the profession of Home Economics[3] which has had the family as its social referent group. Since the beginning of the century the family organization has gradually moved from a cofigurative[4] to a prefigurative[5] style of family member relationship. Out of the evolution of the contemporary family has also evolved the definite youth group in the life cycle. Thus, the Home Economics profession has had to go through an evolution, since its inception in the early 1900's, somewhat parallel in pace to the family movement and secondary to the rise of the youth group.

Cofigurative social groups such as the family and youth group have developed in a recognized form only over the last approximate 15 years. Similarly, at the same time the profession of Home Economics, in its attempt to change and keep pace with its family referent group, has shown a recognized ambiguity in its professional identity. Currently, the Home Economics profession is showing two hands: on the one hand, a traditional cofigurative style, and on the other, a prefigurative purposeful style (Yankelovitch, 1974b, p. 3).

Since the society is undergoing transformation to a prefigurative culture it is possible that the Home Economics profession is

---

[3]Home Economics is the professional name at the national level. Within the Home Economics profession, subgroups are changing their name and philosophies to Human Ecology, e.g., at Michigan State University the College of Home Economics changed to College of Human Ecology in July 1970.

[4]Cofigurative is the kind of culture in which both children and adults learn from their peers (Mead, 1970, p. 1).

[5]Prefigurative is the kind of culture in which adults learn also from their children (Mead, 1970, p. 1).

also undergoing a transformation like other professions to parallel a prefigurative culture style. Hence, present youth orientation can now be a current source of contemporary and future social orientations in the profession. The personal goals or values of Human Ecology under-graduate students in a university can be considered as a preprofessional youth orientation. Further, an orientation assessment of Human Ecology youth since the height of the youth movement, 1968-1970, may provide suggestions to present trends and predictions of the kind of Human Ecology professional identity or orientation that is evolving.

The present study does examine the personal value orientation of Human Ecology preprofessionals at Michigan State University over the time 1968 to 1975. Along with Yankelovitch's (1974) study of the general Home Economics profession, this study of a part of the Home Economics preprofessionals may provide a more complete picture of the general Home Economics orientation--especially the Human Ecology branch at Michigan State University.

However, as a final point what were the conclusions of the last study on the Home Economics preprofessional orientation at Michigan State University? Conclusions (Lorenz, 1970, pp. 123-125) made were that Michigan State University Home Economics students expressed a greater concern in the area of social conscience than other college and university women. Similarly, Home Economics students were more concerned with liberalism and social conscience after becoming involved with a Home Economics program. The Home Economics curricular subgroups did not differ significantly from the total Home Economics group in their concern for liberalism and social conscience and in their

assessment of general values. Subgroups did show a significant difference on the combination of satisfaction with major and concern for well-being of people. Retailing and interior design subgroups showed less altruistic concern for people than did the teaching, foods, and nutrition subgroups. Lack of specificity of where each group stood in relation to values provides opportunity to examine more deeply the identification and comparisons of subgroup values in relation to a professional value commitment in Human Ecology (Lorenz, 1970, p. 126). Since no broad descriptive study of Human Ecology students has been carried out from the inception of the Human Ecology program in 1970 at Michigan State University, Lorenz' study acts as a guide and springboard to institutional assessment of Human Ecology students. In light of past fluctuations in ascertaining and clarifying the Home Economics and Human Ecology value commitments, it would seem appropriate to verify and affirm the present Human Ecology direction seven years after Lorenz' work.

In brief, then, the present study of student values in one professional area, Human Ecology, provides current information about input and output of the university education processing with respect to enhancing professional Human Ecologists. Knowledge of student characteristics is one of the several facets that must be considered when preparing curricula relevant to professions and social trends and needs and when determining the degree of accountability of an educational institution. The use of personal values or goals provides a common denominator among society's current trends of emphasis, professional orientation, and standards, and individual orientations at

any one given time. Identifying and comparing undergraduate Human Ecology student values over the last seven years, thus, is one of the contributing facets to ascertaining university curriculum relevance, university accountability, and social relevance through professional interaction.

Hypotheses

For purposes of this study on the comparison of personal values of Home Economics and Human Ecology undergraduate female students the following general research hypotheses are posed:

1. There are differences in the personal values held by undergraduate Human Ecology students by major and level for the one academic period 1971-1975.

2. There are differences in the personal values held by undergraduate Human Ecology students among majors, levels, and academic years 1971 to 1975.

3. There are differences in the personal values held by freshman and transfer undergraduate Human Ecology students in the years 1971-1975.

4. There are differences in the personal values held by undergraduate Home Economics students in 1968-69 and undergraduate Human Ecology students in 1974-75 by major and level.

The testable forms of the general research hypotheses are restated in detail in Chapter III, Design and Methodology.

Definition of Terms

At the outset, reference to a value is made in terms of a value held by a person. Value in the sense of the degree of worth of an object is not being discussed or considered in this study. Further, since the Rokeach Value Survey is the instrument used in this study, it is appropriate to interpret the concept of value as suggested by Rokeach.

Value "is an enduring belief that a special mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach, 1973, p. 5). A value functions by transcending "attitudes towards objects and situations; . . . 'acting as' a standard that guides and determines action, attitudes towards objects and situations, ideology, presentation of self to others; . . . and attempts to influence others" (Rokeach, 1973, p. 25).

Values have cognitive, affective, and behavioral parts which express the interrelated tripart compositions of a value (Rokeach, 1973, p. 7). The three respective parts of a value are: conceived thoughts of the desirable, feelings for and/or against a value, and intervention that leads to action when activated.

The Rokeach definition of a personal value is also highly compatible with those value definitions proposed by Clyde Kluckhohn (1952), Smith (1963), and Williams (1968) (Rokeach, 1968, p. 160).

Instrumental value is bilateral since there are two kinds: moral value and competence value: (1) Moral values are primarily "modes of behavior and do not necessarily include values that concern

end-states of existence." Moral values refer only "to those that have an interpersonal focus which when violated arouse pangs of conscience or feelings of guilt for wrongdoing" (Rokeach, 1973, p. 8); and (2) Competence values or self actualization values "have a personal rather than interpersonal focus and do not seem to be especially concerned with morality. Their violation leads to feelings of shame about personal inadequacy rather than to feelings of guilt about wrongdoing" (Rokeach, 1973, p. 8).

Terminal value is an idealized end-state of existence. "Generally all instrumental values are modes of behavior that are instrumental to the attainment of all values concerning end-states of existence (Rokeach, 1973, p. 12).

Value system "is an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance" (Rokeach, 1973, p. 5).

Assumptions

1. All people hold the same personal values but with different priorities.

2. Values can be organized into value systems.

3. Human or personal values have a multifaceted origin: culture, society and its institutions, and personality. Thus, the status of an individual's values may reflect contemporary social value patterns.

4. The personal value system held by an individual reflects a personal orientation towards living and influences the selection of an educational choice.

5. There are differences in the personal value systems of male and female university students.

6. Identification and comparison of student values can provide useful data for purposes of college program evaluation planning, revision, accountability, and student status.

7. The American society is the setting in which the study takes place.

8. Administration of the Rokeach Value Survey in one session is the same whether in a class setting or a home setting since the respondent completes the survey independently in about 20 minutes.

9. The Rokeach Value Survey, Form D and Form F, are basically the same instrument as the same completion process and end product results are entailed.

Limitations

1. The study is limited to a nonrandom sample of female Home Economics and Human Ecology freshman, senior, and transfer students at Michigan State University from 1968 to 1975. Generalization beyond this group is inappropriate since it is not a random sample.

2. The 1968-69 Home Economics sample is representative but not random since it is in similar proportion to the population by subgroup and level.

3. The 1971-1975 nonrandom Human Ecology sample is not completely representative. Generalizations cannot be made beyond the size of the sample but the large sample size does allow for suggestions about the population.

4. Male students registered in the past College of Home Economics and present College of Human Ecology are omitted since the small number present in the sample make comparisons difficult and some differences exist in value systems by sex type (Cross, 1968, pp. 12-21; Feather, 1970, p. 134).

5. Home Economics and Human Ecology female students at the under-graduate level were surveyed during only some specific school terms, rather than all school terms of the academic years 1968-69 and 1971-1975.

The first chapter has provided a discussion of the problem, the purpose of the study, and the background of the study. Further, the format of the study has been outlined by way of objectives, main hypotheses, assumptions, and limitations.

In Chapter II there is continuation of background information for the study. Trends in value orientation of three connected areas are shown: (1) professional and preprofessional orientation of Home Economics in general and specifically at Michigan State University, (2) value orientations of campus youth in general, and (3) value

orientations of campus youth through the use of the Rokeach Value Survey.

In Chapter III, an elaboration of the methodology for the study is given. Following the reporting of procedures and instrument used in collecting the data on personal values, a description of the Home Economics and Human Ecology undergraduate student participants is given. Next, the general research hypotheses are stated and followed by an outline of the analysis used to test the hypotheses.

In Chapter IV, the results from the data analysis on Home Economics and Human Ecology student personal values from 1968 to 1975 are described and summarized.

In Chapter V, conclusions, discussion, and implications are presented. Lastly, in the Appendix, an example of the instrument, Rokeach Value Survey, is provided.

CHAPTER II

REVIEW OF LITERATURE

The centrality and pervasiveness of values creates a breadth of scope in values literature. Selection of literature related to the description of values held by Home Economics/Human Ecology undergraduate university students has been narrowed to three areas. The first area concerns the values held by the Home Economics/Human Ecology profession and provides a historical background to the professional orientation and current status.

The second area pertains to a broader view of studies related to values of university students and helps to fit value research of Home Economics/Human Ecology students into the broader perspective of student values in higher education.

The third area deals with the value research of university students using the Rokeach Value Survey. Reference to previous work using the Rokeach Value Survey is pertinent as the current study uses the Rokeach Value Survey with university Home Economics/Human Ecology students. The value theory, research methodologies, and value data results can provide a base for comparison and suggestions for future value studies.

Values in Home Economics/Human Ecology

Since the inception of Home Economics at the turn of the twentieth century there has been a circular development of the clarification of the professional Home Economics purpose, goal, and commitment over the past 70 years. At the 1902 Lake Placid Conference the values of the new Home Economics organization were stipulated as being:

1. The ideal home life for today unhampered by the traditions of the past.
2. The utilization of all the resources of modern science to improve the home life.
3. The freedom of the home from the dominance of things and their due subordination to ideals.
4. The simplicity in material surroundings will free the spirit for the more important and permanent interests of the home and of society [Lake Placid Conference of Home Economics: Proceedings of the Sixth Annual Conference, 1904, p. 31].

These Home Economics women attending the conference were actively asserting their concern for their multifaceted role in society and concern for others in general. Thus, there was a recognition of the concern for a quality life for the family and individuals in context to the apparent social, economic, and industrial changes of that time. As Lorenz (1970, p. 21) pointed out, these stated values still have validity today with the repercussions of an increasing acceleration of technology, industrialization, and pluralistic style of living.

The second stage of professional commitment clarification was indicated by Bane (1950, p. 15), Hill (1955, p. 529), and Budewig's (1959, p. 36) notation of a need to establish clearly the basic values that uphold the Home Economics profession. Both Bane and Hill suggested

a continued focus on the home but Hill zeroed in more specifically on the concept of relating all Home Economics phases to the needs of families and individuals with a positive acceptance of change. As a result of the uncertainties in the 1950's, the committee on the philosophy and objectives of the American Home Economics Association (1959, p. 3) reviewed the 1902 creed and reaffirmed the validity of the creed for a concern of a quality family life.

However, talk and declaration does not imply that there is action to verify the professional Home Economics position and focus. Lee and Dressel (1963, p. 106) indicated the undulating Home Economics position and started inquiries for philosophy change in the 1960's. When Lee and Dressel, determined the balance of liberal and professional education in Home Economic's curricula, they found that there was a lack of family orientation in some Home Economics courses and curricula. Thus, there was a suggestion for continued research of institution curricula evaluation and revision that would tie in the professional family life focus.

As a beginning in curricula evaluation, McConnell (1965) found that according to Home Economics statements of family (as a central focus), human values, integration, and process (McConnell, 1965, p. 126), Home Economics curricula at three educational levels adhered more closely to the pragmatic philosophy of John Dewey than three other examined philosophies (McConnell, 1965, p. 126). Establishment of an educational philosophy was a valid stepping stone which could provide later a frame of reference for curricula revision decisions.

Like Lee and Dressel (1963, p. 106) and McConnell (1965, p. 133), Brown (1967, p. 769) sensed a lack of a central theme in Home Economics subject matter and curricula and queried the identification of central value concepts in Home Economics. Brown's conclusion (1967, p. 769) was that the goals of the Home Economics profession would be more adequately fulfilled if the goals were clearly defined and based upon a total explication and consensus of all fundamental common values in Home Economics.

Movement forward was made from Brown's proposal for action of clarification of the Home Economic's professional commitment. Creekmore (1968, p. 95) stated the basic concept of Home Economics as being, "home economics is the study of man as a total being, his near environment and the interaction between them." However, Creekmore (1968, p. 94) argued that purposes, goals, and values were subject to change over time and consequently inappropriate for basic concepts underlying Home Economics. On the one hand, Creekmore's comment is valid, and, on the other hand, it is not as there is not clarity between the use of changing cultural values and those values that are implicitly posited in a professional commitment such as the Home Economics creed and central theme. Hence, in a professional position statement there can be an identification of certain affiliated values irrespective of the current times. Movement still continues in clarification of a Home Economics professional com-mitment because the national level of Home Economics/Human Ecology profession to date (1975) has not consolidated a current professional direction, commitment, and objectives for a role in society (Brown, 1967; Byrd, 1970; Ray, 1970). There is a diversity of suggested

directions and emphases for the Home Economics/Human Ecology
profession.

One indication of the diversity is Ray's (1970, p. 717)
statement that it is time to clarify professional values since
Home Economics has not lived up to the standards stated in 1958.

Ray indicated that there is a dichotomy about the use of the
family as a focus since the conjecture is that everyone does not live
in a family setting (1970, p. 715).

A second indication came from the brief reports of the 11th
Lake Placid Conference that supported the diversity of opinion about
Home Economics/Human Ecology direction and value orientation. Examples
of different Home Economics directions and concerns are: (1) skills
are a vital part of Home Economics, (2) awareness of the Home Economics
group as one in competition with other professional groups servicing
the public, (3) time to move from the internal to the external,
(4) pursue the relationship between man and environment, and
(5) re-educate men to take a responsibility in homemaking (11th
Lake Placid Conference, 1974, p. 10).

Examples of issues for priority in the 1970's are: maintain
international work and exchange programs, conserve natural and human
resources, child development and care, population education, public
policy and effective change agent, old age problems, consumer problems,
and housing (Lake Placid Year Report, 1974a, p. 50).

Examples of actions to strengthen Home Economics are: (1)
develop political skills, (2) develop a clear conceptual framework,

(3) strengthen research, and (4) build a strong public relations thrust
that exhibits a clear Home Economic's identity and code of professional
values and standards (Lake Placid Year Report, 1974b, p. 50).

A third indication is that with the changing face of the family,
the question has been asked (St. Marie, 1970; East, 1970; The Family
Faces Change, 1970) as to how best should the Home Economics profession
modify itself to align with the current trends of family life and still
be a servicing profession.

And a fourth, a confirmation of the diverse position
of the Home Economics profession and hence need for reconsideration
of its professional value commitment and orientation, has been shown
through Yankelovitch's (1974b) survey of qualitative attitudes from
six fields about the image of the Home Economics profession and about
the work done by Home Economists.

The fields--business, colleges and universities, secondary
schools, government, state legislature, media, have a polarized
perception of the Home Economics profession:

> On the one hand, home economists are seen as active, skilled,
> and worthwhile contributors as employees. . . . On the other
> hand, home economists are seen as traditional, limited, and
> carrying an uncertainty as to the extent to which they can
> or will contribute to the employer's ultimate goals
> [Yankelovitch, 1974b, p. 3].

The key to the solution of the professional orientation issue
that the Yankelovitch study raised was long-range planning in terms
of defining Home Economics. With organization of the discipline's
content and strong public relations there is the possibility of people

clearly seeing what subprofessions and roles in society are housed in the general profession of Home Economics (Yankelovitch, 1974b, p. 7).

To continue with the national level recognition of the Home Economics profession need to clarify its objectives, philosophy, and orientation in society (Brown, Creekmore, Dressel), the College of Human Ecology at Michigan State University has taken six steps in an initiative to clarify, define, and implement a professional value position and direction.

First, through a conceptual analysis of the term family, Quilling (1970) reviewed the 1958-1969 American Home Economics Association literature to update and clarify the current national Home Economics professional value position. At that time the Home Economics philosophy was directed towards the family: "Home Economics attempts to educate individuals to live effective family lives" (Quilling, in Abstract, 1970, p. i). More specifically, the aim was to move the family life style from an independent self-sustaining entity to a more open interdependent group. The family was to have a life style characteristically like:

> . . . middleclass, stable, unified, responsible to society,
> healthy, normal, their needs relative to food, clothing
> and shelter are adequately met, they strive to improve
> their lifestyle, and they promote the culture's political
> ideology [Quilling, in Abstract, 1970, pp. iv-v].

From Quilling's identification and resume of the family concept position projected by the Home Economics profession, the conclusion was that the Home Economics philosophy had reached an evolutionary point where there must be a consideration of knowledge and theory for

clarification of the Home Economics professional orientation and direction (Quilling, 1970, p. 263). Quilling's conclusion identified the status of the past Home Economic's philosophy but the conclusion did not suggest that the status was the desired current and future Home Economics professional position. On the contrary, an implication for future research was "to determine if Home Economics as a field presents a unified approach to the concept family or if a variety of diverse viewpoints exist? (Quilling, 1970, p. 266). Thus, Quilling was in agreement with Brown, Creekmore, and Dressel about a required cementing of a current definition of Home Economics and professional commitment and orientation in society.

Second, Lorenz (1970) described the current Home Economics students at the end of the Michigan State University Home Economics era in 1968-1969.

Third, in 1970 the College of Home Economics at Michigan State University changed its name, curriculum, and philosophy. The revised College of Home Economics was housed under the new heading of College of Human Ecology.

Fourth, two journal articles from Michigan State University have stated professional Human Ecology positions. Turk (1971, p. 1) stated that the challenge to the College of Human Ecology was the quality of living and that the original aim of Home Economics still applies to the professional field of Human Ecology.

When Home Economics was organized as a professional field
around the turn of the century, the leaders stated their
aim as "the study of laws, conditions, principles and
ideals which are concerned on the one hand with man's
immediate physical environment and on the other hand
with his nature as a social being, and is the study
specially of the relation between those two factors."
The aim still fits [Turk, 1971, p. 1].

Since the overall emphasis is on the interdependent relationship
between man and his near environment, there are parallel applications to
the central focus on the subunit of the family. Thus, Hook and Paolucci
(1970, p. 315) in the second journal article have suggested that the
home is "a life support system for the family members; that is, provi-
sion of both physical and social nurturance." The direction for Home
Economists is to "search for understanding and controlling the mutually
sustaining relationships that couple man with his near environment"
(Hook and Paolucci, 1970, p. 316).

Fifth, if a philosophy is to be carried out to an action stage
as in "You practice what you preach," then there is a need for a mech-
anism that will help to transfer the body of coordinated ideas to a
level of action. Hence, with a need to convert the abstract to the
concrete, Vaines (1974) has probed at the national level the use of the
Human Ecological Systems Framework (professional orientation used by
College of Human Ecology at Michigan State University). The Human
Ecological Systems framework is a way to create the transformation,
conversion or mechanism of the philosophy and professional value posi-
tion in Human Ecology and Home Economics, to the implementation stage.
Thus, a goal of the framework is to provide an approach for analysis of
a situation and to assist in finding a suitable answer to the question
or issue at hand or in obtaining a goal.

From the nationwide Home Economics administrator survey, there was indication of 22 percent to 40 percent agreement in using the Ecological Systems Framework as the central focus of Home Economics and Human Ecology.

The use of an abstract technical language in the survey to explain the Ecological Systems Framework may be a factor in low numbers of response and low agreement. Examples of comments from respondents indicated enthusiasm for acceptance of the framework, semantic problems and need for more explanation, and disagreement because of the lack of inclusion of all individuals in society when the focus is only on the family.

Two basic considerations in the communication and innovation diffusion of the framework appear to be incompletely attended to. There appeared to be a lack of communicating in the other man's language (although a glossary was provided). Further, the timing of the administration of the survey was in September and coincided with a busy time for respondents who were administrators and possibly more concerned about the opening of their own college or school for another academic year.

Sixth, in the freshman Human Ecology core course at Michigan State University, the use of the Human Ecological Systems Framework, to implement the human ecological professional value position and phi-losophy, has had a varied response. On introduction to the framework, there has been an initial confused response due to the abstract new language of systems terminology. However, with application of the

framework in case studies, modules, group discussions and an 80
percent mastery test, there is clarity of the Human Ecological
Systems Framework.

Perception of relevance of the use of the framework has
varied. Freshman, sophomore, and junior Human Ecology students
have shown an enthusiastic appreciation to a nil appreciation of
the Human Ecological Systems Framework. Further, students have
shown a positive latent effect in perceiving the relevance and
application of the framework. No study has been done to show the
degree of acceptance and use of the Ecological Systems Framework
by Human Ecology students at undergraduate, graduate, and faculty
level.[1]

To sum up, the value orientation of the Home Economics and
Human Ecology profession has been partially and broadly defined.
One statement of professional orientation is the concern for a quality
life for the family and individuals. A second statement of professional
orientation is that there are five basic intrinsic values undergirding
the Human Ecology field: health, order, aesthetics, ethics, happiness
(College of Home Economics, Michigan State University, 1968, pp. 17-18);
Dressel, 1968). It is easier to understand the shifting of the Home
Economics professional focus and philosophy given that its focus is
interdependent upon the current family. With the discrepancies in
the culture and youth orientations, the Home Economics profession

---

[1]One administrator was a respondent in Vaines' study (1974).

is consequently bound to have some discrepancies in its affiliations and orientations--depending upon the client group served.

What is the student value orientation at the preprofessional level of Human Ecology at Michigan State University in the last two years? In an overview, Home Management Residence and Family life subgroups of Home Economics students have been described, respectively, by the Survey of Interpersonal Values (Fukushima, 1966) and Sixteen Personality Factor Questionnaire (Astle, 1967). Later, in 1968-69, an encompassing representative group of Home Economics students was described by the College Student Questionnaires developed by Educational Testing Service at Princeton, New Jersey, and the Rokeach Value Survey (Lorenz, 1970). The present study of student values would encompass the Human Ecology College by majors and levels over the years since Lorenz' study.

The Survey of Interpersonal Values was used to compare management ratings with the interpersonal values of 30 junior and senior students at the home management residence (Fukushima, 1966). Independence, support, and recognition were ranked higher than conformity, leadership, and benevolence in comparison to the National College Norms for females. The total managerial self scores were not associated with individual specific interpersonal values. An approximate comparison of SIV values to the Rokeach values and undergirding Human Ecology values can be shown in Figure 1.

	VALUES		
	SIV	Rokeach	College of Human Ecology
Scored above national comparison	Independence Support Recognition	Independent Inner Harmony Social recognition	Happiness
Scored below national comparison	Conformity Leadership Benevolence	Obedient Responsibility Helpful	Ethics Happiness

Figure 1. SIV for home management resident students (Fukushima, 1966) compared by Parrish (1975) on Rokeach (1973) and Human Ecology values (CHE unpublished paper).

A tentative inference would show that the home management house residents were low on the professional Human Ecology value commitment as indicated by the lack of parallel matching of values and more matching of values being in the low rated group. Too, the study does make use of a national comparative group which helps to put the home management students into a broader comparative perspective.

Although Astle's (1967) study did not examine student values per se, some of the results in comparison to norms established by Cattell are related indirectly to values. The family life students had a high factor rating on an artistic factor and a low factor rating on a mature confidence in self and capacity to deal with things. These two factors can be approximately compared to the values of Rokeach and Human Ecology in Figure 2.

Profile Factor	Rokeach Value	Human Ecology Value
Artistic	World of beauty	Aesthetic
Confidence and capacity to deal with things	Responsible Accomplishment Capable	Ethics

Figure 2. Profile factor for family life students (Astle, 1967) compared by Parrish (1975) on Rokeach (1973) and Human Ecology values (CHE unpublished papers).

Again, only a partial comparison is made and the alignment of professional value orientation is split half and half.

The comparison of family life students with the younger natural science students does suggest, methodologically, like Fukushima and Lorenz, a perspective with which to view college students. Interest is created by the bipolar comparison of the people-oriented family life sample to the not-so-people-oriented natural science sample.

While the 1960's marked an era of searching for a recapitulation of professional orientation for Home Economics, Lorenz' (1970) descriptive study on backgrounds, attitudes, and values of Home Economics students at Michigan State University marked the beginning of identification of student status on the Home Economics focus of concern for social problems or well being of people. In the area of social conscience the Home Economics undergraduate students scored significantly higher than other college and university women. Home Economics students scored lower in expected job satisfaction from being useful to society.

Significantly higher scores in liberalism and social conscience were attained by after-becoming-involved Home Economics students than when-entering Home Economics students. Subgroups of Home Economics students did not significantly differ from the total group on liberalism social conscience area (Lorenz, 1970, p. 124). Lorenz further pointed out that greater dissatisfaction of Home Economics students with their majors indicated a possible lack of commitment by the students to the purpose of Home Economics as the well being of people, or a lack of

commitment to that purpose in the organization of Home Economics curricula. Also, the students in retailing and interior design majors were more concerned with being creative and using their abilities than with being useful to society (Lorenz, 1970, p. 125). Thus, a concern for the well being of people has been shown by the Home Economics students but in varying degrees by the Home Economics subgroups.

There were differences and similarities in the values held by Home Economics subgroups and comparative groups. When Home Economics subgroups were compared on the Rokeach personal values to the total Home Economics group and the Michigan State University group, there were high correlations. One exclusion was a low correlation on terminal values with comparison of Home Economics subgroups to the Michigan State University comparative group (Lorenz, 1970, p. 82).

With comparison among Home Economics subgroups, there was more difference in terminal values than in instrumental values for freshman students. For the upperclass level (freshmen omitted) subgroups differed significantly more on the instrumental values than on the terminal values. These results did not clearly show the status of Home Economics professional value commitment since this was not the specific overall intent of the use of values in the study.

In relation to Fukushima and Astle, Lorenz has improved the design of comparing Home Economics students to other groups by including both a national comparative group and a Michigan State University campus comparative group which is more representative than

just another academic field group. This dual comparison with other groups helps, first, to put the study's sample into a broader context to university students at large, and second, to compensate since there was the inability to generalize with the nonrandom but representative sample.

Hence, in relation to Lorenz' study, the present undergoing study on Home Economics and Human Ecology student personal values can help to show a short historical movement with the potential of identifying predictors related to student, college, and Human Ecological professional value orientations.

In a last comment and in retrospect to the preprofessional Human Ecology students, a follow-up study on 3,000 alumni (1969-1973) was done in the Michigan State University colleges of Social Science (CSS), Agriculture (CAg), and Human Ecology (CHE) (Marcus, 1974, 1975). The study ascertained factors of career choice, contributions of education, and directions in careers.

In brief, for all three colleges the four reasons given highest priority in career choice were:

1. opportunity to be helpful to others or useful to society,

2. chance to work with people rather than things,

3. opportunity to be original and creative,

4. making a lot of money.

And the two most influencing factors playing a part in selection of a major were:

1. interest in subject matter,

2. wanting a broad general education.

The three colleges highly correlated on the most influencing factors on major selection, r = .98.

The CHE females provided the most consistent pattern in reporting that the highest contribution of college to their lives was in the personal development section. When projecting their career future five years hence, 53 percent of the CHE graduates considered the following preferred areas: writer, 17 percent; homemaker, 10 percent; teacher (not college), 10 percent; salaried manager, <10 percent; and college teacher, <10 percent. While CHE had the highest number, 11 percent, hoping to change organizations or fields in five years, there was no difference between CSS and CHE women in their leaving the labor force to become homemakers (about 10 percent). In fact for all three colleges most women, like men, thought that they would stay on the job until another appears "more interesting or challenging."

When compared to the national averages the Michigan State University alumni are most similar. Hence, Marcus (1975, p. 28) concluded that "if job satisfaction related to college education, experiences at Michigan State University may have enhanced pleasurable employment."

The Michigan State University alumni study does parallel some of the trends of youth in their seeking instant fulfilling jobs and that women see career, marriage, and family (11 percent withdrew to be homemakers) as being compatible. Further, in the youth orientation there is a concern to serve other people and to be self expressive.

In summary, while the Michigan State University College of Human Ecology has established its professional position and direction in the 1970's, the Home Economics/Human Ecology profession as a whole has not reached consensus. Hypothesizing, there may be difficulty in reaching a consensus since the focus of the profession is hinged to lifestyles of people set in a pluralistic society. The College of Human Ecology at Michigan State University and similar colleges of Human Ecology may be showing the need to fraction off and specialize in a specific direction; for example, focus on the family in relationship to its environment, rather than attempt to be all encompassing. The present undergoing study does not attempt to encompass the whole Home Economics and Human Ecology profession but rather settles the professional area of Human Ecology at one university.

Values in Higher Education

Past value studies in higher education have provided results that indicate there are changes in the values held by university students as they progress through their four years of academic studies. For almost a decade, starting in 1952, Freedman (1961, p. 21) studied undergraduate and alumnae personality changes that took place during the college years at the liberal education Vassar College for girls. Results of the studies signify that substantial systematic personality changes took place between freshman and senior years and these data compare similarly with those of other women's liberal arts colleges. These changes appear to have taken place quite early in the four year

term rather than being linear changes from year to year. Seniors tended to demonstrate a greater acceptance of intellectual values and greater internal conflict than freshmen (Freedman in Dressel and Lehmann, 1965, p. 249). Substantial differences among seniors in various major fields appeared not to be a function of influences of majoring in a field but seemed to be more a function of differences already present at the time of college entrance. There is a tendency then of those students selecting the same major to have had some personality characteristics in common (Freedman, 1961, p. 22).

Using a battery of instruments, a four-year study was made on the impact of higher education on undergraduate students at Michigan State University (Dressel and Lehmann, 1965). The results of the study presented changes from freshman to senior year with improved critical thinking and a movement away from authoritarianism and the traditional value orientation. Change occurred more in the freshman to junior years with "outer-or-other" directedness than in the senior year and more marked changes occurred with females than males (Dressel and Lehmann, 1965, pp. 453-455). Females in the vocational-oriented curricula were found to be less dogmatic and stereotypic than those females in nontechnical programs. Homogeneity of students increased over the four years with a leaning toward current mores or entire withdrawal (Dressel and Lehmann, 1965, p. 456).

It was further noted that an impact of higher education on values could be found in:

a. increased consciousness of one's own values;

b. increased awareness of value differences and
    conflicts among individuals and groups;

c. re-examination and possibly modification of one's
    values; and

d. increased ability to make decisions and take actions
    which witness and reinforce the values in which one
    believes [Dressel and Lehmann, 1965, p. 456].

Following Dressel and Lehmann (1965), Lehmann, Sinha and

Hartnett (1966) paralleled a four-year study of 1,747 freshmen and

then as senior students at Michigan State University for purposes of

examining the relationship between changes in attitudes, values, and

general academic attitude. Changes showed that students became "outer

directed" in their value orientation and females underwent a greater

change in values and attitudes than comparative male students (Lehmann

et al., 1966, p. 89).

Further, in the series of Michigan State University student

studies Juola (1973) found that the 1971 freshman class was self-

confident. There were differences between male and female students

in their professional, political, societal, and personal goals. The

women were more concerned than men with intellectual and societal

objectives, such as increased awareness of different lifestyles,

skill in getting along with others, and community service. In

particular, the personal goals tended to be generally more accepted

by the freshmen in the Human Ecology and Education colleges. However,

when asked about their occupational future, female freshmen were

definitely more career oriented at this time in life and clearly did not commit themselves to the single goal of being a housewife (Juola, 1973, p. 23).

Opposite to Freedman (1961), Dressel (1965), and Lehmann et al. (1966) on value changes over the years, Whitely (1938, pp. 406-407) found that after measuring a group of 84 Franklin and Marshall College students each year from freshman to senior year, there was little value change except for an increase in aesthetic scores and a decrease in religious scores.

Using the Allport-Vernon Study of values both Arsenian (1943, p. 339) and Todd (1941, in Arsenian, 1943, p. 341) found that value changes resulted in an emerging value pattern that followed the culture norms. Arsenian's sample included 76 freshman students at Springfield College, Massachusetts, who were later measured again when seniors. Todd's sample consisted of 94 students in the last year of high school who were again measured at the beginning of their sophomore year in college.

Jacob's (1957) massive longitudinal and cross-institutional study of the impact of higher education on student values has been supported later in some respects by previously mentioned studies. Findings of the study showed that the values of college students were homogeneous with greater homogeneity and consistency occurring at the end of the students' fourth year (Jacob, 1957, pp. 3, 6). Results of greater homogeneity at senior level and impetus not coming mainly from formal education paralleled Dressel and Lehmann's findings (1965, pp. 454-455).

To determine the trends in attitudes and value profiles of student bodies, Hoge (1970, p. 170) employed the seldom used research approach of controlled replication of a study of attitude and value change of a stratified random sample of male undergraduates at Dartmouth and University of Michigan, first in 1952 and second in 1968-69. Over the years, there was a decrease in emphasis on privatism, other-directedness, embeddedness in groups, religious attitudes towards traditional beliefs and norms, and anxieties about deviant and suspect social groups. An increased emphasis in value orientation and attitude from 1952 to 1969 was shown in commitments to political participation and criticism of social institutions. Some of these changes show similarity to the trends in Yankelovitch's (1972) nationwide findings of student values and attitudes, 1967-1969.

Hoge used a nationwide poll on religious values and attitudes in 1952 and 1965 to show that there was a small decline in traditional beliefs and practices (Marty et al., 1968). This poll acted as a check on student religious values and attitudes and results were parallel to the student value and attitude changes. However, the student values were accentuations of changes in the entire adult society.

A suggestion for improved methodology was to repeat the study each year to lessen "skimpy" and "inconsistent" data (Hoge, 1970, p. 195). In the present study of Human Ecology student values there is both the replication of the value study and administration of the survey from year to year.

Like Hoge, Morris (1974) duplicated his 1950 nationwide survey of undergraduate university students again in 1970. Using the 13 Ways of Life Survey (conceived values instrument), students still preferred the more detached Way Seven--a desire for a many-sided self. However, the 1970 students were definitely less traditional than the 1950 students. It appeared that the 1970 students were trying "actively in various ways to live by certain basic ideals in a society which many of them felt represented a betrayal of these ideals" (Morris, 1974, p. 260).

Too, there was a definite decline in preference for Way One-- preserve the best that man has attained, i.e., a stress on conservatism, by the 1970 students. Morris' study of noted change in students towards a new openness is a supportive forerunner of Yankelovitch's studies and parallels the findings of Hoge, Flacks, and Lystad.

Williams (1971, p. 41) a research supervisor in student affairs at Pennsylvania State University has indicated that approximately 50 percent of "all college students change their values and their viewpoint about education during their first year."

At the beginning of the freshman year the majority (50 percent) of male and female students affiliate with the collegiate viewpoint of importance on extra-curricular activities--athletics, social life, and college traditions: a norm for many large public universities. By the end of the freshman year the emphasis has changed to understanding, social recognition, autonomy and exhibition. Hence,there is a movement away from restraints and a movement towards interest in ideas or intellect.

In the beginning of Yankelovitch's (1968) longitudinal cross-sectional study of American young adults aged 18-25 years, the most dissatisfied were college students. Social reform and rejection of the traditional conventional career were emphasized. The noncollege youth sector was for the most part a contrast to their peer campus group by affiliating closely with the current social values of work, marriage, patriotism and respect of authority (Yankelovitch, 1972; Yankelovitch and Clark, 1974, p. 45).

Six years later (1973) in a nationwide sample of 3,522 college and noncollege youth aged 16 to 25 years, personal interviews of similar questions used in prior studies, revealed a contrasting value orientation (Yankelovitch and Clark, 1974, p. 45).

There are three distinctive value changes of the present youth. First, the most dissatisfied group of youth is the just graduated from high school and gone to work and/or marriage. In contrast the college group is now oriented with its present life.

Second, the college student interest is now on finding self-fulfillment with a conventional career.

Third, education recently rejected is now strongly advocated as it is seen as a ticket to society (Hechinger, 1974, pp. A-9).

The change in youth values is similar to Jacob's (1957) findings of the 1950's, Hoge's (1970) later ten-year study, and Morris' 1950-1970 repeated study in that there is a weighting towards privatism and a decrease in obedience and religious emphasis.

With respect to privatism and self-fulfillment during the 1950's the individual worked during the week and used the weekend as a time for private life. Fulfillment of life meant a focus on a family and marriage. Today youth seek fulfillment not in a sequential scheduled manner but rather in an all-at-once approach (Yankelovitch and Clark, 1974, p. 46). There is a focus on self-fulfillment and satisfaction in their careers and at the same time enjoyment of the money rewards: instant "the good, rich, satisfying life forever and ever." Both Yankelovitch and Clark conclude that the current value position of youth is supporting the current restless seeking of alternate options to shaping a life career other than going directly to work or college after high school graduation (Yankelovitch and Clark, 1974, p. 64).

A problem in comparing value studies and results is that the different instruments used incorporate different values and measures. Comparisons can only be approximations when different interpretations of the value concepts and different methods of measuring are used. There is no accurate equalizing technique.

Consequently general inferences are made about trends or patterns of value characteristics which in the long run are helpful and contribute to value theory. These studies of values point out a basic method of en masse (macro) test-retest of the sample not only at two points, freshman and senior years, but also at four points, freshman through senior years. Value change appears to be more critical in the first three years of college rather than in senior year. To examine value change, it would seem appropriate to include measures of students in all years for longitudinal study purposes. Both Lehmann

(1966, p. 90) and Corey (1936) have similarly commented on this technique. In the present study of Home Economics/Human Ecology student values the sample is not specifically a test-retest of the same group but rather measures of freshmen and seniors' values each year. Discussion can then center on more microscopic group differences by major, level, and year, and changes by year.

Using the Rokeach Value Survey in the present study over a period of time helps to provide consistency and ease in comparison of group values. It is possible that the Rokeach Value Survey may: provide similar results to previous value instruments which could further support conclusions on value theory; erroneously make the same or other mistakes or make poor measurements as past values instruments may have; and/or provide a more reliable and valid values instrument.

Although value change over time in university students has been shown to occur, there is little evidence that changes are due to any one factor (Lehmann and Payne, 1963, p. 408). Various values studies have findings that indicate value positions and value changes may occur for different reasons and under different circumstances. Lehmann (1966, p. 97) very carefully pointed out that the value changes observed of university students may not be a resultant of college education per se but that, "the maturation and social environment might have more impact upon personality development than courses and formal academic experiences." In examination of value problem areas of 522 freshman and sophomore men and women enrolled in the Effective

Living course in the Basic College of Michigan State University, Orwig (1953, pp. 174, 179) found that more than one-third of the sample had general problems in value areas in the following order of intensity (low to high); a concern for: clear and logical thinking, adequate goals and objectives; inadequate aesthetic standards; religious issues. Orwig's study also lends support to Lehmann's maturation concept and Dressel and Lehmann's leveling-off-after-junior-year concept.

Bengtson and Lovejoy (1973) would further support the influencing factor of life stages on value holding. While age is a dimension of social differentiation and life experiences, age can imply a cultural change over time in value and orientations. When it comes to youth value orientation, the personal experience is the prime predictor (1973, p. 908).

Arsenian's notation that a student's changed value position paralleled those of the cultural norms, may suggest hypothetically that with personal development through the college years that social norms have increased weighting. Hence, the direction of student value change in college may have a one-sided leaning.

In another social context, vocational choice, Woodruff (1942, p. 33) and Dukes (1955, p. 28) reported that past results of the Allport-Vernon-Lindzey Study of Values test indicated value patterns seem to agree with the vocational choices and other activities of individuals. More recently, Feather (1970, p. 127) reported that the students' choice of school (humanities, social sciences, sciences) at

Flinders university was related to the relative importance of values as measured by the Rokeach Value Survey, Form E.

How much influence does a social or cultural value system have upon an individual's value system is a question to be considered when determining reasons for a specific value orientation of a group or individual. Both Friesen and Keniston have commented that value orientations of youth are not highly distinctive from a parent culture.

Friesen (1972) compared three adolescent subcultures enrolled in large urban senior high schools and matched on age, grade, and sex. The High School Values Inventory and Gough Home Index Scale were used. Group differences on each value indicator were tested by the Chi-Square test at the alpha level of .05.

Little support is given to the line of youth culture being separate and distinct from the parent culture because most of the value indicators were directly related to the ethno-cultural background of the involved students (Friesen, 1972, p. 271).

In contrast, Yankelovitch, Bengtson and Lovejoy, Flacks, Lystad, Grunstrom and Mead would suggest that the youth culture does have distinction.

Thomas (1971, p. 135) has an explanation for a difference in value orientation between parent and child. Invariably the children are those of parents who have moved forward to a level of abundance. Those values useful for affluence are now not so useful or meaningful to the children who are already affluent. Rather the child now sees a new set of values that will facilitate new and different goals which are in contrast to those of his parents.

In Keniston's (1968) study of youth movements, the young radicals were considered to be forerunners of the youth in general. Their goals were ones of trust, openness, human responsiveness and recognition of each individual (Keniston, in Brodbelt, 1971, p. 70). Evidence has shown that these youth are living out their parents' values (Keniston, 1968, p. 308) and Flack (1968, p. 7) reported that the outspoken radical student comes from the middle class and upper class family which is more apt to be the highly educated one.

> This type of family, by its own report, encourages intrinsic intellectual and aesthetic achievements more than concern for material comfort and status, which it tends to regard as something vaguely distasteful or immoral. It rejects, at least verbally, conventional religious identifications and criteria for respectability. It values education for its own sake, and tends to substitute the university for the church as the repository of highest values.

Similar to Friesen's findings Flack found that lower class and middle class youth were not strongly opposing adult values. A study of value conflicts between adults and youth by the Lincoln Filene Center (Kvaraceus, 1969, pp. 67-71) showed that youths in the sample are well aware of adult values.

But also, with the decline of the overtly reactionary 1968-1970 era of the youth, a "New Humanistic Ethic" is evolving as the current trend in characteristics and value priorities of the youth (Lystad, 1973, p. 121). There is a desire for immediate gratification, less convention in finding means to satisfy wants, collective orientation, concern for equality, and respect of man as being intrinsically worthy. Again, Yankelovitch, Mead, Stout, and Thomas could agree with Lystad's observations.

In another related dimension of youth value orientation, Cross (1968) provided a national composite picture of university students by combining four national studies of university student descriptions done from 1959 to 1967. One conclusion was that the values held by university students were different for men and for women (Cross, 1968, pp. 12-21). A second conclusion was that upper-class women were increasingly interested in true friendships, living group functions and in the well-rounded woman who valued social life. Relative to men the women were less confident but expressed themselves as being more understanding of others, more cheerful, and more artistic (Cross, 1968, p. 16).

As already suggested by Juola and Marcus, women students are showing a change in their goals especially over the last fifteen years. Epstein (1972, p. 671) first found that 1960-1965 studies on women showed students, both men and women, to have a traditional view that personal fulfillment of the women was centered in their homes and families.

But in the 1970 female freshman sample at a Liberal Arts College, College Student Questionnaire Surveys (CSQ) provided results which indicated that 48 percent of the students in 15 years hence see themselves as married career women with children. This was an increase from 42 percent agreement in the 1965 national sample. Only 28 percent were in agreement with married child in 15 years in the 1970 sample--a decrease. Thus, home and family were not considered as the end all and be all for women but rather only a part of their life.

Klemmack's (1973, pp. 510-523) study of 300 female mid-Atlantic university students of primarily freshman and sophomore level is in accordance with Epstein, Juola, and Marcus. The three roles of housewife, mother, and career were viewed as being compatible. However, 53 percent of those intending to work showed a preference for the traditionally stereotyped nonfeminine occupation--a definite change from the past. Also, marriage and family plans were concluded as serving as a function in determining the type of desired occupation.

As a supporting follow-through, Smith (1955, pp. 471-477) stated that both attitudes and values were modified depending upon the nature of the experience. Both attitudes and values were identified as being modified depending upon the nature of the experience (Smith, 1955, pp. 471-477).

To exemplify, the value orientation of women is paradoxical and mixed given the conditions of being reared and socialized in a marginal role. To explain, a marginal person is one who "must have access to the cultural institutions and media which affirm the values of the dominant group and downgrade or ignore those of the marginal ones" (Walstadt, 1974, p. 640). Women are marginals both as an individual and as a group.

> Females are schooled from birth into the more highly valued
> norms of the male culture (be assertive, autonomous, compet-
> itive, achieving) but they are also taught to be helpful,
> unassertive, dependent, and leave achieving to their hus-
> bands when they grow up. The boundaries between the cultures
> are permeable so girls are drawn to the more powerful and
> rewarding "masculine" world even as they are also learning
> to accept as natural the societal view that they should
> never enter that world. The clash of two possible self-
> definitions is usually experienced by girls and women as
> undifferentiated feelings of frustration, anxiety, or

discontent. Girls learn very early that it is preferable
to be male, and this knowledge may create identity and
self-image problems as the research of Brown (1956),
Hartley (1959, 1960) and many others demonstrates. In
boys and men there is rarely a reverse longing to incor-
porate aspects of the "feminine" role and any male who
attempts to do so will be vulnerable to considerable
social ostracism [Walstadt, 1974, p. 640].

As the orientations and outlets of men have been changing with
the evolution of the youth culture, there is interdependent and conse-
quent change in opportunities for experience and expression by women,
such as the "women's liberation" movement and increased interest in
nonfeminine occupations (Klemmack). Thus, it would be natural to
anticipate a change in female youth value orientation in the last
ten years.

Further, Snyder (1969, p. 270) in a 5-year follow-up of high
school graduates found that:

1. values do change after high school,

2. earlier values of high school time are not associated
   with education and occupational achievement after high
   school.

3. later education and occupational status is related
   positively to the degree of social activity in high
   school.

When interpreting results of value studies there is need to
take caution since intervening uncontrolled factors may exist on account
of the interrelated nature of values. Problems of design and methodol-
ogy of a study may be created with difficulties of controlling all
possible intervening factors since some are not easily quantified.

With studies of college students the place of values in edu-
cational administration can have two different emphases: descriptive

analysis of values and the effect of social and individual values in the administrative process, and the normative approach of philosophical treatment of values or ideals (Willower, 1961, p. 157).

Some questions that pertain to descriptive and normative problems are:

> What is the relationship between personal values and organizational values? How do the members of a profession, for example, school administrators, learn the values of the professional group? How do personal values influence selection and entry into the professional group? How does the personal-organizational values relationship influence conflict, satisfaction, and placement of loyalties in an organizational setting? [Willower, 1961, p. 159].

> What are the specific behavioral implications of a philosophy of education for the educational administrator? [Willower, 1961, p. 160].

Thus, in light of the application of values in the administrative process, a study of identification and comparison of student values in university gains more merit. In continuation a future study would be to inquire into the results of application of identified values.

The Rokeach Value Survey

With focus on college woman studies, Rokeach (1973, p. 35) concluded that there are several determinants of value stability. Although individuals may vary greatly in their value system stability, the reasons for individual differences in stability are not clear. The variables, sex, age, intellectual ability, and liberalism are known to influence terminal and instrumental value stability (Rokeach, 1973, p. 36). Women have significantly (or near-significantly) more stable

instrumental and terminal value systems than men. As compared with older college students the younger college students have more stable value systems. Freshmen have the most stable value system and sophomores and juniors have the least stable. With the instrumental value system there is more stability with social science and communication majors than Home Economics majors. Those preferring intellectual activities over social activities have a more stable terminal and instrumental value system.

The degree of value stability indicates that values may change with individuals in varying amounts. Rokeach has integrated several samples of Americans ranging in age from 11 to 70 and over and shown that sets of values fluctuate in priorities over the age span of an individual. The developmental patterns show that six values remain fairly stable no matter what the age: terminal values--*freedom, happiness,* and *social recognition*; instrumental values--*courageous, honest,* and *self-controlled.* While some values show a decrease suddenly during college years, there are 12 values that show a gradual to sharp increase in importance in college years: terminal values--*inner harmony, mature love, salvation, self respect, a sense of accomplishment,* and *wisdom*; instrumental values--*ambitious, broadminded, imaginative, intellectual, logical,* and *responsible.* Some of these values will show a decline after college and others will surface (Rokeach, 1973, pp. 73-81). Hence, in the present study, there may be indications of differences in values held with comparison of freshmen to seniors and freshmen to transfers.

To partly exemplify, in a recent study of Michigan residents from the Upper Peninsula and Lower Michigan regions, there are differences in the terminal value holdings by age, education, and geographic location (Grundstrom, 1975).

In the March 1975 survey, the top five most important values chosen without ranking were as indicated in Figure 3.

Age Group[a]	Values
18-20 years	Happiness Mature love *Freedom World of peace **Exciting life
21-26 years	**Mature love Freedom **Comfortable life True friendship *Family security

Figure 3. Top five terminal values chosen by Michigan residents in two age groups, 18-20 and 21-26.

[a]Out of two of the four age groups, the majority of the 18-26 aged respondents were attending a Liberal Studies class at Michigan State University with a female/male ratio of 40:28 (Grundstrom, 1975, pp. 8, 9, 22).

*Females rated the value more highly than males.

**Males rated the value more highly than females.

With location, *mature love* and *true friendship* were common to the 18-20 year-old Upper and Lower Peninsula residents. Similarly, *freedom* and *happiness* were the most important from Upper and Lower Peninsula.

Those people with some college education chose for their top five: *freedom, family security, mature love, happiness,* and *an exciting life;* whereas college graduates preferred: *family security, happiness, self respect, wisdom,* and *a comfortable life* (Grundstrom, 1975, p. 23).

Further, as the survey of values was related to degree of energy use, the concluding relationship was that high energy "users" were more likely to be realistic and practical and less idealistic and exciting. Also, social institutions such as the family, church, and school have not had much bearing upon providing a realistic education on the energy issue (Grundstrom, 1975, p. 27).

The best available data dealing with academic majors is Feather's (1970) comparative study of 530 freshman Australian students at Flinders University in the majors of Humanities, Social Studies, and Sciences. It was found that the student's choice of major was related to the relative importance assigned to different terminal and instrumental values (Feather, 1973, p. 127). These results are similar to earlier studies using the Allport-Vernon-Lindzey Study of Values (Dukes, 1955, p. 28) and vocational choice of people-environment (Holland, 1962).

Since the results were obtained just prior to actual entrance to the major, there is indication that an individual's value system hierarchy may influence educational choice rather than the school major shaping the individual's value system. Thus, the more a college student

is involved in the school the greater chance for intervention upon shaping the individual's value system. The timing of administration of the value survey to freshmen then may have importance. To test for significance of differences the ranks of each value were treated as scores and ranked in order across all subjects. The differences in the means of these ranks between majors were tested using the Kruskal-Wallis one-way analysis of variance (Feather, 1973, p. 132).

In contrast, when comparing differences in values between males and females, the median test was used (Feather, 1970, p. 133). Reason for the use of two versus use of one significance of difference test was not given.

Feather (1972) used 2,947 male and female Australian senior high school students to rank values according to themselves and what they thought the school would emphasize. The results showed that measures of school adjustment were positively related to the extent students' values matched school values (Feather, 1972, p. 193). The design of the study provides a technique for matching student values and projected, as perceived by student, school values. Modification of the design can be applied to the present study by correlation of students' own values with the stated college values. The decision has to be made about whether the students' perceptions of school values are in line with the stated values. A correlation could be done between per-ceived and stated school values. Results of Feather's (1972) study may have implications for assistance in guidance of students to appropriate majors but the value systems of student and major must be first known.

Summary

Values of Home Economics and
Human Ecology

With the inception of Home Economics at the beginning of the 1900's the professional concern was for a quality life for the family and individuals. Bane, Hill, and Budewig pointed out in the 1950's that the central professional focus was on the home and relating to family needs with acceptance of change. The American Home Economics Association then published Home Economics New Directions in 1959 which reaffirmed the concern for a quality family life. A decade later, the Home Economics professional direction and value orientation were diverse as indicated at the 11th Lake Placid Conference (1973) and Yankelovitch's study (1974a) of the professional direction. Yankelovitch proposed that there should be long-range planning in terms of defining Home Economics.

At Michigan State University in the 1960's, Lee and Dressel also suggested curriculum revision when a Home Economics curricula evaluation showed that there was a lack of family orientation. Six steps were taken to clarify and implement a Home Economics professional position at Michigan State University:

1. Quilling (1970) identified the status of 1958-1969 Home Economics philosophy;

2. Lorenz (1970) described Home Economics student backgrounds, attitudes, and values in 1968-69;

3. Name and philosophy changed with the transition from College of Home Economics to College of Human Ecology in 1970;

4. Human Ecology position statements by Turk, Hook, and Paolucci (1970-71) had a focus on quality living and examination of the relationships between family and near-environment;

5. Introduction of the Human Ecological Systems Framework in college core courses and application in other courses;

6. Vaines (1974) probed the acceptance of the Human Ecological Systems perspective in a national Home Economics College survey.

From 1960 to 1968, assessment of student orientation as preprofessionals in Home Economics has been on a small group basis (Fukishima; Astle). The Lorenz study on backgrounds, attitudes, and values of a representative group in 1968-69 did not concentrate on the value orientation. Home Economics students expressed more social consciousness than other Michigan State University college women. Freshman majors differed more on terminal values than instrumental values. Upperclass majors differed more on instrumental values. By majors, there was a diversity in concern for the well-being of people.

The Marcus study of Human Ecology Alumni (1969-1973) showed that the main reason for career choice was an opportunity to help others. College of Human Ecology female students also felt that the highest contribution of college to their lives was in the personal development section.

Values in Higher Education

Over the years value studies of college students have shown that value orientations change in the four-year academic term and

over the decades. Seniors have been found to have emerging value patterns that followed cultural norms (Arsenian, 1943; Todd, 1943). Homogeneity of value orientation was greater among senior students than freshmen, sophomores, or juniors (Jacob, 1957). Again, changes in value position were found from freshman to senior level at Michigan State University (Dressel and Lehmann, 1965) and seniors were more outer-directed and less traditional. Confirmation of value change and orientation of freshman to senior level has been given by Lehmann, Sinha, and Harnett (1966), and Williams (1971). Freedman (1971) found that students within a major from freshman to senior level were consistent in their value orientation. Female students at Michigan State University were more concerned with intellectual and societal objectives than male students but were also career-minded (Juola, 1973).

Morris (1970) noted in a replicated 1950 study that college students still preferred a value orientation of Way Seven--a many sided self. However, students in 1970 were less traditional. In the several studies from 1968 to 1973, Yankelovitch observed students move from a concern for social reform and rejection of traditional careers to an orientation of self-fulfillment with a conventional career. The change in youth values was similar to the findings of Jacob (1957), Hoge (1970), and Morris (1970) in that there was a weighting towards privacy and decrease in obedience and religious emphasis.

Value change over time has shown little evidence that changes are due to any one factor. Various contributing factors noted were individual maturation, social environment, life stages, vocational

choice, generational orientations, youth movements, sex type and socialization by sex type, and personal life experiences.

The Rokeach Value Survey

Findings reported were from pertinent studies which employed the Rokeach Value Survey. Reasons for individual differences in value stability are not clear but the variables sex, age, intellectual ability, and liberalism are known to influence terminal and instrumental value stability. Women are more stable on the terminal and instrumental value systems than men. Freshman college students have the most stable value system and sophomores and juniors have the least stable value system. Those preferring intellectual activities over social activities have a more stable terminal and instrumental value system.

Developmental value patterns are shown with fluctuations in priorities over the age span. In college there is an increase in importance for the terminal values: *inner harmony, mature love, salvation, self respect,* and *a sense of accomplishment.* Similarly, there is increased priority on the instrumental values: *ambitious, broadminded, imaginative, intellectual, logical,* and *responsible.*

It was found that the choice of major was related to the relative importance assigned to different terminal and instrumental values when Australian freshmen were compared in Humanities, Social Studies, and Sciences (Feather, 1970). Further, there were value priority differences between male and female college students. Another Australian study indicated that, with senior high school students, measures of school adjustment were positively related to the extent students' values matched school values (Feather, 1973).

CHAPTER III

DESIGN AND METHODOLOGY

This study compares the personal values of Home Economics and
Human Ecology undergraduate students at Michigan State University from
1968 to 1975. To start the overview of the problem for study, a dis-
cussion of the problem under present study and background literature
related to the problem have been given in the last two chapters. In
this third chapter, the design of study is mapped out. Thus, this
chapter includes a description of data collection, an explanation of
the instrument used, a sketch of the subjects in the sample, a statement
of research hypotheses to be tested and an outline of statistical tests
to be used in the analysis of the data.

Collection of Data

Data were collected from Home Economics and Human Ecology
undergraduate female students from Fall term 1968 to Spring term 1975.

Starting with 1968, for the data collection from the 1968-69
Home Economics undergraduate sample, the Rokeach Value Survey, Form D,
was administered immediately after the College Student Questionnaire in
a session with no time limit. The two times selected for administration
were Fall 1968 and April 1969. In the Fall 1968 group, freshman and
transfer students were the subjects. In the April 1969 group, freshman

sophomore, junior, and senior students were the subjects and were
representative of the population.

For data collection of the 1971-72 Human Ecology undergraduate
student sample, first, the Rokeach Value Survey, Form D, was adminis-
tered at the end of the Fall 1971, Winter 1972, and Spring 1972 terms
in the freshman course FE 110, Man and His Near Environment. In each
term the students were tested in one session which followed the writing
of the final examination for the course.

Second, the Value Survey, Form D, was administered in one
session during a FE 401 Senior Seminar class period for both Winter
1972 and Spring 1972 terms.

The 1972-73 group of subjects was given the Form D Value Survey
in the courses FE 110 and FE 401. A collection of data was made in
FE 110 two-thirds of the way through the Fall 1973, Winter 1973, and
Spring 1973 terms; and in FE 401, only in Spring 1973 term. All the
subjects were handed the survey in class and asked to complete it at
home and return the survey two days later in the next class session.

The 1973-74 group of subjects was given the Form F Value Survey
two-thirds of the way through the course FE 110 in Fall 1973, Winter
1974, and Spring 1974 terms and two-thirds of the way through the
course FE 401 in Spring 1974 term. The Value Survey was administered
at the beginning of the class in one session with a maximum of 30
minutes for the survey completion in FE 110 and FE 401. The surveys
were collected immediately after completion.

The 1974-75 sample was given the Value Survey under the same
conditions as the 1973-74 group of participants. The FE 110 course
used Form D and the FE 401 course used Form F.

Since the directions for completion of the survey are self explanatory, general directions in administration entailed distribution of the survey, guiding students to do the survey independently without talking or sharing and to follow the directions written on the inside of the survey front cover. Guidance in requesting the student to provide name and/or student number varied with the sessions.

In Table 1 a summary of the Value Survey form used, sampled groups, and time of survey administration is given.

Table 1. Summary of Data Collection[a]

Course Level	Year														
	1968-69			1971-72			1972-73			1973-74			1974-75		
	Term														
	F	W	S	F	W	S	F	W	S	F	W	S	F	W	S
Freshman	D_1			D_2	D_2	D_2	D_3	D_3	D_3	F_2	F_2	F_2	D_2	D_2	D_2
Senior			D_1		D_2	D_2			D_3			F_2			F_2

^{a}D = Rokeach Value Survey Form D administered in specified term.
F = Rokeach Value Survey Form F administered in specified term.
1 = Survey administration in a special group session in a class.
2 = Survey administration in a class session.
3 = Survey handed out and returned during a class but survey completed outside the class.

In brief, both the administration of the Rokeach Value Survey and the form of the Value Survey used has two parts.

Class and home settings were used when administering the Value
Survey. Variation in administration was because of the lack of written
specifications for consistent administration and use of the Rokeach
Value Survey in the college for future on-going baseline data, and
especially at the time of the 1968-69 data collection. However, in
1970 there was a verbal college administrative agreement and reinforce-
ment to continue using the Value Survey with Human Ecology students for
ten years.

Form D and Form F of the Rokeach Value Survey were used. Use
of both survey forms stemmed partly from the above administrative
reason and partly from the fluctuation of available research funds
in the college to support the cost of the surveys. During a period
of austerity, the college offset Form D of the Value Survey, with a
minor change in recording instructions, thus creating Form F of the
Value Survey at an accommodating cost.

Instrument

Evolution of the Rokeach Value Survey has a history of pilot
testings, revisions, expansions, and analyses of respondent behavior
to instrument structure and composition.

The instrument in a two-page booklet form has: a front
identification cover with spaces for birthdate, place of birth, sex
type, and name; instructions on the backside of the front cover; a
first page with a column of 18 defined terminal values (end-states of
existence) alphabetically listed and a column of 18 numbered spaces;

and a second page of 18 defined instrumental values (modes of conduct
or means) and 18 spaces similarly arranged to the terminal values.

To complete the survey in approximately 20 minutes, the
respondent is required first to rank the 18 terminal values in order
of importance to self, then, second, rank similarly the 18 instrumental
values. In Form D the values are printed on adhesive-backed labels
which can be peeled off and rearranged several times with ease. When
the two sets of values are reranked in the personally preferred order
by the respondent, the resulting two new hierarchies represent the
respondent's own terminal value system and instrumental value system.

In Form F the respondent is given a mimeographed form of
Form D Value Survey but is asked to rank each list of 18 values in
order of importance to self by writing down each value in the per-
sonally preferred order in the provided columns of spaces.

The only difference between Form D and Form F is the medium
of expression of respondent's value systems: placement of printed
values on gummed labels in Form D versus handwriting the values in
Form F. Appendix A gives an example of the Rokeach Value Survey,
Form D and Form F.

Reliability.--The technique used to determine the stability
of the Value Survey was to correlate (Spearman Rank correlation) the
rank orderings of the respondent's value systems at one sitting with
those rankings the respondent gave on a second occasion. For Form D
the median reliability for the terminal value system is 0.78 with a
three to seven week interval between test and retest of college
students and similarly, the median reliability of 0.72 to 0.70

for the instrumental value system. For Form F the median reliability

for the terminal value system is 0.61 with a three-week interval

between test and retest of college students and similarly, the median

reliability of 0.69 for the instrumental value system.

In Table 2 the median test-retest reliabilities for Forms D,

E, F, and paired comparison method of the Rokeach Value Survey are

given.

Scoring.--For computation of the median rankings of the

18 terminal values and 18 instrumental values for each respondent

and subgroup of respondents, the rank ordering scores of each value

are first tabulated in frequencies. With knowledge of the frequencies

of the rank scores on a value, the median or middle score in the

distribution then be calculated.

Given the choice of mean or median, the median is the

appropriate measure of central tendency for ordinal or ranking scale

of measurement. An explanation for why the median is more appropriate

than the mean is given later in the analysis of data section of this

chapter.

Attrition.--The greater ease in completion and game-like

characteristic of Form D due to the use of gummed labels gives less

attrition than Form F. In Form F there is a tendency to sometimes

write down a specific value twice and consequently omit another

specific value.

Unique to Form D is the occasional mixing together of terminal

values and instrumental values when reranking the values into two

hierarchies. Failure to complete a value hierarchy and omission of

Table 2. Median Test-Retest Reliabilities for Form D, Form E, Form F, and Paired Comparison Method of the Rokeach Value Survey (Parrish, 1975; and Rokeach, 1973, p. 32)

Form	Description	N	Sample	Time Between Test-Retest	Terminal Reliability	Instrumental Reliability
D	18 values, defining phrases added, gummed labels	26[a]	7th grade	3 weeks	0.62	0.53
		26[a]	9th grade	3 weeks	0.63	0.61
		26[a]	11th grade	3 weeks	0.74	0.71
		117	college	3 weeks	0.78	0.72
		36	college	4.5 weeks	0.80	0.70
		100	college	7 weeks	0.78	0.71
		216	college	2-4 weeks	0.76	0.65
		204	college	14-16 weeks	0.69	0.61
E	18 values, defining phrases added, mimeographed version of Form D reranked values numbered	189[b]	college	3 weeks	0.74	0.65
		32[b]	Lansing adults	12 weeks	0.74	—
		77[c]	S. Australia College	5 weeks	0.74	0.70
F	18 values, defining phrases added, mimeographed version of Form D reranked values handwritten	21[d]	college	3 weeks	0.61	0.69
Paired comparison method	18 values, defining phrases added	30	college	5 weeks	0.87	0.60

[a]From McLellan (1970).   [b]From Homant (1970).

[c]From Feather (1972).   [d]From Parrish (1975).

one whole value hierarchy (more often the second page of instrumental values) are causes of attrition common to both Form D and Form F.

Use.--The inherent simplicity of the Rokeach Value Survey, developed by Milton Rokeach and cohorts in the Department of Psychology at Michigan State University in the late 1960's, provides a basis for several reasons for the use of the instrument. The instrument is one of the few that simply and easily operationalizes a value theory through the use of the two rank order value scales used to measure terminal and instrumental value systems. In a broader context to past human behavior research and theory, Rokeach has not only differentiated between beliefs, attitudes, and values but also clarified the centrality of values over beliefs and attitudes to human behavior. The Rokeach Value Survey has thus overcome the historical value instrument problem of adequately operationalizing value theory.

Research to date suggests that instructions for survey completion are easily grasped by respondents between the ages of 11 and 90 and average time for survey completion is 20 minutes. Thus, along with low purchase cost, the ease of survey administration implies elimination of trained administrators which in turn reduces research costs. When administering the survey to groups and over time, material cost, consistency in survey administration, and brevity in required completion time become critical factors in the breadth, depth, and continuity of data collection.

To exemplify, the data from Lorenz (1970) study on personal values of Home Economics students at Michigan State University during 1968 and 1969 can be utilized in the current study on personal values

of Human Ecology student at Michigan State University to date. Hence, an additive longitudinal study can be accomplished. In turn, the data from Lorenz' study and this current study can be added to a future study on personal values of Human Ecology students thus helping to build an ongoing comprehensive university college assessment over time. Further, the low material cost of the survey has allowed the continuity of survey administration over the years 1968 to 1975. Even then, budget stringencies forced the use of the less-expensive Form F survey.

Lastly, refinement in value measurement and value change and lack of intervening uncontrolled variables are other criteria in instrument use when studying group values over time. The undisguised Rokeach Value Survey, through direct rank ordering of values, provides separate quantitative measures of values, value systems, and value change without the extra step of scoring. There is not a significant tendency to respond to the survey in a socially desirable manner (Kelley et al., 1972) and ranking of values is not affected by the alphabetical order of values (Cochrane and Rokeach, 1970) nor by importance of the value (Homant, 1967).

The two specific features about the Rokeach Value Survey are its projective nature and ipsativity.[1] The Value Survey is projective as it elicits internal responses. Rokeach noted that,

> The respondent has only his own internalized system of
> values to tell him how to rank the 18 terminal and 18
> instrumental values. Responses to the test are not

---

[1]The rank ordering of 18 values creates ipsativity, which means that once 17 values are ranked, the ranking of the 18th value is decided automatically. There can be tolerance of this amount of ipsativity; however, when interpreting results the ipsativity should be considered.

suggested by the stimulus material. Thus, the ranking
task is highly projective in nature, . . . its most dis-
tinctive feature being that the stimuli are words and the
only responses elicited from the respondent are numbers
from 1 to 18 [Rokeach, 1973, pp. 27-28].

Thus, certain methodological limitations are avoided: the time
consuming and expensive attempt at consistent inference about values
from behavior data; and the respondent's unwillingness, inability, or
selective sharing of own values (Rokeach, 1973, p. 27).

Operational Definitions

Meanings of each value are given in the actual instrument,
located in the Appendix.

Terminal value is represented by 18 different words, each
printed on a moveable gummed label. The 18 words that represent 18
terminal values are: *a comfortable life, an exciting life, a sense of
accomplishment, a world at peace, a world of beauty, equality, family
security, freedom, happiness, inner harmony, mature love, national
security, pleasure, salvation, self respect, social recognition, true
friendship,* and *wisdom.*

Instrumental value is represented by 18 different words, each
printed on a moveable gummed label. The 18 different words that rep-
resent 18 instrumental values are: *ambitious, broadminded, capable,
cheerful, clean, courageous, forgiving, helpful, honest, imaginative,
independent, intellectual, logical, loving, obedient, polite, respon-
sible,* and *self-controlled.*

Value system is formed by the respondent arranging either 18
terminal values or 18 instrumental values in an hierarchy of personal

preference, with each value having a rank position of 1 to 18 on the scale. A terminal value system or hierarchy is formed when 18 terminal values are ranked in a preferred order by the respondent. Similarly, an instrumental value system or hierarchy is formed with instrumental values.

Subjects

Sample distribution.--The sample was composed of Home Economics undergraduate female students enrolled during 1968-69 and Human Ecology undergraduate female students enrolled during 1971-1975 at Michigan State University. The subjects represented by level, three groups: freshman nontransfers, transfers, and senior nontransfers. The freshman nontransfer group had entered the college within less than one year and the senior nontransfer group was in its fourth year in the college and preparing to graduate within less than one year. The transfer group had enrolled in the college after changing choice of college or university. Transfer students were mainly in their sophomore and junior year, however, freshman and senior transfer students were also involved.

The majority of the sample subjects were aged 18 to 22 years. Over the academic years, 1968 to 1975, the amount in each academic year falling into the 18 to 22 age range varied from 87.7 percent to 97.1 percent.

The subgrouping of students by major was: Child Development & Teaching, Consumer-Community Services, Foods, General Home Economics/ Family Ecology, Family Ecology-Communication Arts, Home Economics Education, Clothing & Textiles, Interior Design, Human Environment & Design,

Dietetics, Nutrition/Research, and Retailing of Clothing & Textiles. For part of the analysis of data some of the majors were clustered together as follows: (1) Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; (2) Foods, Dietetics, Nutrition/ Research; and (3) Interior Design, Human Environment & Design. Each of the three clusters of majors was affiliated with only one college department. Clustering was done as some of the majors in their smallest cell size were just less than nine, the smallest number of dependent variables taken at one time when doing the multivariate analysis of variance test on the value systems. The multivariate analysis of variance will not accept a cell size of an independent variable smaller than the number of dependent variables being analyzed at one time.

Home Economics and Human Ecology undergraduate male students enrolled during 1968 to 1975 were not included in the sample for two reasons. First, control of the sex type variable was needed because sex type differences exist when ranking the values in the Rokeach Value Survey. In an Australian sample, male college students differed significantly from female college students irrespective of school major choice (Feather, 1970a, pp. 133-134).

In an American national survey, $N = 1,409$, 12 of 18 terminal values and 8 of 18 instrumental values did significantly separate men from women (Rokeach, 1973, p. 58). Thus, control was built into the research design of this current study (Kerlinger, 1973, p. 257) by confining the sex type variable to only one of the sexes, the female sex.

Second, the male sample size was inadequate: the range of N was from a low of one to a high of nine for any given year. This size of male sample gave incomplete cells when attempting to make comparisons with the female sample by subgroups. Also, a representative male sample was not possible. The alternative of using a large nonprobability male sample was impossible with the low total male sample size. Thus, inability to obtain a suitable male sample by the two major means gave another reason to the omission of male subjects in the Home Economics and Human Ecology undergraduate student sample.

To summarize the sample distribution, by levels, transfers, and majors for each academic year, the number and proportion in the sample by percent and comparative population proportions are shown in Tables 3, 4, and 5.

Sample type.--As a consequence of sample distribution and survey administration design the overall sample description type is twofold. The 1968-69 section of the sample is a representative or quota nonprobability sample since the same proportion of elements in the population was maintained in the sample and there was no assurance that every element had an equal chance of being included.

The 1971 to 1975 part of the sample is a purposive nonprobability sampling due to the college administrative factors mentioned in the data collection section of this chapter. This 1971 to 1975 part is nonrandom and one of convenience since preformed groups by course enrollment were used. However, there was pinpointing at specific classes that would encapsule a large proportion of freshman

Table 3. Sample and Population Distribution by Levels of Home Economics and Human Ecology Undergraduate Students, 1968-1975[a]

Year[b]	Sample		Population[c]		% Sample to Population
	N	%	N	%	
1968-69:					
Freshman nontransfer	246	72.6	249	48.6	
Senior nontransfer	93	27.4	263	51.4	
Total	339		512		66.2
1971-72:					
Freshman nontransfer	154	44.5	223	45.2	
Senior nontransfer	192	55.5	270	54.8	
Total	346		493		70.2
1972-73:					
Freshman nontransfer	177	58.8	258	50.6	
Senior nontransfer	124	41.2	252	49.4	
Total	301		510		59.0
1973-74:					
Freshman nontransfer	183	67.8	245	42.2	
Senior nontransfer	87	32.2	335	57.8	
Total	270		580		46.6
1974-75:					
Freshman nontransfer	159	66.8	233	40.2	
Senior nontransfer	79	33.2	346	59.8	
Total	238		579		41.1
1968-1975	1,494		2,674		55.9
1971-1975	1,155		2,162		53.4

[a]Undergraduate students are female freshman nontransfers and female senior nontransfers.

[b]Year is the academic year, consisting of Fall term of one year and Winter and Spring term of the following year.

[c]Figures are taken from the university count on the fifth day of Fall term of each academic year. See College of Human Ecology Report 4401, 1968 to 1975.

Table 4.   Sample and Population Distribution of Undergraduate Transfer
Students in the College of Human Ecology, 1971-1975[a]

Year[b]	Sample[c]		Population[d]		% Sample to Population
	N	%	N	%	
1971-72	58	14.4	336	44.5	14.6
1972-73	131	30.3	456	47.2	28.7
1973-74	136	33.5	536	48.0	25.4
1974-75	100	29.4	516	47.0	19.3

[a]Undergraduate transfer students are female and enrolled in Fall
term or Spring term of each academic year. Transfer students are from
freshman, sophomore, junior, and senior levels.

[b]Year is the academic year, consisting of Fall term of one year
and Winter and Spring term of the following year.

[c]Percentage of transfer students is based upon total sample size
consisting of transfer, freshman nontransfer, and senior nontransfer
students.

[d]Percentage of transfer students is based upon total population
size consisting of transfer, freshman nontransfer, and senior nontrans-
fer students.

Table 5. Sample and Population Distribution by Majors of Home Economics and Human Ecology Undergraduate Students, 1968-1974[a]

Year[b]	03 Child Development & Teaching		04 Consumer-Community Service 17 General HE/Family Ecol 23 Communication Arts		11 Foods 33 Dietetics 34/35 Nutrition/Research		25 Home E Education		26 Clothing & Textiles		27 Interior Design 32 Human Environment & Design		40 Retailing of Clothing & Textiles		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1968-69 Sample	20	5.9	34	10.0	39	11.5	81	23.9	23	6.8	67	19.8	75	22.1	339	100
Population[c]	62	12.1	52	10.1	33	6.4	110	21.5	28	5.5	111	21.7	116	22.7	512	100
1971-72 Sample	56	16.2	45	13.0	36	10.4	49	14.2	52	15.0	54	15.6	54	15.6	346	100
Population	62	12.4	25	11.6	42	8.5	80	16.2	83	16.8	89	18.1	81	16.4	493	100
1972-73 Sample	50	16.6	41	13.6	42	14.0	32	10.6	41	13.6	59	19.6	40	12.0	301	100
Population	91	17.8	79	15.5	63	12.4	72	14.1	80	15.7	107	21.0	18	3.5	510	100

Table 5--Continued

Year[b]	03 Child Development & Teaching		04 Consumer-Community Service / 17 General HE/Family Eco / 23 Communication Arts		11 Foods / 33 Dietetics / 34/35 Nutrition/Research		25 Home E Education		26 Clothing & Textiles		27 Interior Design / 32 Human Environment & Design		40 Retailing of Clothing & Textiles		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1973-74 Sample	50	18.5	32	11.9	41	15.2	24	8.9	23	8.5	57	21.1	43	15.9	270	100
Population	95	16.4	81	13.9	69	11.9	56	9.7	80	13.8	94	16.2	105	18.1	580	100
1974-75 Sample	48	20.2	27	11.3	40	16.8	8	3.4	21	8.8	54	22.7	40	16.8	238	100
Population	111	19.2	86	14.8	73	12.6	42	7.3	40	6.9	93	16.1	134	23.1	579	100

[a]Undergraduate students are female freshman nontransfers and female senior nontransfers.

[b]Year is the academic year, consisting of Fall term of one year and Winter and Spring term of the following year.

[c]Figures are taken from the university count on the fifth day of Fall term of each academic year. See College of Human Ecology Report 4401, 1968 to 1975.

(FE 110) and senior (FE 401) level undergraduate students. Thus, a quasi-representative-area sampling within the realm of a purposive nonprobability sampling was attained.

Sample size and representativeness.--Since the sample type is overall nonprobability or nonrandom there is a reduction in the ability to generalize results beyond the size of the sample. Hence, in order to do any kind of generalizing beyond the size of the nonrandom sample, the factors of sample size and representativeness to the population take on significance.

The largeness of the sample size helps to increase accuracy and at the same time reduce errors. It is known that statistics calculated from large samples are more accurate (Kerlinger, 1973, p. 128) and that the larger the sample the smaller the error and vice versa (Compton, 1972, p. 191; Kerlinger, 1973, 1973, p. 128), as illustrated in Figure 4.

Size of Sample

Figure 4. Relation between sample size and error
(Kerlinger, 1973, p. 128).

Uncontrolled variables will operate more randomly in a large sample than in a small sample (Compton, 1971, p. 191). With the sample also being divided into subgroups the large sample reassures cell completion and general adequate cell size necessary when comparing by major, level, and year.

The subgroup size ranges are: (1) for majors from 8 to 81, (2) for level from 79 to 246, and (3) for year from 337 to 432. Hence, the amount of sample error is low; however, the cell size should not be disregarded when discussing results and degree of generalizations.

In brief, the sample is classified as large and represents 41 to 70 percent of the population in any given academic year. The general adequacy of numbers provides for the most part safety in having a normally distributed sample which in turn provides a basis for making confident conclusions about the sample and suggestions about the population.

For the most part the sample is representative on a total and subgroup basis to the population. By freshman and senior nontransfer level in three of the five academic years there is a greater proportion of freshmen and smaller proportion of seniors than the population. By transfer level one year is underrepresented. The representativeness of the sample closely parallels the same proportions in the population by majors over the years.

Hence, external validity and clarity of differences among groups over the years can be achieved. However, there is greater external validity (representativeness) with the majors and total groups by years than with the subgroups by levels. Therefore, greater caution in degree

of generalization must be taken when interpreting the results of level comparisons than with the major and total groups.

In comparison to past sample sizes of other studies using the complete Rokeach Value Survey, this sample is also the largest of all samples, N = 2,351, and longitudinally the longest, seven years. The next largest sample is the National NORC Sample tested in April 1968 by sex, income, education, race, age, and religion, for American adults over the age of 21, N = 1,409: males = 665 and females = 744 (Rokeach, 1973, p. 55+). However, an Australian high school sample tested in April 1971 would be the alternative next largest sample, N = 2,947, when considering the completion of only half the survey. Approximately half of the subjects ranked the terminal values, N = 1,465 and the remaining subjects ranked the instrumental values, N = 1,482 (Feather, 1972, pp. 196-197).

Hypotheses

The data on student terminal and instrumental values can be used for a baseline description of undergraduate Home Economics and Human Ecology female students and as information for basic consideration in curriculum development, curriculum revision, and college program changes.

In hypothesis 1, a description of the Human Ecology students over the last four years, 1971-1975, in a broad composite assessment can provide a general overview. This overview is pertinent since the College of Human Ecology was established five years ago in 1970 and little descriptive baseline data on Human Ecology students exists for

this period of time. The data also can help to answer the college administrative question, "What are the values of students in your college?" Thus, hypothesis 1 can provide the initial overview of student terminal and instrumental values in the College of Human Ecology for the block period 1971-1975 in one broad stroke.

However, a general assessment over the years may neither provide an average indicator nor show clearly significant differences from year to year. Can the broad overview act as an accurate average of Human Ecology students? Can the overview indicate a pattern or predictor of Human Ecology student values? Should there be similarities over the years, then the yearly value descriptions may help to validate the general overview indicated in hypothesis 1. Hence, in hypothesis 2 a comparison of student values among the years 1971-1975 is done to show support, prediction, and trends.

Turning to hypothesis 3, the general comment about freshman students having personality changes during their first year at university leads to the question, "Are freshmen significantly different by school term in their first academic year?" Since transfer students are theoretically not freshmen but do enter new to the College of Human Ecology similarly to freshmen, there too may be differences among transfer students when grouped by school term. Although freshman and transfer students enter the college at different levels and possibly for the same and/or different reasons, the two groups, on the one hand, may be highly similar, and on the other hand, may be uniquely different. Thus, the determination of differences between freshman and transfer students can help to guide faculty advisors in

making suitable suggestions applicable to individual student group differences. Similarly, the college administration may be able to make sounder program decisions on a broad scale based upon the concrete evidence of student group differences. So, for 1971-1975, hypothesis 3 attends to (1) the comparison of freshmen by Fall and Spring school terms in each year and over the years, (2) the comparison of transfers by Fall and Spring school terms in each year and over the years, (3) the comparison between freshmen and transfers over the years, and (4) the comparison of the combined freshman and transfer groups over the years and by school term over the years.

Lastly, in hypothesis 4 with the college organization change to Human Ecology in 1970, has there been a change in personal value description of enrolled students? Are Home Economics students different from Human Ecology students? Is there a definite trend in student value description over time? By comparing the Home Economics students of 1968-69 (students at the College of Home Economics to College of Human Ecology transition time) to Human Ecology students of 1974-75 (students exposed only to the College of Human Ecology organization) there can be further clarification and identification of stability of student personal value orientations. Hence, in hypothesis 4, comparison is made between the terminal and instrumental values of Home Economics students in 1968-69 and of Human Ecology students in 1974-75.

The suggested hypotheses found in Chapter I are now stated below more specifically in the general research hypothesis form.

Hypothesis 1

There are differences in the personal values held by undergraduate Human Ecology students by major and level for the one academic period 1971-1975.

1.1   *There are differences in the values held by undergraduate Human Ecology students by major for the one academic period 1971-1975.*

1.2   *There are differences in the values held by undergraduate Human Ecology students by level for the one academic period 1971-1975.*

1.3.1   *There are differences in the values held by freshman non-transfer undergraduate Human Ecology students by major for the one academic period 1971-1975.*

1.3.2   *There are differences in the values held by senior nontransfer undergraduate Human Ecology students by major for the one academic period 1971-1975.*

1.4   *There are differences in values held by each of the four college departments, comprised of the respective majors, for the one academic period 1971-1975.*

Hypothesis 2

There are differences in the personal values held by undergraduate Human Ecology students among majors, levels, and academic years 1971-1975.

2.1   *There are differences in the values held by undergraduate Human Ecology students among the academic years 1971-1975.*

2.2   *There are differences in the values held by undergraduate*
        Human Ecology students among the majors in the academic year
        1971-72, and similarly in the years, 1972-73, 1973-74, and
        1974-75.

2.3   *There are differences in the values held by undergraduate*
        Human Ecology students between levels, freshman nontransfers,
        and senior nontransfers, in the academic year 1971-72, and
        similarly in the years 1972-73, 1973-74, and 1974-75.

2.4   *There are differences in the values held by undergraduate*
        Human Ecology students in each major among the academic years
        1971-1975.

2.5   *There are differences in the values held by undergraduate*
        Human Ecology students in the freshman nontransfer level
        among the academic years 1971-1975, and similarly, in the
        senior nontransfer level among the years 1971-1975.

2.6.1   *There are differences in the values held by freshman nontransfer*
        undergraduate Human Ecology students among the majors, in the
        academic year 1971-72, and similarly, in the years 1972-73,
        1973-74, and 1974-75.

2.6.2   *There are differences in the values held by senior nontransfer*
        undergraduate Human Ecology students among the majors in the
        academic year 1971-72, and similarly, in the years 1972-73,
        1973-74, and 1974-75.

2.7.1   *There are differences in the values held by freshman non-*
        transfer undergraduate Human Ecology students in a major
        among the academic years 1971-1975.

2.7.2 *There are differences in the values held by senior nontransfer*
undergraduate Human Ecology students in a major among the
academic years 1971-1975.

Hypothesis 3

There are differences in the personal values held by transfer
and freshman nontransfer undergraduate Human Ecology students in the
years 1971-1975.

3.1 *There is a difference in the values held between freshman*
undergraduate Human Ecology students in Fall and Spring
term of each year 1971-1975.

3.2 *There is a difference in the values held between transfer*
undergraduate Human Ecology students in Fall and Spring term
of each year 1971-1975.

3.3 *There are differences in the values held by freshman under-*
graduate Human Ecology students in Fall term over the years
1971-1975.

3.4 *There are differences in the values held by transfer under-*
graduate Human Ecology students in Fall term over the years
1971-1975.

3.5 *There are differences in the values held by freshman under-*
graduate Human Ecology students in Spring term over the years
1971-1975.

3.6 *There are differences in the values held by transfer under-*
graduate Human Ecology students in Spring term over the years
1971-1975.

3.7   *There are differences in the values held between freshman and transfer undergraduate Human Ecology students in the academic year 1971-72, and similarly, in the years 1972-73, 1973-74, and 1974-75.*

3.8   *There are differences in the values held in the combined group of freshman and transfer undergraduate Human Ecology students over the years 1971-1975.*

3.9   *There are differences in the values held by the combined group of freshman and transfer undergraduate Human Ecology students in Fall term over the years 1971-1975.*

3.10   *There are differences in the values held by the combined group of freshman and transfer undergraduate Human Ecology students in Spring term over the years 1971-1975.*

Hypothesis 4

There are differences in the personal values held by undergraduate Home Economics students in 1968-69 and undergraduate Human Ecology students in 1974-75 by major and level.

4.1   *There are differences in the values held between Home Economics students in 1968-69 and Human Ecology students in 1974-75.*

4.2   *There are differences in the values held between Home Economics students of 1968-69 and Human Ecology students of 1974-75 by level.*

4.3   *There are differences in the values held between Home Economics students of 1968-69 and Human Ecology students of 1974-75 by major.*

4.4.1 There are differences in the values held between freshman

nontransfer Home Economics students of 1968-69 and freshman

nontransfer Human Ecology students of 1974-75 in each major.

4.4.2 There are differences in the values held between senior

nontransfer Home Economics students in 1968-69 and senior

nontransfer Human Ecology students of 1974-75 in each major.

Design Matrices

According to the four hypotheses, four matrices are suggested for the design of the study as illustrated in Figures 5 through 8.

Figure 5. Hypothesis 1 matrix.

Figure 6.   Hypothesis 2 matrix.

Figure 7.   Hypothesis 3 matrix.

Major

Level	Year									
Freshman nontransfer	1968-69									
	1974-75									
Senior nontransfer	1968-69									
	1974-75									

Figure 8. Hypothesis 4 matrix.

Analysis of Data

Since the Rokeach Value Survey, Form D and Form F, requires that the 18 values in the terminal value list and the 18 values in the instrumental value list be arranged in two hierarchies according to personal preference, the data are reported in rank order form and scoring of the data is by frequencies and medians. Thus, for analysis of the data, nonparametric statistical tests at the ordinal level of measurement are required.

Data Classification

Classification of the data by ordinal level of measurement is chosen because, first, the rank ordering measurement of values is another way of expressing ordinal measurement. Specifically, rank order measurement or ordinal measurement has formal properties which "incorporate not only the relation of equivalence (=) but also the

relation greater than (>). The latter relation is irreflexive, asymmetrical, and transitive" (Siegel, 1956, p. 24).

Second, with ordinal scaling many hypotheses can be tested using the broad set of nonparametric statistical tests. Further, the measurement requirement for nonparametric tests uses the median[2] which is the most appropriate statistic for central tendency of ordinal scaling. To use the mean and standard deviation and parametric statistical tests with ordinal scaling is incorrect and inappropriate. However, it is possible to make transformations and then apply parametric statistical tests, but some efficiency is lost in the transforming (Feather, 1970, 1972).

Statistical Test Classification

Nonparametric statistical tests are chosen because, first, parametric tests are inappropriate since specified conditions about the population parameters are assumed to be held and are not usually tested. As a requirement by parametric tests, the scores to be analyzed must be at least in a measurement at the interval scale level.

---

[2]The most appropriate statistic for describing the central tendency of rank order scores (ordinal scale) is the median because "the median is not affected by changes of any scores which are above or below it as long as the number of scores above and below remains the same" (Siegel, 1956, p. 25). To augment, Siegel (1956, p. 26) has emphasized that, "when only the rank order of scores is known, means and standard deviations found on the scores themselves are in error to the extent that the successive intervals (distances between classes) on the scale are not equal. When parametric techniques of statistical inferences are used with such data, any decisions about hypotheses are doubtful. Probability statements derived from the application of parametric statistical tests to ordinal data are in error to the extent that the structure of the methods of collecting data is not isomorphic to arithmetic.

This study on the ranking of values by students is at the ordinal level and not the interval level. Further, nonparametric methods will use the information in the sample more appropriately than will the parametric method. The reason given is that,

> if the measurement is weaker than that of an interval scale, by using parametric tests the researcher would "add information" and thereby create distortions which may be as great and as damaging as those introduced by the "throwing away of information" which occurs when scores are converted to ranks [Siegel, 1956, p. 32].

Second, the nonparametric test models do not specify the conditions about the parameters of the population from which the sample is drawn (Siegel, 1956, p. 31). Thus, less strong measures can be used in nonparametric tests than those required for parametric tests.

Third, regardless of the shape of the population distribution from which the random sample was drawn, probability statement obtained from most nonparametric statistical tests are exact probabilities (Siegel, 1956, p. 32).

Fourth, the power of nonparametric tests can be increased simply by increasing the size of N. The larger the sample size, the more assuring the test results.

Nonparametric tests have two major disadvantages. First, in comparison to parallel parametric tests under specified assumptions the nonparametric tests are more wasteful of data. The power-efficiency of the nonparametric test is the way of expressing the degree of wastefulness of data, e.g., the 95 percent power efficiency of a nonparametric test would mean that "where all the conditions of the parametric test are satisfied the appropriate parametric test

would be just as effective with a sample which is 5 percent smaller than that used in the nonparametric analysis" (Siegel, 1956, p. 33).

Second, unless specific assumptions are made about additivity, there are no nonparametric methods for direct testing of interactions in analysis of variance (Siegel, 1956, p. 33). So, an analysis of variance (one-way and two-way analysis of variance) can be done with nonparametric statistical tests but there are limitations to the degree and complexity of analysis. There may be plenty of nonparametric statistical tests but basic designs for comparing groups remain more simplified than the basic designs for parametric statistical tests. In this current study about student personal values, the comparison of values by majors, or levels, or years, is an example of a one-way analysis of variance. The comparison of student values by majors and levels or by majors and years or by levels and years, exemplify a two-way analysis of variance.

Statistical Test Selection

There is a choice of nonparametric statistical tests for the data analyses of comparing the Rokeach values of Home Economics under-graduate students and Human Ecology undergraduate students during the period 1968-1975.

To determine summaries of subgroup rankings of values the median measure of central tendency is used since the mean is inappropriate to ordinal level of measure (Siegel, 1956, pp. 25-31).

To test for significance of differences among subgroups for each value both the Extension of the Median test and Kruskal-Wallis H

one-way analysis of variance test are appropriate for use. Siegel (1956, pp. 193-194) prefers the Kruskal-Wallis H test because it is the most efficient nonparametric test and has a 95.5 percent efficiency when compared to the most powerful parametric F test. Since the Kruskal-Wallis H test converts scores to ranks and the Extension of the Median test converts scores to either pluses or minuses, the Kruskal-Wallis H test is more sensitive to differences in shape of distributions. The Kruskal-Wallis H test may lend itself to misleading results thus making the Extension of the Median the more dependable and more conservative of the two tests. However, both tests when applied to the same data give nearly comparable results.

To amplify and exemplify with some past cases, Lorenz (1970) used Chi-Square for k independent samples when comparing Home Economics undergraduate subgroups for significance of differences. In comparison, the Extension of the Median test is essentially a Chi Square test for k samples. Frequencies are used with Chi-Square and medians derived from frequencies are used with the Extension of the Median test. The use of the Chi-Square test is more restrictive since the test requires that the expected frequencies in each cell are not too small, that is, less than 20 percent of the cells have expected frequencies of less than five and no cell has an expected frequency of less than one (Siegel, 1956, p. 178).

Rokeach (1973) reported the use of three significane of difference tests: Median, Kruskal-Wallis H test, and Newman-Kuels test. Thus, for the comparison of values of Home Economics and Human Ecology undergraduate students from 1968 to 1975, the Median test is

chosen for comparison of two independent groups and the Extension of the Median test is chosen for comparison of more than two (k) independent groups. The comparative dependability and conservatism of the Median tests insure more safety in degree of accuracy in analysis.

To test for significance of difference among groups for ranking a set of values (one set of 18 terminal values, one set of 18 instrumental values) the multivariate analysis of variance is used. Although a rationale for use of nonparametric statistical tests is given, the parametric multivariate analysis of variance can be used, given specific conditions. When dealing with one value system of either the 18 terminal values or 18 instrumental values, multivariate analysis of variance will not function properly because the scoring, 1 to 18 of the 18 values in a system by ranking is ipsative. The last value to be ranked or scored is not freely scored as it takes on the only remaining score. However, when a value system of 18 values is subdivided into nine values and comparisons across groups are made, then multivariate analysis of variance will function. In this case each of the nine values has the opportunity of being scored or ranked from 1 to 18 and the score of the ninth value is freely chosen. Hence, there is an employment of an interval scale which accepts parametric-statistical tests. Thus, to compare groups on 18 values or a value system all at once, the multivariate analysis of variance is legitimately employed when the system of values is subdivided into two lots of nine values. Results of the analysis of the two sublots of values are combined together to arrive at a conclusion about the significance

of difference among groups when comparing the groups' value systems
of 18 values.

Although the nonparametric Friedman two-way analysis of variance
test was considered for comparing groups by value systems, the test was
rejected in the end. The Friedman test is useful for comparing small
sizes of groups, however, since the test is theoretically used with
related groups, its use with independent groups as in this study,
then becomes doubtful. Further, the Friedman computer program available
at Michigan State University handles a sample size up to 100, a size
too small for this study's sample. The Friedman multivariate analysis
of variance computer program is presently not available.

To determine homogeneity within groups, the Kendall Coefficient
of Concordance W is the most useful since it is a nonparametric tech-
nique and used with ordinal level of measurement. It "measures the
extent of association among several (k) set of rankings of N entities"
(Siegel, 1956, p. 239).

A two-tailed probability level of .05 in general is chosen for
determining the significance of difference among groups. In past
research with comparison of groups by separate values the range of
reported significant probability levels for specific values has been
.07 to .001 (Rokeach, 1973). Some values have had a tendency to be
significant at only the .05 level while other values have had a tendency
to be significant at the .01 and .001 levels. Too, not all values in
either the terminal set or instrumental set have been found to be
significant when comparing groups.

Two-tailed testing is done since it is difficult to hypothesize with confidence about the unique characteristics of the groups. Beginning in 1968 with data gathering from the Rokeach Value Survey Form D only seven years has elapsed. Hence, the specific Rokeach value theory building and establishment of value holding patterns are still in their infancy. Generalizations about values of past researched groups do not transfer completely to the present group under study since the groups are not the same and past groups are in a different social time orientation. Thus, the direction of this study's results is uncertain and unpredictable. An inadequate foundation for prediction has made a two-tailed testing more appropriate than a one-tailed testing.

In brief, for group comparison by value systems, all hypotheses were tested using the multivariate analysis of variance. For group comparison by separate values only some of the hypotheses were selected for testing by the Median test, Spearman Rank Correlation, and Coefficient of Concordance. Reduction in hypotheses tested is caused by the high cost factor of computer time.

At this point in time the program Valutest written by Charles Hollen and especially made for analysis of the Rokeach Value Survey data by separate values, is not readily available. Valutest is written for the 3600 computer and Michigan State University operates only the 6500 computer. However, Valutest is presently in the midst of being converted at Michigan State University. Washington State University, where Milton Rokeach is currently located, will keypunch cards and analyze any value survey data using Valutest on their 3600 computer for a fee.

Summary

The nonrandom but fairly representative sample under study is composed of female Home Economics and Human Ecology undergraduate students at Michigan State University from 1968 to 1975. Sample size is $N = 2,351$. The levels of freshman nontransfer, transfer, and senior nontransfer and 12 majors are represented. Data from the Rokeach Value Survey Form D and Form F were collected in classroom group sittings for four out of the five academic years observed. In the remaining year, students responded to the survey at home and returned it 48 hours later in class.

The overall design of the study compares students by majors, levels, and years on the 36 dependent variables, personal values, in separate and group form. Since data are at the ordinal level of measurement, nonparametric statistical tests are applicable. To compare groups by separate values, the Median test, Coefficient of Concordance measures were employed. To compare groups by value systems, 18 values at once, the values were initially subdivided into two lots of nine to permit legitimate use of the parametric multivariate analysis of variance test. A two-tailed probability level of .05 was chosen for determining the significance of difference among groups.

Following this chapter on design and methodology is Chapter IV where the results of the analysis of data for this study are reported and summarized.

CHAPTER IV

FINDINGS

The findings of the study are reported by a statement of the
null hypothesis along with the results of the statistical test. A
summary of the findings follows the presentation of the 30 hypothesis
statements.

Throughout the reporting of the results of each hypothesis test,
reference is made to the dependent variable, personal value. The per-
sonal value variable was analyzed in two major ways: (1) by one value
at a time and (2) by grouping of the personal values into two lists,
terminal and instrumental. Alternate ways to describe the two lists
of values were scale, hierarchy, or value system, and accordingly named
either terminal or instrumental. In all, there were 36 personal values
and when the values were divided into the two groups or lists, the ter-
minal value system had 18 specific personal values and the instrumental
value system had 18 specific personal values.

When analyzing the personal values in group form, the ipsative
nature of rank scoring of the values required that the group of 18 per-
sonal values be subdivided into two equal lots of nine personal values.
Division of the group of 18 personal values was done by alphabetizing
the personal values and then dividing the 18 values into two equal lots
by counting off the first nine values and placing them in one group.

The remaining nine personal values or last nine values were placed in the second subgroup. Thus, when referring to results according to whether the dependent variable, personal value, was in singular, group, or subgroup form, there were different titles for the dependent variable. When the dependent variable was in singular form, it went by one of 36 descriptive names as noted in Figure 9. When the dependent variable was grouped into two groups of 18 personal values each, it was labeled as terminal value system (scale, hierarchy, list) and instrumental value system (scale, hierarchy, list). When the dependent variable was grouped into two groups and each group subdivided into two subgroups of nine personal values each, it was identified as upper half of terminal value hierarchy (scale)--UHTVH; lower half of terminal value hierarchy (scale)--LHTVH; upper half of instrumental value hierarchy (scale)-- UHIVH; and lower half of instrumental value hierarchy (scale)--LHIVH. Classification is shown in Figure 9.

Null Hypothesis 1.1

There are no differences in the values held by undergraduate Human Ecology students by major for the one academic period 1971-1975.

This hypothesis concerned the comparison of seven academic major clusters[1] in the College of Human Ecology during the one time period 1971-1975. To form a major, the same specific major from the academic

---

[1]Detailed description and rationale for major clusters is given on pages 72-73.

TERMINAL VALUE SYSTEM   INSTRUMENTAL VALUE SYSTEM

A comfortable life   ⎫   Ambitious   ⎫
An exciting life   ⎪   Broadminded   ⎪
A sense of accomplishment   ⎪ Upper Half of   Capable   ⎪ Upper Half of
A world at peace   ⎬ Terminal Value   Cheerful   ⎬ Instrumental Value
A world of beauty   ⎪ Hierarchy (Scale) Clean   ⎪ Hierarchy (Scale)
Equality   ⎪ (UHTVH)   Courageous   ⎪ (UHIVH)
Family security   ⎪   Forgiving   ⎪
Freedom   ⎪   Helpful   ⎪
Happiness   ⎭   Honest   ⎭

Inner harmony   ⎫   Imaginative   ⎫
Mature love   ⎪   Independent   ⎪
National security   ⎪   Intellectual   ⎪
Pleasure   ⎪ Lower Half of   Logical   ⎪ Lower Half of
Salvation   ⎬ Terminal Value   Loving   ⎬ Instrumental Value
Self respect   ⎪ Hierarchy (Scale) Obedient   ⎪ Hierarchy (Scale)
Social recognition   ⎪ (LHTVH)   Polite   ⎪ (LHIVH)
True friendship   ⎪   Responsible   ⎪
Wisdom   ⎭   Self-controlled ⎭

Figure 9. Classification of 36 personal values by group.

years 1971-72, 1972-73, 1973-74, and 1974-75 was clustered to form a larger specific major, 1971-1975. The seven major clusters formed were (1) Child Development & Teaching, (2) Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts, (3) Foods, Dietetics, Nutrition, (4) Home Economics Education, (5) Clothing & Textiles, (6) Interior Design, Human Environment & Design, and (7) Retailing of Clothing & Textiles. With a total sample size, n = 1,085, the mean major group size was n = 155.

The dependent variable, personal value, was grouped into upper and lower, terminal and instrumental value scales.

The results of testing this hypothesis in terms of the personal value variable by four subgroups showed the following:

Subgroup	Multivariate F	df	p
UHTVH	2.6837	54, 5424.9	.0001
LHTVH	1.5435	54, 5424.9	.0001
UHIVH	2.0413	54, 5424.9	.0001
LHIVH	1.8473	54, 5424.9	.0002

Thus, there was rejection of the null hypothesis at the .05 alpha level. The conclusion was that the differences among Human Ecology majors during 1971-1975 were beyond chance existence. As noted in Table 6 there were 14 personal values that created a significant difference at p < .05+. The significant terminal values were *a comfortable life, an exciting life, a sense of accomplishment, a world at peace, equality, family security, social recognition,* and *true friendship.* The significant contrast instrumental values were *ambitious, courageous, forgiving, helpful, imaginative,* and *loving.*

Table 6. Difference in Value Systems for Majors[a] During 1971-1975

Terminal Value	p*	Instrumental Value	p*
A comfortable life	.05	Ambitious	.001
An exciting life	.01	Broadminded	——
A sense of accomplishment	.001	Capable	——
A world at peace	.005	Cheerful	——
A world of beauty	——	Clean	——
Equality	.005	Courageous	.001
Family security	.001	Forgiving	.05
Freedom	——	Helpful	.001
Happiness	——	Honest	——
p**	.001+[b]	p**	.001+[c]
Inner harmony	——	Imaginative	.001
Mature love	——	Independent	——
National security	——	Intellectual	——
Pleasure	——	Logical	——
Salvation	——	Loving	.05
Self respect	——	Obedient	——
Social recognition	.01	Polite	——
True friendship	.05	Responsible	——
Wisdom	——	Self controlled	——
p**	.01+[d]	p**	.001+[e]

[a]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Multivariate $F = 2.6837$; $df = 54, 5424.85$.

[c]Multivariate $F = 2.0413$; $df = 54, 5424.85$.

[d]Multivariate $F = 1.5435$; $df = 54, 5424.85$.

[e]Multivariate $F = 1.8473$; $df = 54, 5424.85$.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Null Hypothesis 1.2

There are no differences in the personal values held by undergraduate Human Ecology Students by level for the one academic period 1971-1975.

The focus of this hypothesis was on comparing freshman nontransfer Human Ecology students to senior nontransfer Human Ecology students during the time 1971-1975. To obtain the one group of 673 freshman students for 1971-1975, freshmen came from the Fall, Winter, and Spring terms of the academic years 1971-72, 1972-73, 1973-74, and 1974-75. Similarly, the one group of 482 seniors came from the same terms and academic years as the freshmen. The null hypothesis was rejected when the dependent variable, personal value, was grouped by terminal and instrumental value systems and results from the multivariate analysis of variance test were:

Subgroup	Multivariate F	df	p
UHTVH	4.9803	9, 1063	.0001
LHTVH	8.1234	9, 1063	.0001
UHIVH	7.9177	9, 1063	.0001
LHIVH	5.7893	9, 1063	.0001

Hence, with the alpha level set at .05, the conclusion was that the personal value systems of freshman nontransfer students were significantly different, $p < .0001$, from those of senior nontransfer students in Human Ecology during 1971-1975.

The null hypothesis was not rejected when the median test was applied to the separate personal values of freshmen and seniors. With

the alpha level set at .05, 19 of 36 values were not significant at p < .05, but 17 of 36 were significant at p < .05+. The conclusion was that freshman students did differ significantly, p < .05+, from senior students on only 17 personal values. While the 17 values actually varied in degree of significance from p < .05 to p < .0001, the terminal values that distinguished the two student levels were *an exciting life, family security, inner harmony, mature love, national security, salvation,* and *true friendship*. The differentiating instrumental values were *ambitious, capable, clean, courageous, imaginative, independent, intellectual, obedient, polite, and self-controlled*.

As shown in Table 7, the significant terminal values ranked higher by seniors than freshmen were *an exciting life* (12th rank), *mature love* (4th rank), and *national security* (17th rank). Freshmen gave the terminal values, *family security* (7th rank), *salvation* (17th rank), and *true friendship* (5th rank) higher preference than seniors. The only significant personal terminal value given the same rank position but different median rankings by freshmen (4.7) and seniors (3.9) was *inner harmony*.

Of less importance to seniors than freshmen, in Table 8, were the significant instrumental values, *ambitious* (11th rank), *forgiving* (12th rank), and *polite* (18th rank). Both freshmen and seniors gave *courageous* 12th rank but with respective significant medians of 11.2 and 10.5. Similarly, *obedient* was ranked 18th but freshmen gave the value a median ranking of 16.4 and seniors gave it one of 17.5. In turn, when compared to seniors, freshmen placed lower priority on the

Table 7. Terminal Value Medians and Composite Rank Orders for
          Nontransfer Undergraduate Students During 1971-1975

| Terminal Value   N = | Level[a] | | p[•] |
| | Freshmen | Seniors | |
	673	482	
A comforting life	12.9(14)[b]	12.4(14)	——
An exciting life	12.1(13)	10.4(12)	.0001
A sense of accomplishment	8.6(9)	8.1(8)	——
A world at peace	9.6(10)	9.4(9)	——
A world of beauty	11.3(12)	11.4(13)	——
Equality	10.4(11)	9.8(11)	——
Family security	8.2(7)	9.8(10)	.0001
Freedom	6.2(4)	6.4(5)	——
Happiness	4.9(2)	4.8(3)	——
p**			.001+[c]
Inner harmony	4.7(1)	3.9(1)	.01
Mature love	7.3(8)	5.7(4)	.0001
National security	16.5(18)	16.5(17)	.05
Pleasure	13.4(15)	13.2(15)	——
Salvation	15.9(17)	17.2(18)	.0001
Self respect	5.2(3)	4.9(2)	——
Social recognition	15.1(16)	15.4(16)	——
True friendship	6.4(5)	7.2(6)	.05
Wisdom	7.2(6)	7.6(7)	——
p**			.007[d]
Concordance coefficient	.31	.35	

[a]Level: Freshman nontransfer students and senior nontransfer
students.

[b]Figures indicate median rankings and, in parentheses, composite
rank orders.

[c]Multivariate F = 4.9803; df = 9 and 1063.

[d]Multivariate F = 8.1234; df = 9 and 1063.

[•]Median test, df = 1.

**Multivariate analysis of variance test for the value system,
nine values at one time.

Table 8. Instrumental Value Medians and Composite Rank Order for Nontransfer Undergraduate Students During 1971-1975

Instrumental Value	N =	Level[a]		p[*]
		Freshmen	Seniors	
		673	482	
Ambitious		8.5(9)	10.2(11)	.001
Broadminded		6.3(4)	6.1(4)	——
Capable		10.9(11)	9.2(9)	.0001
Cheerful		7.6(6)	8.1(7)	——
Clean		14.3(17)	14.5(16)	——
Courageous		11.2(12)	10.5(12)	.05
Forgiving		6.5(5)	7.9(6)	.001
Helpful		8.4(7)	8.3(8)	——
Honest		2.8(1)	3.1(1)	——
	p**			.001+[c]
Imaginative		11.5(13)	9.1(10)	.005
Independent		8.5(8)	6.9(5)	.05
Intellectual		11.8(14)	10.8(13)	.05
Logical		12.9(15)	12.7(15)	——
Loving		3.5(2)	3.9(2)	——
Obedient		16.4(18)	17.5(18)	.0001
Polite		13.2(16)	14.7(17)	.0001
Responsible		6.2(3)	5.7(3)	——
Self-controlled		10.7(10)	12.1(14)	.005
	p**			.001+[d]
Concordance coefficient		.29	.32	

[a]Level: Freshman nontransfer students and senior nontransfer students.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 7.9177; df = 9 and 1063.

[d]Multivariate F = 5.7893; df = 9 and 1063.

[*]Median test, df = 1.

**Multivariate analysis of variance test for the value system, nine values at one time.

following instrumental values: *capable* (11th rank), *imaginative* (13th rank), *independent* (8th rank) and *intellectual* (14th rank).

It was also concluded that seniors were more homogeneous in their ranking of values since seniors had higher concordance coefficients on both the terminal value system, $W = .35$, versus the freshmen, $W = .31$, and the instrumental value system, $W = .32$, versus the freshmen, $W = .29$.

Null Hypothesis 1.3.1

There are no differences in the personal values held between freshman and senior nontransfer Human Ecology students within a major.

The main concern of this hypothesis was to contrast the freshman nontransfer students with the senior nontransfer students grouped in one major over the 1971-1975 time period. With seven academic major clusters, there were seven different contrasts between freshmen and seniors. All the freshmen from a major were pulled together from the academic years 1971-72, 1972-73, 1973-74, and 1974-75 in order to form one freshman nontransfer major group, 1971-1975. Similarly, senior major groups, 1971-1975 were formed.

The null hypothesis was not rejected when the dependent variable, personal value, was grouped by UHTVH, LHTVH, UHIVH, and LHIVH and freshman and senior groups in a major were contrasted by the multivariate analysis of variance test. With an alpha level set at .05, results for the seven academic major clusters were as follows:

Major 1. Child Development & Teaching

Subgroup	Multivariate F	df	p
UHTVH	1.6143	9, 194	.1134
LHTVH	2.5620	9, 194	.0084
UHIVH	2.7320	9, 194	.0051
LHIVH	2.0789	9, 194	.0332

The conclusion was that freshmen and seniors in Major 1 were not different on UHTVH, $p < .1134$.

Major 2. Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts

Subgroup	Multivariate F	df	p
UHTVH	1.2259	9, 127	.2849
LHTVH	2.9640	9, 127	.0032
UHIVH	1.1204	9, 127	.3532
LHIVH	2.1162	9, 127	.0327

The results led to the conclusion that freshmen differed significantly from seniors in Major 2 on their LHTVH, $p < .0032$, and LHIVH, $p < .0327$.

Major 3. Foods, Dietetics, Nutrition

Subgroup	Multivariate F	df	p
UHTVH	1.2781	9, 134	.2545
LHTVH	0.6898	9, 134	.7172
UHIVH	2.2974	9, 134	.0198
LHIVH	1.8376	9, 134	.0670

It can be concluded that in Major 3 freshmen were only significantly different, $p < .0198$, on the UHIVH.

Major 4.   Home Economics Education

Subgroup	Multivariate F	df	p
UHTVH	2.6117	9, 90	.0100
LHTVH	3.0827	9, 90	.0029
UHIVH	1.6870	9, 90	.1037
LHIVH	1.9179	9, 90	.0592

With a $p < .0100$ on the UHTVH and a $p < .0029$ on the LHTVH, the conclusion was that freshmen were different from seniors in Major 4 only in the terminal value system.

Major 5.   Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	0.4980	9, 125	.8736
LHTVH	2.2634	9, 125	.0221
UHIVH	2.9263	9, 125	.0036
LHIVH	1.5323	9, 125	.0436

In the Major 5, the freshmen and seniors were concluded as being different from each other on their LHTVH, $p < .0221$, and UHIVH, $p < .0036$.

Major 6.   Interior Design, Human Environment & Design

Subgroup	Multivariate F	df	p
UHTVH	1.5329	9, 195	.1386
LHTVH	0.9106	9, 195	.5170
UHIVH	2.2127	9, 195	.0228
LHIVH	0.5281	9, 195	.8531

Little significant difference was shown between freshmen and seniors in Major 6 as the two groups were separate on only the UHIVH, $p < .0228$.

Major 7.   Retailing of Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	2.0973	9, 150	.0331
LHTVH	1.4589	9, 150	.1683
UHIVH	1.3989	9, 150	.1934
LHIVH	1.7871	9, 150	.0751

Major 7 was concluded as having freshmen and senior retailing students different only on the UHTVH, $p < .0331$.

In brief, as shown in Tables 9 and 10, freshman and senior students in each of the seven majors did differ significantly on one to three halves of the terminal and instrumental value systems.

No significant personal value was held in common among the seven majors as a value that distinguished the freshmen from the seniors in a major. Within the terminal value system, *mature love* was held in common by Majors 1, 2, 4, and 5; *salvation* was held in common by Majors 4, 5, and 7; and *exciting life* was held in common by Majors 2, 4, and 6; *family security* was held in common by Majors 6 and 7; and *true friendship* was held in common by Majors 2 and 4. These terminal values were significant contrasts at $p < .05+$. *Equality, inner harmony, self respect* and *wisdom* were significant terminal value contrasts, $p < .05+$, but were not held in common by any two majors.

Within the instrumental value system, the significant values, $p < .05+$, that were held in common by the majors were: *capable* by Majors 1, 3, 4, 5 and 6; *polite* by Majors 1, 2, 4, and 5; *obedient* by Majors 1, 3, 5, and 7; *forgiving* by Majors 3, 5, and 6; *broadminded* by Majors 5 and 6; *helpful* by Majors 1 and 2; *honest* by Majors 4 and 7;

Table 9. Difference in Terminal Value Systems Between Levels[a] in Each Major[b] During 1971-1975

Terminal Value	Major[b]						
	1	2	3	4	5	6	7
	p*	p*	p*	p*	p*	p*	p*
A comfortable life	—	—	—	—	—	—	—
An exciting life	—	.05	—	.01	—	.05	—
A sense of accomplishment	—	—	—	—	—	—	—
A world at peace	—	—	—	—	—	—	—
A world of beauty	—	—	—	—	—	—	—
Equality	—	—	—	—	—	—	.05
Family security	—	—	—	—	—	.05	.01
Freedom	—	—	—	—	—	—	—
Happiness	—	—	—	—	—	—	—
p**	.113[c]	.285[d]	.255[e]	.010[f]	.874[g]	.139[h]	.033[i]
Inner harmony	.05	—	—	—	—	—	—
Mature love	.01	.01	—	.01	.05	—	—
National security	—	—	—	—	—	—	—
Pleasure	—	—	—	—	—	—	—
Salvation	—	—	—	.01	.01	—	.05
Self respect	.05	—	—	—	—	—	—
Social recognition	—	—	—	.05	—	—	—
True friendship	—	.05	—	—	—	.05	—
Wisdom	—	—	—	.01	—	—	—
p**	.008[j]	.003[k]	.717[l]	.003[m]	.022[n]	.517[o]	.168[p]

Note: Footnotes on next page.

Footnotes for Table 9:

[a]Level: Freshman nontransfer students and senior nontransfer students.

[b]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[c]Multivariate F = 1.6143; df = 9 and 194.

[d]Multivariate F = 1.2259; df = 9 and 127.

[e]Multivariate F = 1.2781; df = 9 and 134.

[f]Multivariate F = 2.6117; df = 9 and 90.

[g]Multivariate F = 0.4980; df = 9 and 125.

[h]Multivariate F = 1.5329; df = 9 and 195.

[i]Multivariate F = 2.0973; df = 9 and 150.

[j]Multivariate F = 2.5620; df = 9 and 194.

[k]Multivariate F = 2.9640; df = 9 and 127.

[l]Multivariate F = 0.6898; df = 9 and 134.

[m]Multivariate F = 3.0827; df = 9 and 90.

[n]Multivariate F = 2.2634; df = 9 and 125.

[o]Multivariate F = 0.9106; df = 9 and 195.

[p]Multivariate F = 1.4589; df = 9 and 150.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 10. Difference in Instrumental Value Systems Between Levels[a] in Each Major[b] During 1971-1975

Instrumental Value	Major[b]						
	1	2	3	4	5	6	7
	p*	p*	p*	p*	p*	p*	p*
Ambitious	.05	—	—	—	—	—	—
Broadminded	—	—	—	—	.01	.01	—
Capable	.05	—	.01	.01	.05	.05	—
Cheerful	—	—	—	—	—	—	—
Clean	—	—	—	—	—	—	—
Courageous	—	—	—	—	.01	—	—
Forgiving	—	—	.05	—	.05	.05	—
Helpful	.05	.05	—	—	—	—	—
Honest	—	—	—	.05	—	—	.05
p**	.005	.353	.020	.104	.004	.023	.193
Imaginative	—	.01	—	.01	—	—	—
Independent	—	—	—	—	.05	—	.05
Intellectual	—	—	—	—	—	—	—
Logical	—	—	—	—	—	—	—
Loving	—	—	—	—	—	—	—
Obedient	.01	—	.05	—	.01	—	.01
Polite	.05	.05	—	.01	.05	—	—
Responsible	—	—	.05	—	—	—	—
Self-controlled	—	.05	—	—	—	—	—
p**	.033	.033	.067	.059	.144	.853	.075

Note: Footnotes on next page.

Footnotes for Table 10:

[a]Level: Freshman nontransfer students and senior nontransfer students.

[b]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[c]Multivariate F = 2.7320; df = 9 and 194.

[d]Multivariate F = 1.1204; df = 9 and 127.

[e]Multivariate F = 2.2974; df = 9 and 134.

[f]Multivariate F = 1.6870; df = 9 and 90.

[g]Multivariate F = 2.9263; df = 9 and 125.

[h]Multivariate F = 2.2127; df = 9 and 195.

[i]Multivariate F = 1.3989; df = 9 and 150.

[j]Multivariate F = 2.0789; df = 9 and 194.

[k]Multivariate F = 2.1162; df = 9 and 127.

[l]Multivariate F = 1.8376; df = 9 and 134.

[m]Multivariate F = 1.9179; df = 9 and 90.

[n]Multivariate F = 1.5323; df = 9 and 125.

[o]Multivariate F = 0.5281; df = 9 and 195.

[p]Multivariate F = 1.7871; df = 9 and 150.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

imaginative by Majors 2 and 4; and *independent* by Majors 5 and 7. The following instrumental values although significant, $p < .05+$, were not held as common contrasts among majors: *ambitious, courageous, responsible,* and *self-controlled.*

Null Hypothesis 1.3.2

There are no differences in the values held by freshman nontransfer undergraduate Human Ecology students by major for the one academic period 1971-1975.

This hypothesis was concerned with comparing the seven academic major clusters at the freshman nontransfer student level during 1971-1975. Major clusters were formed in the manner as indicated in hypothesis 1.1, however, for this hypothesis, 673 freshmen were retained in the sample. The results of comparing the majors by the four subgroups of the terminal and instrumental value systems with the multivariate analysis of variance test were:

Subgroup	Multivariate F	df	p
UHTVH	1.8943	54, 3359.75	.0001
LHTVH	1.1743	54, 3359.75	.1809
UHIVH	1.5501	54, 3359.75	.0064
LHIVH	1.4460	54, 3359.75	.0188

The null hypothesis thus could not be rejected at the alpha level .05. The conclusion was that freshman majors differ significantly on the UHTVH, $p < .0001$; UHIVH, $p < .0064$; and LHIVH, $p < .0188$. The freshman majors did not differ significantly on the LHTVH, $p < .1809$. As shown in Table 11, those personal values that actually caused the difference

Table 11. Difference in Value Systems for Majors by Level During 1971-1975

Terminal Value	N =	Freshmen 673 p*	Seniors 412 p*	Instrumental Value	N =	Freshmen 673 p*	Seniors 412 p*
A comfortable life		.05	—	Ambitious		—	.005
An exciting life		.005	—	Broadminded		—	—
A sense of accomplishment		.05	.005	Capable		—	—
A world at peace		.005	—	Cheerful		—	—
A world of beauty		—	—	Clean		—	—
Equality		.001	—	Courageous		.001	—
Family security		—	.001	Forgiving		—	.05
Freedom		—	—	Helpful		.005	.01
Happiness		—	—	Honest		—	—
	p**	.001+[a]	.001+[b]		p**	.006[c]	.011[d]
Inner harmony		—	—	Imaginative		.001	.05
Mature love		—	—	Independent		—	—
National security		—	—	Intellectual		—	—
Pleasure		—	—	Logical		—	—
Salvation		—	—	Loving		—	.01
Self respect		—	—	Obedient		—	—
Social recognition		—	.05	Polite		—	—
True friendship		—	—	Responsible		—	—
Wisdom		—	—	Self-controlled		—	—
	p**	.181[e]	.064[f]		p**	.019[g]	.061[h]

117

Note: Footnotes on next page.

Footnotes for Table 11:

[a]Multivariate $F = 1.8943$; df = 54 and 3359.75.

[b]Multivariate $F = 1.7313$; df = 54 and 2028.91.

[c]Multivariate $F = 1.5501$; df = 54 and 3359.75.

[d]Multivariate $F = 1.5061$; df = 54 and 2028.91.

[e]Multivariate $F = 1.1743$; df = 54 and 3359.75.

[f]Multivariate $F = 1.3140$; df = 54 and 2028.91.

[g]Multivariate $F = 1.4460$; df = 54 and 3359.75.

[h]Multivariate $F = 1.3205$; df = 54 and 2028.91.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

among majors were: *a comfortable life, an exciting life, a sense of accomplishment, a world at peace, equality, courageous, helpful,* and *imaginative.*

Null Hypothesis 1.3.3

There are no differences in the values held by senior nontransfer undergraduate Human Ecology students by major for the one academic period 1971-1975.

The comparison of seven academic major clusters only at the senior nontransfer level was the concern of this hypothesis. The major clusters were formed in the same manner indicated in hypothesis 1.1, but only the 412 seniors were chosen.

The multivariate analysis of variance test, when applied to the comparison of majors by four subgroups of nine personal values each, yielded the following results:

Subgroups	Multivariate F	df	p
UHTVH	1.7313	54, 2028.91	.0009
LHTVH	1.3140	54, 2028.91	.0639
UHIVH	1.5061	54, 2028.91	.0107
LHIVH	1.3205	54, 2028.91	.0605

With the alpha level set at .05, the null hypothesis was not rejected. The conclusion was that senior majors were not significantly different on the LHTVH, p < .0639 and LHIVH, p < .0605. However, the senior majors did differ significantly on their UHTVH, p < .009 and UHIVH, p < .0107. As shown in Table 11, distinguishing personal values for the majors were: *a sense of accomplishment, family security, social recognition,*

ambitious, forgiving, helpful, imaginative, and *loving.* The only significant personal values that were held in common by the senior majors and freshman majors were: *a sense of accomplishment, helpful,* and *imaginative.* Thus, by deduction of the three cited personal values, the remaining significant personal values that distinguish the majors were unique to the senior level. Similarly, when the three common personal values are removed from the significant values at the freshman major level, the remaining significant values were unique as separating the freshman majors.

Null Hypothesis 1.4

There are no differences in personal values held by each of the four college departments, comprised of the respective majors, for the one academic period, 1971-1975.

In this hypothesis, the focus was on comparing the four college departments, Family Ecology, Family & Child Sciences, Human Environment & Design, and Food Science and Human Nutrition, in the one time lapse 1971-1975. Majors affiliated with a department were pulled together from each academic year, 1971-72, 1972-73, 1973-74, and 1974-75, to form the group labeled as a college department, 1971-1975. There were 258 freshman and senior nontransfer Human Ecology students from the Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts, and Home Economics Education majors in the Department of Family Ecology (FE). Similarly, there were 204 students from the Child Development & Teaching major in the Department of Family & Child Sciences (FCS). There were 533 students in the Clothing & Textiles,

Interior Design, and Human Environment & Design majors in the Department
of Human Environment & Design (HED). Lastly, 160 students from the
Foods, Dietetics, and Nutrition majors were in the Department of Food
Science and Human Nutrition (FSHN). The null hypothesis was rejected
when the dependent variable, personal value, was grouped by terminal
and instrumental value system subgroups and the results from the
multivariate analysis of variance test were:

Subgroup	Multivariate F	df	p
UHTVH	3.3102	27, 3333.79	.0001
LHTVH	1.8974	27, 3338.79	.0035
UHIVH	2.6563	27, 3338.79	.0001
LHIVH	2.6731	27, 3338.79	.0001

Hence, with the alpha level set at .05, the conclusion was that the
personal terminal and instrumental value orientations of the four
college departments were different from each other, $p < .005+$, during
1971-1975.

The null hypothesis was not rejected when the median test was
applied to the separate personal values of the departments. With the
alpha level set at .05, only 14 values were significant, $p < .05+$. The
conclusion was that the departments did differ significantly, $p < .05$ to
.001, on only 14 of 36 separate personal values. In the terminal value
system, as shown in Table 12, the 8 of 18 values that distinguished the
departments were: *a comfortable life, an exciting life, a sense of
accomplishment, equality, family security, inner harmony, salvation,*
and *wisdom.* Within the instrumental value system, as shown in Table 13,
the comparatively fewer significant personal values, 6 of 18 values,

Table 12. Terminal Value Medians and Composite Rank Orders for Departments[a] During 1971-1975

Terminal Value	N =	Departments[a]				Department Contrasts						
		FE (1)	FCS (2)	HED (3)	FSHN (4)	1-2	1-3	1-4	2-3	2-4	3-4	1-2-3-4
		258	204	533	160	p*	p*	p*	p*	p*	p*	p*
A comfortable life		13.2(14)	13.6(15)	12.0(14)	13.4(14)	—	.05	—	.001	—	.005	.005
An exciting life		12.0(13)	11.6(13)	10.8(11)	11.8(13)	—	.05	—	—	—	—	.05
A sense of accomplishment		8.0(8)	9.9(11)	7.9(8)	8.6(8)	.01	—	—	.001	—	—	.01
A world at peace		9.8(11)	8.5(9)	10.0(10)	8.7(9)	—	—	—	.05	—	—	—
A world of beauty		11.7(12)	11.4(12)	11.1(13)	11.5(12)	—	—	—	—	—	—	—
Equality		9.3(10)	9.5(10)	11.0(12)	10.0(11)	—	.001	—	.005	—	—	.001
Family security		8.9(9)	7.8(7)	9.4(9)	9.5(10)	.05	—	—	.05	.01	—	.005
Freedom		6.6(4)	6.6(6)	5.9(4)	6.1(4)	—	—	—	—	—	—	—
Happiness		5.2(3)	4.5(2)	4.5(1)	5.7(3)	—	—	—	—	—	—	—
p**												.001+[c]
Inner harmony		4.2(1)	3.8(1)	4.9(2)	3.8(1)	—	—	—	.01	—	—	.05
Mature love		7.0(6)	5.8(4)	6.4(5)	6.7(7)	.05	—	—	—	—	—	—
National security		16.6(18)	16.7(17)	16.4(17)	16.1(17)	—	—	—	—	—	—	—
Pleasure		13.4(15)	13.6(14)	13.1(15)	13.7(15)	—	—	—	—	—	—	—
Salvation		15.9(17)	16.7(18)	16.7(18)	16.7(18)	—	.05	—	—	—	—	.05
Self respect		5.1(2)	5.4(3)	5.1(3)	4.6(2)	—	—	—	—	—	—	—
Social recognition		15.5(16)	15.4(16)	15.2(16)	14.7(16)	—	—	.05	—	—	—	—
True friendship		6.8(5)	6.3(5)	7.0(6)	6.6(6)	—	—	—	—	—	—	—
Wisdom		7.1(7)	7.9(8)	7.7(7)	6.5(5)	—	—	—	—	.05	.05	.05
p**												.005+[d]
Concordance coefficient		.34	.38	.31	.34							

122

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; and FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 3.3102; df = 27 and 3338.79.   [d]Multivariate F = 1.8974; df = 27 and 3338.79.

*Median test; df = 1 and 3.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 13. Instrumental Value Medians and Composite Rank Orders for Departments[a] During 1971-1975

Instrumental Values	N =	Departments[a]				Department Contrasts						
		FE (1)	FCS (2)	HED (3)	FSHN (4)	1-2	1-3	1-4	2-3	2-4	3-4	1-2-3-4
		258	204	533	160	p*	p*	p*	p*	p*	p*	p*
Ambitious		9.8(9)	9.6(9)	8.3(8)	10.9(12)	—	.01	—	.05	—	.05	.01
Broadminded		5.9(4)	6.4(4)	6.4(4)	5.7(3)	—	—	—	—	—	—	—
Capable		10.4(11)	9.9(10)	10.0(11)	10.0(9)	—	—	—	—	—	—	—
Cheerful		7.7(7)	8.1(7)	8.0(7)	6.9(5)	—	—	—	—	—	—	—
Clean		14.3(17)	14.6(16)	14.1(17)	14.8(17)	—	—	—	—	—	—	—
Courageous		10.2(10)	10.6(11)	11.6(14)	10.2(11)	—	.005	—	—	—	.01	.005
Forgiving		6.3(5)	6.6(5)	7.5(6)	7.3(6)	—	—	—	—	—	—	—
Helpful		7.5(6)	7.6(6)	9.5(9)	7.9(8)	—	.0001	—	.0005	—	—	.005
Honest		2.6(1)	2.6(1)	3.1(1)	3.1(1)	—	—	—	—	—	—	—
	p**											.001+[c]
Imaginative		11.6(13)	11.9(13)	9.8(10)	12.1(14)	—	.05	—	.01	—	.0001	.001
Independent		8.4(8)	8.7(8)	7.2(5)	7.8(7)	—	—	—	—	—	—	—
Intellectual		11.9(14)	11.4(12)	11.2(12)	11.3(13)	—	—	—	—	—	—	—
Logical		12.9(15)	13.0(15)	12.7(15)	12.8(15)	—	—	—	—	—	—	—
Loving		3.8(2)	3.2(2)	3.9(2)	3.8(2)	—	—	—	.01	—	—	.05
Obedient		16.9(18)	16.9(18)	16.9(18)	16.6(18)	—	—	—	—	—	—	—
Polite		13.9(16)	14.6(17)	13.8(16)	13.8(16)	—	—	—	.05	—	—	—
Responsible		5.7(3)	5.7(3)	6.3(3)	5.7(4)	—	—	—	—	—	—	—
Self-controlled		11.5(12)	12.2(14)	11.4(13)	10.1(10)	—	—	—	—	.01	.05	.05
	p**											.001+[d]
Concordance coefficient		.32	.34	.28	.29							

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; and FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 2.6563; df = 27 and 3338.79.   [d]Multivariate F = 2.6731; df = 27 and 3338.79.

*Median test; df = 1 and 3.

**Multivariate analysis of variance test for the value system, nine values at one time.

123

that separated the departments were: *ambitious, courageous, helpful, imaginative, loving,* and *self-controlled.*

Since the departments were not significantly different, p < .120 to .535, on the first six ranked terminal values, the departments were consequently similar in part of their terminal value orientation for the personal values: *self respect, happiness, freedom, true friendship,* and *mature love.* The one exception was the *inner harmony* value which was ranked second by HED and first by FE, FCS, and FSHN, and was significant, p < .05.

Similarly, the departments were similar on the first five ranked instrumental values, p < .181 to .415: *honest, responsible, forgiving,* and *broadminded.* Again, the one exception was the instrumental value *loving* which was ranked second by the four departments but was significant, p < .05.

With pair-wise contrasts of the departments for the separate personal values, the null hypothesis was not rejected since the departments were not significantly different on all the values. As shown in Tables 12 and 13 FE was most similar to FSHN since the only significant value was *social recognition,* p < .05. However, FE was least similar to HED as 8 of 36 values were significant, p < .05 to .0001: *a comfortable life, an exciting life, equality, salvation, ambitious, courageous, helpful,* and *imaginative.* The greatest similarity in value systems to FCS was with FE and FSHN. Both FE and FSHN each had only three significant values in contrast with FCS: FE--*a sense of accomplishment,* p < .01, *mature love,* p < .05, and *family security,* p < .05; FSHN--*wisdom,* p < .05, *family security,* p < .01, and *self-controlled,* p < .01.

FCS was least similar to HED as these two departments significantly differed, p < .05 to .0005, on 11 of the 36 personal values which were: *a comfortable life, a sense of accomplishment, a world at peace, a world of beauty, family security, inner harmony, ambitious, helpful, imaginative, loving,* and *polite.*

When HED was contrasted, it was closest to FSHN since the two significantly differed, p < .05 to .0001, on the six values: *a comfortable life, wisdom, ambitious, courageous, imaginative,* and *self controlled.* HED was least similar to FCS.

FSHN was most similar to FE with only 1 of 36 values being significant. However, FSHN was least similar to HED as there were 6 of 36 values that significantly separated the two departments.

Thus, there were differences in the amount of similarity between the college departments. When FSHN was pair-wise contrasted to the other three departments, its average number of significant contrasting values was 3.3. Similarly, FE had 4.0 values, FCS had 6.7 values, and HED had 8.3 values. FSHN was the most similar to the other departments, whereas, HED was the least similar to the other three departments.

The four departments showed a greater amount of intra conformity in their ranking of terminal values (concordance coefficient ranged from .31 to .38) than in their instrumental values (concordance coefficient ranged from .28 to .34).

Null Hypothesis 2.1

There are no differences in the personal values held by undergraduate Human Ecology students among the academic years 1971-1975.

Hypothesis 2.1 concerned the comparison of one group of freshman and senior nontransfer Human Ecology students in an academic year, excluding Summer term, to one group of freshman and senior nontransfer Human Ecology students in another academic year. For the first comparison, comparison was among the years 1971-72, 1972-73, 1973-74, and 1974-75. The terminal and instrumental value systems were compared by the multivariate analysis of variance test. For the second comparison, the academic years examined were 1971-72 and 1974-75. The values, as two systems and as separate entities, were analyzed in the comparative years 1971-72 and 1974-75, as indicated in Table 14.

The null hypothesis was not rejected at the .05 alpha level when the value systems of the four years were compared. The results of the comparison among years 1971-72 to 1974-75 were:

Years 1971-72-73-74

Subgroup	Multivariate F	df	p
UHTVH	3.0513	27, 338.79	.0001
LHTVH	2.2301	27, 3338.79	.0003
UHIVH	1.5648	27, 3338.79	.0319
LHIVH	1.0737	27, 3338.79	.3623

For the first comparison, the conclusion was that in the four academic years, Human Ecology students, with an average cell size n = 288.8, were different on the UHTVH, LHTVH and UHIVH, p < .05+. The personal values

Table 14. Value Differences Between Years[a]

	1971-72	1974-75		1971-72-73-74		1971-72	1974-75		1971-72-73-74
Terminal Value	346	238	p*	1,155	Instrumental Value	346	238	p*	1,155
			p°	p*				p°	p*
A comforting life	12.7(14)[b]	12.7(14)	—	—	Ambitious	9.2(9)	8.9(9)	—	—
An exciting life	11.8(13)	10.8(12)	.05	—	Broadminded	5.8(3)	6.8(4)	—	—
A sense of accomplishment	7.9(8)	8.7(8)	—	—	Capable	9.9(10)	10.0(10)	—	—
A world at peace	7.8(7)	10.7(11)	.001	.001	Cheerful	7.1(5)	8.8(8)	.005	.005
A world of beauty	11.2(12)	11.4(13)	—	—	Clean	14.7(17)	14.8(17)	—	—
Equality	9.3(10)	10.4(10)	—	.05	Courageous	10.9(12)	10.2(11)	—	—
Family security	9.8(11)	8.7(9)	.05	.05	Forgiving	7.3(6)	7.3(5)	—	—
Freedom	6.2(5)	6.4(4)	—	—	Helpful	8.6(7)	8.2(7)	—	—
Happiness	4.2(1)	5.7(3)	.05	—	Honest	2.8(1)	2.8(1)	—	—
p**			.001+[c]	.001+[d]	p**			.012[e]	.032[f]
Inner harmony	4.7(2)	4.1(1)	—	—	Imaginative	10.7(11)	10.9(12)	—	—
Mature love	5.9(4)	6.7(6)	—	.05	Independent	8.9(8)	7.8(6)	—	.01
National security	16.5(17)	16.5(18)	—	—	Intellectual	11.5(14)	10.9(13)	—	—
Pleasure	13.2(15)	13.2(15)	—	—	Logical	12.9(15)	12.8(15)	—	—
Salvation	16.8(18)	15.9(17)	—	.05	Loving	3.9(2)	3.8(2)	—	—
Self respect	5.6(3)	4.7(2)	—	.01	Obedient	16.9(18)	17.0(18)	—	—
Social recognition	15.6(16)	14.8(16)	.05	.05	Polite	14.5(16)	14.1(16)	—	—
True friendship	7.3(6)	16.5(5)	.05	.05	Responsible	5.9(4)	5.9(3)	—	—
Wisdom	8.1(9)	7.1(7)	—	—	Self-controlled	11.1(13)	11.4(14)	—	—
p**			.001+[g]	.001+[h]	p**			.455[i]	.362[j]
Concordance coefficient	.33	.32			Concordance coefficient	.31	.29		

[a]Year: Academic years 1971-72, 1972-73, 1973-74, 1974-75, Summer term omitted.

[b]Figures indicated are median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 5.0207; df = 9 and 574.　　　　　　[d]Multivariate F = 3.0513; df = 27 and 3338.79.

[e]Multivariate F = 2.3732; df = 9 and 574.　　　　　　[f]Multivariate F = 1.5648; df = 27 and 3338.79.

[g]Multivariate F = 3.9763; df = 9 and 574.　　　　　　[h]Multivariate F = 2.2301; df = 27 and 3338.79.

[i]Multivariate F = 0.9801; df = 9 and 574.　　　　　　[j]Multivariate F = 1.0737; df = 27 and 3338.79.

*Median Test, df = 1.　　　　　　　　　　　　　　　　*Multiple analysis of variance test for each value.

**Multiple analysis of variance test for the value system, nine values at one time.

that differentiated, p < .05+, the four years were the eight terminal values: *a world at peace, equality, family security, mature love, salvation, self respect, social recognition,* and *true friendship.* The two significant, p < .01+, instrumental values were *cheerful* and *independent.*

As in the first comparison, the null hypothesis was not rejected at the alpha level .05 when the years 1971-72 and 1974-75 were compared on value systems and separate values. The results of the analysis indicated:

Years 1971-72 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	5.0207	9, 574	.0001
LHTVH	3.9763	9, 574	.0001
UHIVH	2.3732	9, 574	.0123
LHIVH	0.9801	9, 574	.4554

For the second comparison then, the conclusion was that the Human Ecology students, freshman and senior nontransfers, in 1971-72 were different from those in 1974-75 on the: UHTVH, p < .0001; LHTVH, p < .0001; and UHIVH, p < .0123. Only six terminal values separated, p < .05+, the two years apart: *an exciting life, a world at peace, family security, happiness, social recognition,* and *true friendship.* One instrumental personal value, *cheerful* distinguished the two years apart, p < .005.

With the comparison of the 1971-72 and 1974-75 years, the Human Ecology students did not change significantly on 66 percent of their ranking of the first six terminal values: *happiness, inner harmony, self respect, freedom, mature love,* and *true friendship.* The values

happiness and *true friendship* remained in the top six positions of the terminal hierarchy although they significantly changed in median rankings, p < .05. The last three rank positions of the terminal value hierarchy (16th, 17th, and 18th) were maintained over the years by the values, *social recognition*, p < .05, *national security*, and *salvation*.

The top four ranked instrumental values in the years 1971-72 and 1974-75 remained the same: *honest, loving, broadminded*, and *responsible*. Similarly, the instrumental values that occupied 16th, 17th, and 18th positions in the hierarchy were the same over the years: *polite, clean*, and *obedient*.

In 1974-75 the Human Ecology freshman and senior nontransfer students have reduced their amount of group concensus on ranking of values. The homogeneity of ranking the terminal values in an hierarchy has gone from W^2 = .33 to W^2 = .32. Similarly, there was a decrease of homogeneity on instrumental value ranking from W^2 = .31 to W^2 = .29.

Null Hypothesis 2.2

There are no differences in the values held by undergraduate Human Ecology students among the majors in the academic year 1971-1972, and similarly, in the years 1972-1973, 1973-1974, and 1974-1975.

The focus in this hypothesis was on the comparison across the seven academic majors in an academic year. Each major was composed of freshman and senior nontransfer Human Ecology students from a specified year. The selected years were 1971-72, 1972-73, 1973-74, and 1974-75.

---

[2]W = concordance coefficient.

For the first comparison, the majors were compared on their value systems by the multivariate analysis of variance test as in Tables 15 and 16. For the second comparison, the majors were categorized by their affiliate college department FE, FCS, HED, and FSHN and were compared on both value systems and separate personal values in the years 1971-72 and 1974-75.

For the first comparison by majors in a year the null hypothesis was not rejected at the .05 alpha level. Results for comparisons in the four years, 1971-72, 1972-73, 1973-74, and 1974-75 were:

Majors in 1971-72

Subgroup	Multivariate F	df	p
UHTVH	1.6628	54, 1692.37	.0020
LHTVH	1.3670	54, 1692.37	.0410
UHIVH	1.2739	54, 1692.37	.0892
LHIVH	1.3644	54, 1692.37	.0419

The conclusion was that the seven majors in 1971-72 were different on: UHTVH, p < .002; LHTVH, p < .041; and LHIVH, p < .0419 in 1971-72. At the p < .05+, eight values caused significant contrast among majors: *a comfortable life, a sense of accomplishment, a world of beauty, inner harmony, social recognition, ambitious,* and *courageous.*

Majors in 1972-73

Subgroup	Multivariate F	df	p
UHTVH	1.6229	54, 1462.91	.0033
LHTVH	1.1181	54, 1462.91	.2612
UHIVH	1.1949	54, 1462.91	.1602
LHIVH	1.3947	54, 1462.91	.0324

Table 15. Difference in Terminal Value Systems Across Majors in a Year

	Year			
	1971-72	1972-73	1973-74	1974-75
N =	346	301	207	238
Terminal Value	p*	p*	p*	p*
A comfortable life	.005	.005	—	—
An exciting life	—	—	—	—
A sense of accomplishment	.01	—	.01	—
A world at peace	—	—	.05	—
A world of beauty	.05	—	—	—
Equality	—	.05	—	—
Family security	—	—	.001	—
Freedom	—	—	—	—
Happiness	—	—	—	—
p**	$.002^a$	$.003^b$	$.005^c$	$.748^d$
Inner harmony	.01	—	—	—
Mature love	—	—	—	—
National security	—	—	—	—
Pleasure	—	—	—	—
Salvation	—	—	—	—
Self respect	—	—	—	—
Social recognition	.01	—	—	.01
True friendship	—	—	—	—
Wisdom	—	—	—	—
p**	$.041^e$	$.261^f$	$.694^g$	$.104^h$

[a] Multivariate F = 1.6628; df = 54 and 1692.37.

[b] Multivariate F = 1.6229; df = 54 and 1462.91.

[c] Multivariate F = 1.6074; df = 54 and 1304.84.

[d] Multivariate F = 0.8503; df = 45 and 969.32.

[e] Multivariate F = 1.3670; df = 54 and 1692.37.

[f] Multivariate F = 1.1181; df = 54 and 1462.91.

[g] Multivariate F = 0.8925; df = 54 and 1304.84.

[h] Multivariate F = 1.2824; df = 45 and 969.32.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 16. Difference in Instrumental Value Systems Across Majors in a Year

Instrumental Value	N =	Year			
		1971-72	1972-73	1973-74	1974-75
		346	301	207	238
		p*	p*	p*	p*
Ambitious		.05	——	.05	——
Broadminded		——	——	——	——
Capable		——	——	——	——
Cheerful		——	——	.05	——
Clean		——	——	——	——
Courageous		.05	——	——	——
Forgiving		——	——	.05	——
Helpful		——	.005	.05	——
Honest		——	——	——	——
	p**	.089[a]	.160[b]	.041[c]	.432[d]
Imaginative		.001	.001	——	——
Independent		——	——	——	——
Intellectual		——	——	——	——
Logical		——	——	——	——
Loving		——	——	.05	——
Obedient		——	——	——	——
Polite		——	——	——	——
Responsible		——	——	——	——
Self-controlled		——	——	——	——
	p**	.042[e]	.032[f]	.183[g]	.246[h]

[a]Multivariate $F = 1.2739$; $df = 54$ and 1692.37.

[b]Multivariate $F = 1.1949$; $df = 54$ and 1462.91.

[c]Multivariate $F = 1.3683$; $df = 54$ and 1304.84.

[d]Multivariate $F = 1.0233$; $df = 45$ and 969.32.

[e]Multivariate $F = 1.3644$; $df = 54$ and 1692.37.

[f]Multivariate $F = 1.3947$; $df = 54$ and 1462.91.

[g]Multivariate $F = 1.1753$; $df = 54$ and 1304.84.

[h]Multivariate $F = 1.1418$; $df = 45$ and 969.32.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

It was concluded that the seven majors in 1972-73 were significantly different on the UHTVH, p < .0033 and LHIVH p < .0324. Within the value systems the values, *a comfortable life, helpful, imaginative*, were significantly varying among the majors, p < .005.

Majors in 1973-74

Subgroup	Multivariate F	df	p
UHTVH	1.6074	54, 1304.84	.0039
LHTVH	0.8925	54, 1304.84	.6943
UHIVH	1.3683	54, 1304.84	.0414
LHIVH	1.1753	54, 1304.84	.1834

The results of comparing the seven majors on their value systems in 1973-74 led to the conclusion that only the UHTVH at p < .0039, and the UHIVH at p < .0414 were varying beyond chance. Within the value hierarchies the significant contrast values were: *a sense of accomplishment, a world at peace, family security, broadminded, cheerful, courageous, forgiving,* and *loving,* p < .05+.

Majors in 1974-75

Subgroup	Multivariate F	df	p
UHTVH	0.8503	45, 969.32	.7476
LHTVH	1.2824	45, 969.32	.1035
UHIVH	1.0233	45, 969.32	.4315
LHTVH	1.1418	45, 969.32	.2456

The conclusion was that the six majors, Major 4 omitted, did not differ since none were significant at the .05 level. Within the value system comparisons only the value *social recognition* showed significant contrast, p < .01, among majors. For the second comparison as noted in

Tables 17 to 20, value systems and separate personal values by departments in a year, the results were as follows:

Departments in 1971-72

Subgroup	Multivariate F	df	p
UHTVH	1.9179	27, 976.1	.0034
LHTVH	1.6034	27, 976.1	.0268
UHIVH	0.9290	27, 976.1	.5699
LHIVH	1.6237	27, 976.1	.0237

The conclusion was that the 1971-72 Human Ecology departments FE, FCS, HED, and FSHN, with an average size, n = 115.3, were different on the UHTVH, p < .0034; LHTVH, p < .0268; and LHIVH, p < .0237. The departments contrasted on seven terminal values, p < .05+, *a comfortable life, a sense of accomplishment, a world at peace, family security, inner harmony, pleasure,* and *salvation.* The instrumental value, *inner harmony* was significant at p < .05 among the departments. Hence, the departments varied more on terminal values than on instrumental values.

In paired-comparisons between departments FE was least similar to FCS with four significant contrast values, p < .05+, *a sense of accomplishment, a world at peace, family security,* and *independent.* Similarly, FE significantly differed, p < .05+, from HED on the four values, *a comfortable life, equality, inner harmony,* and *pleasure.* FE varied only by chance from FSHN. However, the largest paired contrast was between FCS and HED with six significant values, p < .05+: *a comfortable life, a sense of accomplishment, a world at peace, equality, family security,* and *inner harmony.* The comparison of FCS with FSHN

Table 17. Terminal Value Medians and Composite Rank Orders for Departments[a] in 1971-1972

Terminal Value	N =	Departments[a]				Department Contrasts						
		FE (1)	FCS (2)	HED (3)	FSHN (4)	1-2	1-3	1-4	2-3	2-4	3-4	1-2-3-4
		94	56	160	36	p*	p*	p*	p*	p*	p*	p*
A comfortable life		14.1(15)[b]	13.2(14)	11.7(14)	13.2(15)	—	.001	—	.05	—	—	.001
An exciting life		11.8(13)	12.6(13)	10.5(11)	12.9(13)	—	—	—	—	—	—	—
A sense of accomplishment		7.6(7)	10.3(11)	7.4(7)	6.5(6)	.05	—	—	.01	—	—	.05
A world at peace		8.2(9)	5.2(3)	8.9(9)	7.0(8)	.05	—	—	.01	—	—	.05
A world of beauty		10.8(12)	11.3(12)	11.0(13)	13.0(14)	—	—	—	—	—	—	—
Equality		8.7(10)	7.8(8)	10.9(12)	9.1(10)	—	.05	—	.01	—	—	—
Family security		10.4(11)	7.8(9)	10.2(10)	9.8(11)	.01	—	—	.05	—	—	.05
Freedom		6.1(4)	5.8(4)	6.7(5)	5.5(3)	—	—	—	—	—	—	—
Happiness		4.5(2)	3.7(1)	3.9(1)	5.2(2)	—	—	—	—	—	—	—
	p**											.005[c]
Inner harmony		3.8(1)	3.8(2)	5.8(4)	5.5(4)	—	.05	—	.001	—	—	.005
Mature love		6.4(5)	5.9(5)	5.4(2)	6.6(7)	—	—	—	—	—	—	—
National security		16.5(18)	16.3(17)	16.4(17)	16.5(18)	—	—	—	—	—	—	—
Pleasure		13.9(14)	13.6(15)	12.7(15)	12.5(12)	—	.05	—	—	—	—	.05
Salvation		16.3(17)	17.5(18)	17.1(18)	16.3(17)	—	—	—	—	—	—	.05
Self respect		5.4(3)	6.5(6)	5.8(6)	5.0(1)	—	—	—	—	—	—	—
Social recognition		15.8(16)	15.8(16)	15.4(16)	14.5(16)	—	—	—	—	—	—	—
True friendship		7.5(6)	6.8(7)	7.1(6)	7.9(9)	—	—	—	—	—	—	—
Wisdom		8.0(8)	8.3(10)	8.3(8)	6.5(5)	—	—	—	—	—	—	—
	p**											.027[d]
Concordance coefficient		.38	.41	.31	.33							

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; and FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 1.9179; df = 27 and 976.1.

[d]Multivariate F = 1.6034; df = 27 and 976.1.

*Median test, df = 1 and 3.

135

Table 18. Instrumental Value Medians and Composite Rank Orders for Departments[a] in 1971-1972

Instrumental Value	N =	Departments[a]				Department Contrasts						
		FE (1)	FCS (2)	HED (3)	FSHN (4)	1-2	1-3	1-4	2-3	2-4	3-4	1-2-3-4
		94	56	160	36	p*	p*	p*	p*	p*	p*	p*
Ambitious		9.7(9)[b]	8.8(8)	8.9(8)	11.5(13)	—	—	—	—	—	—	—
Broadminded		5.7(4)	5.5(4)	5.9(3)	5.5(3)	—	—	—	—	—	—	—
Capable		10.4(11)	10.5(11)	9.6(11)	10.0(10)	—	—	—	—	—	—	—
Cheerful		6.9(7)	7.0(6)	7.1(5)	7.8(5)	—	—	—	—	—	—	—
Clean		14.3(16)	15.0(17)	14.7(17)	15.7(17)	—	—	—	—	—	—	—
Courageous		10.0(10)	10.5(10)	11.6(12)	10.5(11)	—	—	—	—	—	—	—
Forgiving		6.7(5)	7.0(5)	7.7(6)	8.5(6)	—	—	—	—	—	—	—
Helpful		6.8(6)	8.3(7)	9.4(10)	9.0(8)	—	—	—	—	—	—	—
Honest		2.2(1)	2.4(1)	3.3(1)	3.5(1)	—	—	—	—	—	—	—
p**												.570[c]
Imaginative		11.3(13)	12.0(13)	9.1(9)	12.2(14)	—	—	—	.01	.005	—	.05
Independent		8.5(8)	11.5(12)	8.4(7)	8.9(7)	.05	—	—	.05	—	—	—
Intellectual		11.7(14)	11.2(9)	12.0(14)	10.8(12)	—	—	—	—	—	—	—
Logical		13.3(15)	12.8(15)	12.6(15)	13.0(16)	—	—	—	—	—	—	—
Loving		3.9(2)	3.5(2)	4.0(2)	3.8(2)	—	—	—	—	—	—	—
Obedient		17.2(18)	16.9(18)	16.9(18)	16.0(18)	—	—	—	—	—	—	—
Polite		14.8(17)	15.0(16)	13.9(16)	12.5(15)	—	—	—	—	—	—	—
Responsible		5.6(3)	5.3(3)	6.3(4)	5.9(4)	—	—	—	—	—	—	—
Self-controlled		10.9(12)	12.5(14)	11.6(13)	9.3(9)	—	—	—	—	.05	—	—
p**												.234[d]
Concordance coefficient		.35	.37	.29	.28							

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; and FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 0.9790; df = 27 and 976.1.

[d]Multivariate F = 1.6237; df = 27 and 976.1.

*Median test, df = 1 and 3.

136

Table 19. Terminal Value Medians and Composite Rank Orders for Departments[a] in 1974-1975

Terminal Value	N =	Departments[a]				Department Contrasts						
		FE (1)	FCS (2)	HED (3)	FSHN (4)	1-2	1-3	1-4	2-3	2-4	3-4	1-2-3-4
		35	48	115	40	p*	p*	p*	p*	p*	p*	p*
A comfortable life		13.3(15)[b]	13.5(15)	12.3(14)	13.0(14)	—	—	—	—	—	—	—
An exciting life		10.9(11)	10.3(11)	10.7(11)	11.5(13)	—	—	—	—	—	—	—
A sense of accomplishment		9.7(10)	8.7(9)	7.9(8)	8.3(8)	—	—	—	—	—	—	—
A world at peace		11.8(12)	10.5(12)	11.2(12)	9.3(9)	—	—	.05	—	—	.05	—
A world of beauty		12.1(13)	11.2(13)	12.0(13)	10.3(10)	—	—	—	—	—	—	—
Equality		8.8(9)	10.3(10)	10.3(10)	11.3(12)	—	—	—	—	—	—	—
Family security		8.4(8)	8.3(8)	8.5(9)	10.5(11)	—	—	—	—	.01	.05	.05
Freedom		7.4(7)	7.5(7)	5.9(4)	5.8(3)	—	—	—	—	—	—	—
Happiness		6.3(4)	4.1(2)	5.7(3)	6.3(4)	—	—	—	—	—	—	—
p**												.518[c]
Inner harmony		4.9(2)	3.2(1)	4.7(2)	3.2(1)	—	—	—	.05	—	—	—
Mature love		7.3(6)	5.6(4)	7.3(6)	7.0(7)	—	—	—	—	—	—	—
National security		16.6(18)	16.9(18)	16.4(18)	15.9(17)	—	—	—	—	.01	—	—
Pleasure		13.0(14)	13.3(14)	13.1(15)	13.6(15)	—	—	—	—	—	—	—
Salvation		13.3(16)	16.8(17)	15.9(17)	16.8(18)	—	—	—	—	—	—	—
Self respect		4.4(1)	5.2(3)	4.5(1)	4.7(2)	—	—	—	—	—	—	—
Social recognition		15.9(17)	15.2(16)	14.5(16)	14.5(16)	—	—	—	—	—	—	—
True friendship		5.4(3)	6.5(5)	6.9(5)	6.3(5)	—	—	—	—	—	—	—
Wisdom		6.6(5)	7.3(6)	7.7(7)	6.5(6)	—	—	—	—	—	—	—
p**												.092[d]
Concordance coefficient		.36	.36	.30	.32							

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; and FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 0.9644; df = 27 and 660.7

[d]Multivariate F = 1.3888; df = 27 and 660.7.

*Median test, df = 1 and 3.

Table 20. Instrumental Value Medians and Composite Rank Orders for Departments[a] in 1974-1975

Instrumental Value	N =	Departments[a]				Department Contrasts						
		FE (1)	FCS (2)	HED (3)	FSHN (4)	1-2	1-3	1-4	2-3	2-4	3-4	1-2-3-4
		35	48	115	40	p*	p*	p*	p*	p*	p*	p*
Ambitious		9.2(9)[b]	9.0(8)	8.6(7)	11.3(12)	—	—	—	—	—	—	—
Broadminded		5.0(4)	7.5(6)	7.6(5)	6.0(4)	—	.05	—	—	—	—	—
Capable		11.3(11)	10.3(10)	10.1(10)	8.9(9)	—	—	—	—	—	—	—
Cheerful		7.2(5)	9.2(9)	9.1(8)	6.5(5)	—	—	—	—	—	—	—
Clean		15.8(17)	14.3(16)	14.3(17)	14.9(17)	—	—	—	—	—	—	—
Courageous		9.7(10)	11.0(13)	10.7(13)	9.7(10)	—	—	—	—	—	—	—
Forgiving		7.3(6)	7.0(5)	7.3(4)	7.5(7)	—	—	—	—	—	—	—
Helpful		8.4(7)	7.7(7)	9.3(9)	7.7(8)	—	—	—	.05	—	—	—
Honest		3.3(2)	3.2(1)	2.4(1)	2.4(1)	—	—	—	—	—	—	—
p**												.251[c]
Imaginative		11.3(12)	11.0(12)	10.7(12)	11.5(13)	—	—	—	—	—	—	—
Independent		8.8(8)	6.5(3)	8.0(6)	7.3(6)	—	—	—	—	—	—	—
Intellectual		13.1(15)	11.3(14)	10.3(11)	11.5(14)	—	—	—	—	—	—	—
Logical		12.8(13)	13.0(15)	12.9(15)	12.3(15)	—	—	—	—	—	—	—
Loving		2.2(1)	3.9(2)	4.0(2)	5.5(2)	—	—	—	—	—	—	—
Obedient		16.2(18)	17.1(18)	17.1(18)	17.1(18)	—	—	—	—	—	—	—
Polite		14.4(16)	15.0(17)	13.8(16)	14.5(16)	.05	—	—	—	—	—	—
Responsible		4.8(3)	6.5(4)	6.1(3)	5.5(3)	—	—	—	—	—	—	—
Self-controlled		13.1(14)	10.9(11)	11.4(14)	10.8(11)	.05	—	—	—	—	—	—
p**												.353[d]
Concordance coefficient		.37	.30	.29	.30							

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; and FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 1.1725; df = 27 and 660.7.

[d]Multivariate F = 1.0837; df = 27 and 660.7.

*Median test, df = 1 and 3.

138

yielded the contrasting values *imaginative*, p < .005, and *self-controlled*, p < .05. HED varied only by chance from FSHN.

In the UHTVH the departments ranked the values *inner harmony*, *self respect*, *freedom*, and *happiness* in the first six positions. In the LHTVH, the 16th, 17th, and 18th positions were occupied by *social recognition*, *salvation*, and *national security* for the four departments. Again, the departments similarly placed the values *honest*, *loving*, *responsible*, and *broadminded* in the top six positions of the UHIVH. The last three rank positions of the LHIVH were occupied by *polite*, *clean*, and *obedient* for all departments.

The departments varied in their homogeneity of ranking the 36 values. FCS had the highest homogeneity W = .41 and .37. Next FE had W = .38 and .35, and FSHN had W = .33 and .28. HED had the lowest group agreement in value ranking with W = .31 and .29.

Departments in 1974-75

Subgroup	Multivariate F	df	p
UHTVH	0.9644	27, 660.7	.5176
LHTVH	1.3888	27, 660.7	.0922
UHIVH	1.1725	27, 660.7	.2510
LHIVH	1.0837	27, 660.7	.3529

The conclusion was that the 1974-75 Human Ecology departments FE, FCS, HED, and FSHN with an average size, n = 59.5, were not different at the .05 alpha level on the terminal and instrumental value hierarchies. The departments contrasted on only one terminal value, *family security*, p < .05.

In paired-comparisons between departments FE was different from FCS on the values *responsible* and *self-controlled*, p < .05. FE was distinct from HED on the value *broadminded*, p < .05. The value *a world at peace* at p < .05 separated FE from FSHN. FCS and HED differed on *inner harmony* and *helpful*, p < .05. FCS differed with FSHN on *family security* and *national security*, p < .01. The values *world at peace* and *family security* significantly distinguished HED and FSHN, p < .05.

In the UHTVH the departments ranked the values *inner harmony, self respect, true friendship,* and *happiness* in the first six positions. In the LHTVH the 16th, 17th, and 18th positions were occupied by *salvation, social recognition,* and *national security* for the four departments. Again, the departments similarly placed the values *loving, responsible, honest,* and *broadminded* in the top six positions of the UHIVH. The last three rank positions in the LHIVH were *polite, clean,* and *obedient* for all departments.

While the departments were similar in the rank positions of values at the high end and low end of the terminal and instrumental value hierarchies, the departments varied in their homogeneity of ranking the 18 values in the two value systems. FE had the highest homogeneity W = .36 and .37. Next FCS had W = .36 and .30, and FSHN had W = .32 and .30. HED, as in 1971-72, had the lowest group agreement in value rankings with W = .32 and .30.

When the range of homogeneity of 1974-75 departments was compared to that of 1971-72, the 1974-75 departments had a lower average concordance coefficient and smaller range among the four groups. For 1974-75 departments the average was W = .335 and .315, and for 1971-72

departments the average was W = .358 and .323. The range in concordance coefficients in 1974-75 was .06 and .08, while in 1971-72 the range was .10 and .09.

Null Hypothesis 2.3

There are no differences in the personal values held by undergraduate Human Ecology students between levels, freshman nontransfers and senior nontransfers, in the academic year 1971-1972, and similarly in the years 1972-1973, 1973-1974, and 1974-1975.

In hypothesis 2.3 the concern was to compare freshman nontransfer students to senior nontransfer students first in the academic year 1971-72, then in 1972-73, 1973-74, and 1974-75. The terminal and instrumental value systems of freshmen and seniors were compared in each of the four years. The separate values of the two value systems of freshmen and seniors were compared in the year 1971-72 and the year 1974-75, the two ends of the time span in which the College of Human Ecology has been reorganized.

As shown in Tables 21 and 22, the results from the comparison of freshman and senior value systems in 1971-72 led to the rejection of the null hypothesis:

Levels in 1971-72

Subgroup	Multivariate F	df	p
UHTVH	3.0849	9, 336	.0015
LHTVH	5.3099	9, 336	.0001
UHIVH	3.2802	9, 336	.0008
LHIVH	3.5964	9, 336	.0003

Table 21. Terminal Value Differences Between Levels[a] in a Year

Terminal Value	N =	1971-72 Freshmen 154	1971-72 Seniors 192	p*	1972-73 Fr-Sr p*	1973-74 Fr-Sr p*	1974-75 Freshmen 159	1974-75 Seniors 79	p*
A comfortable life		12.6(14)	12.9(14)	—	—	.005	13.2(14)	12.1(14)	—
An exciting life		12.6(13)	10.7(12)	—	.001	—	11.3(12)	9.7(9)	.05
A sense of accomplishment		8.9(10)	7.5(7)	.05	—	—	8.5(9)	8.9(8)	—
A world at peace		7.8(8)	7.8(8)	—	.005	—	10.8(11)	10.3(12)	—
A world of beauty		10.3(12)	11.8(13)	.05	—	—	11.7(13)	10.9(13)	—
Equality		9.4(11)	9.3(10)	—	—	—	10.7(10)	9.8(10)	—
Family security		8.8(9)	10.5(11)	.05	.01	—	8.2(8)	9.9(11)	.05
Freedom		6.4(3)	6.1(5)	—	—	—	6.3(5)	6.6(5)	—
Happiness		3.9(1)	4.4(2)	—	—	.05	5.8(3)	5.3(3)	—
p**				.005[c]	.001+[d]	.020[e]			.021[f]
Inner harmony		5.8(2)	4.1(1)	.05	—	—	4.3(1)	3.5(1)	—
Mature love		6.7(4)	5.6(4)	.05	.001	—	7.5(7)	5.9(4)	—
National security		16.6(18)	16.3(17)	—	—	—	16.6(18)	16.2(17)	—
Pleasure		12.9(15)	13.3(15)	—	—	—	13.7(15)	12.5(15)	—
Salvation		15.4(16)	17.5(18)	.001	.05	—	15.3(17)	17.3(18)	.05
Self respect		6.8(5)	5.0(3)	.001	—	—	4.5(2)	4.9(2)	—
Social recognition		15.6(17)	15.5(16)	—	—	—	14.5(16)	15.3(16)	—
True friendship		7.2(6)	7.4(6)	—	—	.05	6.2(4)	7.9(7)	—
Wisdom		7.8(7)	8.3(9)	—	—	—	7.2(6)	6.9(6)	—
p**				.001+[g]	.005[h]	.374[i]			.052[j]
Concordance coefficient		.30	.38				.32	.34	

Note: Footnotes on next page.

142

Footnotes for Table 21:

Table 22.   Instrumental Value Differences Between Levels[a] in a Year

Instrumental Value	N =	1971-72 Freshmen 154	Seniors 192	p•	1972-73 Fr-Sr p*	1973-74 Fr-Sr p*	1974-75 Freshmen 159	Seniors 79	p•
Ambitious		8.3(7)	10.2(11)	.05	—	—	8.3(7)	11.1(13)	.05
Broadminded		6.1(3)	5.6(4)	—	—	—	7.1(5)	5.8(3)	—
Capable		10.6(11)	9.5(9)	.05	.05	.001	10.9(12)	8.6(8)	.001
Cheerful		6.8(5)	7.3(5)	—	—	—	8.6(9)	8.9(9)	—
Clean		14.8(17)	14.7(16)	—	—	—	14.9(17)	14.4(16)	—
Courageous		11.6(13)	10.3(12)	—	.05	—	10.1(10)	10.6(11)	—
Forgiving		6.9(6)	7.9(7)	—	.01	.05	6.3(4)	8.3(6)	—
Helpful		9.6(9)	7.6(6)	.05	—	—	8.0(6)	8.5(7)	—
Honest		3.1(1)	2.5(1)	—	—	—	2.4(1)	4.3(2)	.05
p**					.001+[c]	.039[d]	.001+[e]		.001+[f]
Imaginative		11.5(12)	10.1(10)	—	—	.05	11.3(14)	9.8(10)	—
Independent		9.5(8)	8.6(8)	—	—	—	8.5(8)	6.3(5)	.05
Intellectual		12.3(14)	10.8(13)	—	.001	—	10.9(13)	10.9(12)	—
Logical		12.3(15)	13.2(15)	—	—	—	13.1(15)	11.7(14)	—
Loving		3.5(2)	4.1(2)	—	—	—	3.5(2)	4.2(1)	—
Obedient		16.2(18)	17.4(18)	.001	.001	.05	16.8(18)	17.5(18)	—
Polite		12.8(16)	14.9(17)	.005	.001	—	13.8(16)	14.6(17)	—
Responsible		6.4(4)	5.5(3)	—	—	—	5.9(3)	5.8(4)	—
Self-controlled		10.2(10)	11.8(14)	—	—	—	10.8(11)	12.2(15)	—
p**					.001+[g]	.001[h]	.090[i]		.327[j]
Concordance coefficient		.28	.35				.30	.30	

Note: Footnotes on next page.

Footnotes for Table 22:

[a]Level: Freshmen or Fr = Freshman nontransfer students; Seniors or Sr = Senior nontransfer students.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 3.2802; df = 9 and 336.

[d]Multivariate F = 2.0003; df = 9 and 291.

[e]Multivariate F = 3.8072; df = 9 and 285.

[f]Multivariate F = 3.5272; df = 9 and 203.

[g]Multivariate F = 3.5964; df = 9 and 336.

[h]Multivariate F = 3.2317; df = 9 and 291.

[i]Multivariate F = 1.6941; df = 9 and 285.

[j]Multivariate F = 1.1531; df = 9 and 203.

*Median test, df = 1.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

The conclusion was that the freshman Human Ecology students were different from the senior Human Ecology students on both the terminal and instrumental value systems, p < .005+, in 1971-72. The seven terminal values that contrasted the levels were: *a sense of accomplishment, a world of beauty, family security, inner harmony, mature love, salvation,* and *self respect,* p < .05+.

The results from the comparison between freshmen and seniors on value systems in 1972-73 led to the rejection of the null hypothesis:

Levels in 1972-73

Subgroup	Multivariate F	df	p
UHTVH	3.4986	9, 291	.0004
LHTVH	2.8128	9, 291	.0035
UHIVH	2.0003	9, 291	.0392
LHIVH	3.2317	9, 291	.0010

The conclusion was that the freshman Human Ecology students were different from the senior Human Ecology students on both the terminal and instrumental value systems, p < .05+ in 1972-73. The five significant contrast values in the terminal value system were: *an exciting life, a world at peace, family security, mature love,* and *salvation,* p < .05+. Within the instrumental value system, significant contrast values were *capable, courageous, forgiving, intellectual, obedient,* and *polite,* p < .05+.

In 1973-74 the comparison between freshmen and seniors on the terminal and instrumental value systems led to the acceptance of the null hypothesis since the results were:

Levels in 1974-74

Subgroup	Multivariate F	df	p
UHTVH	2.2441	9, 285	.0196
LHTVH	1.0852	9, 285	.3737
UHIVH	3.8072	9, 285	.0002
LHIVH	1.6941	9, 285	.0900

It was concluded that in 1973-74 the freshmen were significantly different from the seniors only on the UHTVH, $p < .0196$, and UHIVH, $p < .0002$. Within the terminal value system, the significant values that contrasted freshmen and seniors were: *a comfortable life, happiness,* and *true friendship,* $p < .05+$. In the instrumental value system the four significant contrast values were: *capable, forgiving, imaginative,* and *obedient,* $p < .05+$.

The 1974-75 results from comparing the two value systems of freshmen and seniors led to the acceptance of the null hypothesis:

Levels in 1974-75

Subgroup	Multivariate F	df	p
UHTVH	2.2444	9, 203	.0207
LHTVH	1.9095	9, 203	.0524
UHIVH	3.5272	9, 203	.0005
LHTVH	1.1531	9, 203	.3273

The conclusion was that freshmen and seniors were significantly different on UHTVH, LHTVH, and UHIVH at $p < .05+$. Significant terminal values that differentiated the two levels were: *an exciting life, family security,* and *salvation* at $p < .05$. Significant contrasting

instrumental values were: *ambitious, capable, honest,* and *independent,* p < .05+.

Over the years 1971 to 1975 the freshmen and seniors have significantly differed on the UHTVH, p < .04+. Further, the number of values that contrasted the freshmen and seniors has been reduced from 12 values in 1971-72 to 7 values in 1974-75.

In Table 23, the terminal values which have differentiated freshmen from seniors in both 1971-72 and 1974-75 were *family security* and *salvation,* p < .05. Similarly, over the four-year span the instrumental values that separated the two levels were: *ambitious* and *capable,* p < .05+.

From 1971 to 1975, freshmen have increased in their amount of group consensus on the terminal value hierarchy from W = .30 to W = .32. Similarly, freshmen have increased on homogeneity of ranking the instrumental value hierarchy from W = .28 to W = .30. However, seniors have decreased in homogeneity over the same four years on the terminal values, from W = .38 to W = 34.and on the instrumental values from W = .35 to W = .30.

Null Hypothesis 2.4

There are no differences in the personal values held by undergraduate Human Ecology students in each major among the academic years 1971-1975.

As the first focus for this hypothesis, a Human Ecology major in 1971-72 and composed of freshman and senior nontransfer students, was compared to the same major in 1972-73, 1973-74, and 1974-75.

Table 23. Significant Value Differences Between Levels in a Year

	1971-72			1974-75		
	Freshmen	Seniors		Freshmen	Seniors	
N =	154	192	p*	157	79	p*
Terminal Value:						
An exciting life	—	—	—	11.3(12)	9.7(9)	.05
A sense of accomplishment	8.9(10)[a]	7.5(7)	.05	—	—	—
A world of beauty	10.3(12)	11.8(13)	.05	—	—	—
Family security	8.8(9)	10.5(11)	.05	8.2(8)	9.9(11)	.05
Inner harmony	5.8(2)	4.1(1)	.05	—	—	—
Mature love	6.7(4)	5.6(4)	.05	—	—	—
Salvation	15.4(16)	17.5(18)	.001	15.3(17)	17.3(18)	.05
Self respect	6.8(5)	5.0(3)	.001	—	—	—
Instrumental Value:						
Ambitious	8.3(7)	10.2(11)	.05	8.3(7)	11.1(13)	.05
Capable	10.6(11)	9.5(9)	.05	10.9(12)	8.6(8)	.001
Helpful	9.6(9)	7.6(6)	.05	—	—	—
Honest	—	—	—	2.4(1)	4.3(2)	.05
Independent	—	—	—	8.5(8)	6.3(5)	.05
Obedient	16.2(18)	17.4(18)	.001	—	—	—
Polite	12.8(16)	14.9(17)	.005	—	—	—

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

*Median test, df = 1.

149

Seven majors were compared over the four years on the terminal and instrumental value systems.

The second focus of this hypothesis was the comparison of a college department between the two academic years 1971-72 and 1974-75 on the two value systems and the separate personal values. The four departments compared over the years were FE, FCS, HED, and FSHN.

With the first focus, the results from comparing the value systems of all of the seven majors from 1971 to 1975 led to the acceptance of the null hypothesis, as indicated in Tables 24 and 25:

Major 1, 1971 to 1975--Child Development & Teaching

Subgroup	Multivariate F	df	p
UHTVH	1.2896	27, 561.38	.1513
LHTVH	1.3795	27, 561.38	.0978
UHIVH	1.2712	27, 561.38	.1647
LHIVH	1.2212	27, 561.38	.2056

The conclusion was that Major 1 did not significantly vary over the years on the terminal and instrumental value hierarchies at the .05 alpha level, $p < .2056$ to $p < .0978$. However, four personal values did contrast over the years: *a world at peace, national security, cheerful,* and *independent,* $p < .05+$.

Major 2, 1971 to 1975--Consumer-Community Services et al.

Subgroup	Multivariate F	df	p
UHTVH	0.9649	27, 389.07	.5176
LHTVH	1.2691	27, 389.07	.1696
UHIVH	1.2924	27, 389.07	.1527
LHIVH	1.0056	27, 389.07	.4596

Table 24. Difference in Terminal Value System for Each Major[a] Over the Years[b]

Terminal Value	Major[a]						
	1	2	3	4	5	6	7
N =	204	145	159	105	137	224	173
	p*	p*	p*	p*	p*	p*	p*
A comfortable life	—	—	—	—	—	—	—
An exciting life	—	—	—	—	—	—	—
A sense of accomplishment	—	—	—	—	—	—	—
A world at peace	.005	—	—	.001	—	.05	—
A world of beauty	—	—	—	—	—	—	—
Equality	—	—	—	—	—	—	—
Family security	—	—	—	—	—	—	—
Freedom	—	—	—	—	—	—	—
Happiness	—	—	—	—	—	—	—
p**	.151[c]	.518[d]	.116[e]	.024[f]	.138[g]	.193[h]	.231[i]
Inner harmony	—	—	—	—	—	—	—
Mature love	—	—	—	—	—	—	—
National security	.005	—	—	—	—	—	—
Pleasure	—	—	—	—	—	—	—
Salvation	—	—	—	—	—	—	—
Self respect	—	—	—	—	.01	—	—
Social recognition	—	—	—	.05	—	—	—
True friendship	—	—	—	—	—	—	—
Wisdom	—	—	—	—	—	—	—
p**	.098[j]	.170[k]	.711[l]	.331[mt]	.370[n]	.408[o]	.190[p]

Note: Footnotes on next page.

Footnotes for Table 24:

[a]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Year: Academic years of 1971-72, 1972-73, 1973-74, and 1974-75, Summer term omitted.

[c]Multivariate F = 1.2896; df = 27 and 561.38.

[d]Multivariate F = 0.9649; df = 27 and 389.07.

[e]Multivariate F = 1.3492; df = 27 and 429.96.

[f]Multivariate F = 1.8391; df = 18 and 188.

[g]Multivariate F = 1.3160; df = 27 and 365.71.

[h]Multivariate F = 1.2347; df = 27 and 619.79.

[i]Multivariate F = 1.1955; df = 27 and 470.85.

[j]Multivariate F = 1.3795; df = 27 and 561.38.

[k]Multivariate F = 1.2691; df = 27 and 389.07.

[l]Multivariate F = 0.8312; df = 27 and 429.96.

[m]Multivariate F = 1.1245; df = 18 and 183.

[n]Multivariate F = 1.0727; df = 27 and 365.71.

[o]Multivariate F = 1.0417; df = 27 and 619.79.

[p]Multivariate F = 1.2407; df = 27 and 470.85.

[†]Omitted 1974-75.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 25. Difference in Instrumental Value System for Each Major[a] Over the Years[b]

Instrumental Value	N =	Major[a]						
		1 204 p*	2 145 p*	3 159 p*	4 105 p*	5 137 p*	6 224 p*	7 173 p*
Ambitious		—	—	—	—	—	—	—
Broadminded		—	—	—	—	—	—	—
Capable		—	—	—	—	—	—	—
Cheerful		.005	—	—	—	—	—	—
Clean		—	—	—	—	—	—	—
Courageous		—	—	—	—	—	—	—
Forgiving		—	—	—	—	—	—	—
Helpful		—	—	—	—	—	—	—
Honest		—	—	—	—	—	—	—
	p**	.165[c]	.153[d]	.992[e]	.993[f]	.164[g]	.458[h]	.410[i]
Imaginative		—	—	—	—	—	.05	—
Independent		.05	—	—	—	—	—	—
Intellectual		—	—	—	—	—	—	—
Logical		—	—	—	—	—	—	—
Loving		—	—	—	—	—	—	—
Obedient		—	—	—	—	—	—	—
Polite		—	—	—	.05	—	—	—
Responsible		—	—	—	—	—	—	—
Self-controlled		—	—	—	—	—	—	—
	p**	.206[j]	.460[k]	.994[l]	.145[m†]	.105[n]	.478[o]	.394[p]

Note: Footnotes on next page.

154

Footnotes for Table 25:

[a]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Year: Academic years of 1971-72, 1972-73, 1973-74, and 1974-75, Summer term omitted.

[c]Multivariate F = 1.2712; df = 27 and 561.38.

[d]Multivariate F = 1.2924; df = 27 and 389.07.

[e]Multivariate F = 0.4579; df = 27 and 429.96.

[f]Multivariate F = 0.3563; df = 18 and 188.

[g]Multivariate F = 1.2773; df = 27 and 365.71.

[h]Multivariate F = 1.0059; df = 27 and 619.79.

[i]Multivariate F = 1.0409; df = 27 and 470.85

[j]Multivariate F = 1.2212; df = 27 and 561.38.

[k]Multivariate F = 1.0056; df = 27 and 389.07.

[l]Multivariate F = 0.4385; df = 27 and 429.96.

[m]Multivariate F = 1.3812; df = 18 and 188.

[n]Multivariate F = 1.3728; df = 27 and 365.71.

[o]Multivariate F = 0.9918; df = 27 and 619.79.

[p]Multivariate F = 1.0528; df = 27 and 470.85.

[+]Omitted 1974-75.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

It was concluded that Major 2 varied only by chance from 1971 to 1975 on the two value systems. Only one value significantly differed among the four years in Major 2, *family security*, p < .05.

Major 3, 1971 to 1975--Food, Dietetics, Nutrition

Subgroup	Multivariate F	df	p
UHTVH	1.3492	27, 429.96	.1160
LHTVH	0.8312	27, 429.96	.7113
UHIVH	0.4579	27, 429.96	.9919
LHIVH	0.4385	27, 429.96	.9943

Similarly, Major 3 varied only by chance on its two value systems among the years 1971 to 1975. No personal values significantly differed across the four years.

Major 4, 1971 to 1975--Home Economics Education

Subgroup	Multivariate F	df	p
UHTVH	1.8391	18, 188	.0235
LHTVH	1.1245	18, 188	.3313
UHIVH	0.3563	18, 188	.9933
LHIVH	1.3812	18, 188	.1447

The conclusion was that the UHTVH did vary significantly, p < .0235, over the years 1971 to 1975 in Major 4. The significant contrast values for the four years in Major 4 were: *a world at peace, social recognition,* and *polite,* p < .02+.

Major 5, 1971 to 1975--Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	1.3160	27, 365.71	.1376
LHTVH	1.0727	27, 365.71	.3701
UHIVH	1.2773	27, 365.71	.1642
LHIVH	1.3728	27, 365.71	.1049

It was concluded that Major 5 varied only by chance on both the terminal and instrumental value systems over the years except for the significant contrast value, *self respect*, $p < .01$.

Major 6, 1971 to 1975--Interior Design et al.

Subgroup	Multivariate F	df	p
UHTVH	1.2347	27, 619.79	.1931
LHTVH	1.0417	27, 619.79	.4081
UHIVH	1.0059	27, 619.79	.4577
LHIVH	0.9918	27, 619.79	.4779

Further, Major 6 varied by chance from 1971 to 1975 on the two value systems but two contrast personal values did vary significantly, *a world at peace* and *imaginative*, at $p < .02+$.

Major 7, 1971 to 1975--Retailing of Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	1.1955	27, 470.85	.2307
LHTVH	1.2407	27, 470.85	.1902
UHIVH	1.0409	27, 470.85	.4102
LHIVH	1.0528	27, 470.85	.3944

The conclusion was that from 1971 to 1975 Major 7 did not change significantly on the terminal and instrumental value systems. The

value *pleasure* did significantly vary among the four years, p < .05, in Major 7.

In the second focus of this hypothesis, as shown in Tables 26 and 27, the results of observing the four departments in 1971 and 1975 led to the acceptance of the null hypothesis:

FE, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	1.6030	9, 119	.1220
LHTVH	1.9452	9, 119	.0519
UHIVH	1.0876	9, 119	.3771
LHIVH	1.6418	9, 119	.1111

The conclusion was that FE varied beyond chance from 1971 to 1975 on only LHTVH, p < .05. The value *world at peace* varied significantly in the four years, p < .01, with a change in rank from 9th to 12th position in 1974-75.

FCS, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	2.0186	9, 94	.0455
LHTVH	1.3298	9, 94	.2322
UHIVH	2.2761	9, 94	.0236
LHIVH	1.0981	9, 94	.3719

It was concluded that FCS differed significantly in the four years on UHTVH, p < .0455, and on UHIVH, p < .0236. Two values that differed over the years were *an exciting life* and *a world at peace,* p < .05+.

Table 26. Terminal Value Medians and Composite Rank Orders For Departments[a] in the Years 1971-1972 and 1974-1975

Terminal Value	FE 1971-72 94	FE 1974-75 35	p*	FCS 1971-72 56	FCS 1974-75 48	p*	HED 1971-72 160	HED 1974-75 115	p*	FSHN 1971-72 36	FSHN 1974-75 40	p*
A comfortable life	14.1(15)[b]	13.3(15)	—	13.2(14)	13.5(15)	—	11.7(14)	12.3(14)	—	13.2(15)	13.0(14)	—
An exciting life	11.8(13)	10.9(11)	—	12.6(13)	10.3(11)	.05	10.5(11)	10.7(11)	—	12.9(13)	11.5(13)	—
A sense of accomplishment	7.6(7)	9.7(10)	—	10.3(11)	8.7(9)	—	7.4(7)	7.9(8)	—	6.5(6)	9.3(8)	—
A world at peace	8.2(9)	11.8(12)	.01	5.2(3)	10.5(12)	.005	8.9(9)	11.2(12)	.01	7.0(8)	9.3(9)	—
A world of beauty	10.8(12)	12.1(13)	—	11.3(12)	11.2(13)	—	11.0(13)	12.0(13)	—	13.0(14)	10.3(10)	.05
Equality	8.7(10)	8.8(9)	—	7.8(8)	10.3(10)	—	10.9(12)	10.3(10)	—	9.1(10)	11.3(12)	.05
Family security	10.4(11)	8.4(8)	—	7.8(9)	8.3(8)	—	10.2(10)	8.5(9)	.05	9.8(11)	10.5(11)	—
Freedom	6.1(4)	7.4(7)	—	5.8(4)	7.5(7)	—	6.7(5)	5.9(4)	—	5.5(3)	5.8(3)	—
Happiness	4.5(2)	6.3(4)	—	3.7(1)	4.1(2)	—	3.9(1)	5.7(3)	—	7.2(2)	6.3(4)	—
p**		.122[c]			.046[d]			.001+[e]			.289[f]	
Inner harmony	3.8(1)	4.9(2)	—	3.8(2)	3.2(1)	—	5.8(4)	4.7(2)	—	5.5(4)	3.1(1)	—
Mature love	6.4(5)	7.3(6)	—	5.9(5)	5.6(4)	—	5.4(2)	7.3(6)	.05	6.6(7)	7.0(7)	—
National security	16.5(18)	16.6(18)	—	16.3(17)	16.9(18)	—	16.4(17)	16.4(18)	—	16.5(18)	15.9(17)	—
Pleasure	13.9(14)	13.0(14)	—	13.6(15)	13.3(14)	—	12.7(15)	13.1(15)	—	12.5(12)	13.6(15)	—
Salvation	16.3(17)	13.3(16)	—	17.5(18)	16.8(17)	—	17.1(18)	15.9(17)	—	16.3(17)	16.8(18)	—
Self respect	5.4(3)	4.4(1)	—	6.5(6)	5.2(3)	—	5.8(3)	4.5(1)	—	5.0(1)	4.7(2)	—
Social recognition	15.8(16)	15.9(17)	—	15.8(16)	15.2(16)	—	15.4(16)	14.5(16)	—	14.5(16)	14.5(16)	—
True friendship	7.5(6)	5.4(3)	—	6.8(7)	6.5(5)	—	7.1(6)	6.9(5)	—	7.9(9)	6.3(5)	—
Wisdom	8.0(8)	6.6(5)	—	8.3(10)	7.3(6)	—	8.3(8)	7.7(7)	—	6.5(5)	6.5(6)	—
p**		.052[g]			.232[h]			.008[i]			.460[j]	
Concordance coefficient	.38	.36		.41	.36		.31	.30		.33	.32	

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 1.6030; df = 9 and 119.

[e]Multivariate F = 3.3864; df = 9 and 265.

[g]Multivariate F = 1.9452; df = 9 and 119.

[i]Multivariate F = 2.5660; df = 9 and 265.

[d]Multivariate F = 2.0186; df = 9 and 94.

[f]Multivariate F = 1.2353; df = 9 and 66.

[h]Multivariate F = 1.3298; df = 9 and 94.

[j]Multivariate F = 1.9858; df = 9 and 66.

*Median test, df = 1.

**Multivariate analysis of variance test for the value system, nine values at one time.

158

Table 27. Instrumental Value Medians and Composite Rank Orders for Departments[a] in the Years 1971-1972 and 1974-1975

Instrumental Value	FE 1971-72 N=94	FE 1974-75 N=35	p*	FCS 1971-72 N=56	FCS 1974-75 N=48	p*	HED 1971-72 N=160	HED 1974-75 N=115	p*	FSHN 1971-72 N=36	FSHN 1974-75 N=40	p*
Ambitious	9.7(9)[b]	9.2(9)	—	8.8(8)	9.0(8)	—	8.9(8)	8.6(7)	—	11.5(13)	11.3(12)	—
Broadminded	5.7(4)	5.0(4)	—	5.5(4)	7.5(6)	—	5.9(3)	7.6(5)	.05	5.5(3)	6.0(4)	—
Capable	10.4(11)	11.3(11)	—	10.5(11)	10.1(10)	—	9.6(11)	10.1(10)	—	10.0(10)	8.9(9)	—
Cheerful	6.9(7)	7.2(5)	—	7.0(6)	9.2(9)	—	7.1(5)	9.1(8)	.05	7.8(5)	6.5(5)	—
Clean	14.3(16)	15.8(17)	—	15.0(17)	14.3(16)	—	14.7(17)	14.3(17)	—	15.7(17)	14.9(17)	—
Courageous	10.0(10)	9.7(10)	—	10.5(10)	11.0(13)	—	11.6(12)	10.8(13)	—	10.5(11)	9.7(10)	—
Forgiving	6.7(5)	7.3(6)	—	7.0(5)	7.0(5)	—	7.7(6)	7.3(4)	—	8.5(6)	7.5(7)	—
Helpful	6.8(6)	8.4(7)	—	8.3(7)	7.7(7)	—	9.4(10)	9.3(9)	—	9.0(8)	7.7(8)	—
Honest	2.2(1)	3.3(2)	—	2.4(1)	3.1(1)	—	3.3(1)	2.4(1)	—	3.5(1)	2.4(1)	—
p**			.377[c]			.024[d]			.089[e]			.988[f]
Imaginative	11.3(13)	11.3(12)	—	12.0(13)	11.0(12)	—	9.1(9)	10.7(12)	—	12.2(14)	11.5(13)	—
Independent	8.5(8)	8.8(8)	—	11.5(12)	6.5(3)	.05	8.4(7)	8.0(6)	—	8.9(7)	7.3(6)	—
Intellectual	11.7(14)	13.1(15)	—	10.2(9)	11.3(14)	—	12.0(14)	10.3(11)	.05	10.8(12)	11.5(14)	—
Logical	13.3(15)	12.6(13)	—	12.8(15)	13.0(15)	—	12.6(15)	12.9(15)	—	13.0(16)	12.3(15)	—
Loving	3.9(2)	2.2(1)	—	3.5(2)	3.9(2)	—	4.0(2)	4.0(2)	—	3.8(2)	5.5(2)	—
Obedient	17.1(18)	16.2(18)	—	16.9(18)	17.1(18)	—	16.9(18)	17.1(18)	—	16.0(18)	17.0(18)	—
Polite	14.8(17)	14.4(16)	—	15.0(16)	15.0(17)	—	13.9(16)	13.8(16)	—	12.5(15)	14.5(16)	—
Responsible	5.6(3)	4.8(3)	—	5.3(3)	6.5(4)	—	6.3(4)	6.1(3)	—	5.9(4)	5.5(3)	—
Self-controlled	10.9(12)	13.1(14)	—	12.5(14)	10.9(11)	—	11.6(13)	11.4(14)	—	9.3(9)	10.8(11)	—
p**			.111[g]			.372[h]			.215[i]			.680[j]
Concordance coefficient	.35	.37		.37	.30		.29	.29		.28	.30	

[a]Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; FSHN = Food Science & Human Nutrition.

[b]Figures indicate median rankings and, in parentheses, composite rank orders.

[c]Multivariate F = 1.0876; df = 9 and 119.

[d]Multivariate F = 2.2761; df = 9 and 94.

[e]Multivariate F = 1.7027; df = 9 and 265.

[f]Multivariate F = 0.2368; df = 9 and 66.

[g]Multivariate F = 1.6418; df = 9 and 119.

[h]Multivariate F = 1.0981; df = 9 and 94.

[i]Multivariate F = 1.3436; df = 9 and 265.

[j]Multivariate F = 0.7295; df = 9 and 66.

*Median test, df = 1.

**Multivariate analysis of variance test for the value system, nine values at one time.

HED, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	3.3864	9, 265	.0006
LHTVH	2.5660	9, 265	.0077
UHIVH	1.7027	9, 265	.0885
LHIVH	1.3436	9, 265	.2145

The conclusion was that HED changed on only the terminal value system, $p < .007+$, from 1971 to 1975. However, the values that indicated change were: *a world at peace, family security, mature love, broadminded, cheerful,* and *intellectual,* $p < .05+$.

FSHN, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	1.2353	9, 66	.2893
LHTVH	0.9858	9, 66	.4602
UHIVH	0.2368	9, 66	.9878
LHIVH	0.7295	9, 66	.6804

It was concluded that from 1971 to 1975 FSHN varied only by chance on both the terminal and instrumental systems. Nevertheless, the values in contrast over the years were: *a world of beauty* and *equality,* $p < .05$.

To summarize, the highest amount of change from 1971 to 1975 was in HED with six values and two halves of value systems that varied beyond chance. In between, FE and FCS varied beyond chance over the four years on one-half of a value system and two values. The lowest amount of change was in FSHN with no significant change in value systems but with two significantly changed values.

While the four departments varied in the amount of change beyond chance from 1971 to 1975, there was no significant values held in common by all four departments. However, the value *a world at peace* was a significant contrast, p < .01+, for three departments. In 1974-75, *a world at peace* ranked 12th position in FE, 12th position in FCS, and 12th position for HED. *A world at peace* did not significantly vary over the years for FSHN but was ranked in 10th position in 1974-75.

Null Hypothesis 2.5

There are no differences in the personal values held by undergraduate Human Ecology students in the freshman nontransfer level among the academic years 1971-1975, and similarly, in the senior nontransfer level among the years 1971-1975.

The concern in hypothesis 2.5 was to compare the Human Ecology freshman nontransfer students in an academic year, summer term omitted, with the Human Ecology freshman nontransfer students in another academic year. Similarly, Human Ecology senior nontransfer students were compared. For the first comparison, students came from the years 1971-72, 1972-73, 1973-74, and 1974-75. In the first comparison, only the value systems were tested over the four years. For the second comparison, students came from the years 1971-72 and 1974-75, the two ends of the time lapse in which the College of Human Ecology has been established at Michigan State University. In the second comparison, both the value systems and separate personal values were analyzed.

For the first comparison, given an alpha level of .05, and the following results, in Tables 28 and 29, for freshmen 1971 to 1975 and

Table 28.   Difference in Terminal Value System for Levels[a] Over the
            Years[b]

Terminal Value	N =	1971-1975		1971-72 and 1974-75	
		Freshmen	Seniors	Freshmen	Seniors
		673	482	313	271
		p*	p*	p*	p*
A comfortable life		—	—	—	—
An exciting life		—	—	—	—
A sense of accomplishment		—	—	—	—
A world at peace		.001	.001	.001	.05
A world of beauty		.01	—	.005	—
Equality		.05	—	—	—
Family security		—	—	—	—
Freedom		—	—	—	—
Happiness		.01	—	.005	—
	p**	.001+	.001+	.001+	.019
Inner harmony		—	—	.05	—
Mature love		—	—	—	—
National security		—	—	—	—
Pleasure		—	—	—	—
Salvation		—	—	—	—
Self respect		.001	—	—	—
Social recognition		.005	—	.001	—
True friendship		—	—	.001	—
Wisdom		—	—	—	—
	p**	.002	.665	.001+	.455

Note: Footnotes on next page.

Footnotes for Table 28:

[a]Levels: Freshmen = Freshman nontransfer students; Seniors = Senior nontransfer students.

[b]Years: Academic years 1971-1975 = 1971-72, 1972-73, 1973-74, and 1974-75, Summer term omitted.

[c]Multivariate $F = 2.6341$; df = 27 and 1931.10.

[d]Multivariate $F = 2.2422$; df = 27 and 1373.29.

[e]Multivariate $F = 4.9563$; df = 9 and 303.

[f]Multivariate $F = 2.2636$; df = 9 and 261.

[g]Multivariate $F = 1.9890$; df = 27 and 1931.10.

[h]Multivariate $F = 0.8654$; df = 27 and 1373.29.

[i]Multivariate $F = 3.5087$; df = 9 and 303.

[j]Multivariate $F = 0.9827$; df = 9 and 261.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 29. Difference in Instrumental Value System for Levels[a] Over the Years[b]

Instrumental Value	N =	1971-1975		1971-72 and 1974-75	
		Freshmen	Seniors	Freshmen	Seniors
		673	482	313	271
		p*	p*	p*	p*
Ambitious		.05	——	.001	——
Broadminded		——	.05	——	——
Capable		——	.05	——	——
Cheerful		.005	——	——	——
Clean		——	——	——	——
Courageous		——	——	.05	——
Forgiving		——	——	——	——
Helpful		——	——	——	——
Honest		——	——	——	——
	p**	.003	.219	.017	.128
Imaginative		——	——	——	——
Independent		.05	——	——	——
Intellectual		——	——	——	——
Logical		——	——	——	——
Loving		——	——	——	——
Obedient		——	——	——	——
Polite		——	——	——	——
Responsible		——	——	——	——
Self-controlled		——	——	——	——
	p**	.386	.598	.456	.321

Note: Footnotes on next page.

Footnotes for Table 29:

[a]Levels: Freshmen = Freshman nontransfer students; Seniors = Senior nontransfer students.

[b]Years: Academic years 1971-1975 = 1971-72, 1972-73, 1973-74, and 1974-75, Summer term omitted.

[c]Multivariate $F = 1.9058$; $df = 27$ and 1931.10.

[d]Multivariate $F = 1.2016$; $df = 27$ and 1373.29.

[e]Multivariate $F = 2.2973$; $df = 9$ and 303.

[f]Multivariate $F = 1.5584$; $df = 9$ and 261.

[g]Multivariate $F = 1.0563$; $df = 27$ and 1931.10.

[h]Multivariate $F = 0.9106$; $df = 27$ and 1373.29.

[i]Multivariate $F = 0.9777$; $df = 9$ and 303.

[j]Multivariate $F = 1.1611$; $df = 9$ and 261.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

seniors 1971 to 1975, the null hypothesis was not rejected in regard to differences over four years in a level.

Freshmen 1971-1975

Subgroup	Multivariate F	df	p
UHTVH	2.6341	27, 1931.10	.0001
LHTVH	1.9890	27, 1931.10	.0019
UHIVH	1.9058	27, 1931.10	.0034
LHIVH	1.0563	27, 1931.10	.3859

The conclusion was that Human Ecology freshman nontransfer students differed significantly on their UHTVH, LHTVH, and UHIVH, $p < .005+$. Those personal values that contributed to the beyond chance variation were: *a world at peace, a world of beauty, equality, happiness, self respect, social recognition, ambitious, cheerful,* and *independent,* $p < .005+$. The average cell size in each year was n = 168.

Seniors 1971-1975

Subgroup	Multivariate F	df	p
UHTVH	2.2422	27, 1373.29	.0003
LHTVH	0.8654	27, 1373.29	.6646
UHIVH	1.2016	27, 1373.29	.2192
LHIVH	0.9106	27, 1373.29	.5975

It can be concluded that the senior nontransfer students in Human Ecology with an average annual cell size of n = 120.5, differed beyond chance over the four years only on the UHTVH, $p < .0003$. The significant contrasting values were *a world at peace, broadminded,* and *capable,* $p < .05+$.

Since the freshmen varied beyond chance on three halves of the value hierarchies and seniors varied beyond chance on one-half of a value hierarchy, the freshmen did vary more than the seniors over the four years 1971 to 1975. The only significant contrasting value over the years for both freshmen and seniors was *a world at peace,* p < .0005+.

For the second comparison, in Tables 28 to 32, the null hypothesis was not rejected in regard to differences in two years (1971-72 and 1974-75), but over a four-year span, in a level. The results of comparison of a level in two years, first, by value system, and second, by separate personal values were as follows:

Freshmen 1971-72 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	4.9563	9, 303	.0001
LHTVH	3.5087	9, 303	.0004
UHIVH	2.2973	9, 303	.0166
LHIVH	0.9777	9, 303	.4585

The conclusion was that freshman nontransfer students in Human Ecology significantly changed from 1971-72 to 1974-75 on the UHTVH, p < .0001; LHTVH p < .0004; and UHIVH, p < .0166. However, when the single values were tested by the median test, no personal values caused significant variance in the UHIVH. The significant contrast values for freshmen over the years were: *a world at peace,* p < .001;. *family security,* p < .05; *self respect,* p < .001; *social recognition,* p < .05; and *true friendship,* p < .05.

Table 30. Value Medians and Composite Rank Orders for Freshman Students in the Years 1971-1972 and 1974-1975

Terminal Value N =	1971-72 154	1974-75 159	p*	Instrumental Value N =	1971-72 154	1974-75 159	p*
A comfortable life	12.6(14)[a]	13.2(14)	—	Ambitious	8.3(7)	8.3(7)	—
An exciting life	12.6(13)	11.3(12)	—	Broadminded	6.1(3)	7.1(5)	—
A sense of accomplishment	8.9(10)	8.5(9)	—	Capable	10.6(11)	10.9(12)	—
A world at peace	7.8(8)	10.8(11)	.001	Cheerful	6.8(5)	8.6(9)	—
A world of beauty	10.3(12)	11.7(13)	—	Clean	14.8(17)	14.9(17)	—
Equality	9.4(11)	10.7(10)	—	Courageous	11.6(13)	10.1(10)	—
Family security	8.8(9)	8.2(8)	—	Forgiving	6.9(6)	6.3(4)	—
Freedom	6.4(3)	6.3(5)	.05	Helpful	9.6(9)	8.0(6)	—
Happiness	3.9(1)	5.8(3)	—	Honest	3.1(1)	2.4(1)	—
Inner harmony	5.8(2)	4.3(1)	—	Imaginative	11.5(12)	11.3(14)	—
Mature love	6.7(4)	7.5(7)	—	Independent	9.5(8)	8.5(8)	—
National security	16.6(18)	16.6(18)	—	Intellectual	12.3(14)	10.9(13)	—
Pleasure	12.9(15)	13.7(15)	—	Logical	12.3(15)	13.1(15)	—
Salvation	15.4(16)	15.3(17)	—	Loving	3.5(2)	3.5(2)	—
Self respect	6.8(5)	4.5(2)	.001	Obedient	16.2(18)	16.8(18)	—
Social recognition	15.6(17)	14.5(16)	.05	Polite	12.8(16)	13.8(16)	—
True friendship	7.2(6)	6.2(4)	.05	Responsible	6.4(4)	5.9(3)	—
Wisdom	7.8(7)	7.2(6)	—	Self-controlled	10.2(10)	10.8(11)	—
Concordance coefficient	.30	.32		Concordance coefficient	.28	.30	

[a]Figures indicate median rankings and, in parentheses, the composite rank orders.

*Median test, df = 1.

Table 31. Value Medians and Composite Rank Orders for Senior Students in the Years 1971-1972 and 1974-1975

Terminal Value	N =	1971-72 192	1974-75 79	p*	Instrumental Value	N =	1971-72 192	1974-75 79	p*
A comfortable life		12.9(14)[a]	12.1(14)	—	Ambitious		10.2(11)	11.1(13)	—
An exciting life		10.7(12)	9.7(9)	—	Broadminded		5.6(4)	5.8(3)	—
A sense of accomplishment		7.5(7)	8.9(8)	.05	Capable		9.5(9)	8.6(8)	—
A world at peace		7.8(8)	10.3(12)	.05	Cheerful		7.3(5)	8.9(9)	.05
A world of beauty		11.8(13)	10.9(13)	—	Clean		14.7(16)	14.4(16)	—
Equality		9.3(10)	9.8(10)	—	Courageous		10.3(12)	10.6(11)	—
Family security		10.5(11)	9.9(11)	—	Forgiving		7.9(7)	8.3(6)	—
Freedom		6.1(5)	6.6(5)	—	Helpful		7.6(6)	8.5(7)	—
Happiness		4.4(2)	5.3(3)	—	Honest		2.5(1)	4.3(2)	.05
Inner harmony		4.1(1)	3.5(1)	—	Imaginative		10.1(10)	9.8(10)	—
Mature love		5.6(4)	5.9(4)	—	Independent		8.6(8)	6.3(5)	.05
National security		16.3(17)	16.2(17)	—	Intellectual		10.8(13)	10.9(12)	—
Pleasure		13.3(15)	12.5(15)	—	Logical		13.2(15)	11.8(14)	—
Salvation		17.5(18)	17.3(18)	—	Loving		4.1(2)	4.2(1)	—
Self respect		5.0(3)	4.9(2)	—	Obedient		17.4(18)	17.5(18)	—
Social recognition		15.5(16)	15.3(16)	—	Polite		14.9(17)	14.6(17)	—
True friendship		7.4(6)	7.4(7)	—	Responsible		5.5(3)	5.8(4)	—
Wisdom		8.3(9)	6.9(6)	—	Self-controlled		11.8(14)	12.2(15)	—
Concordance coefficient		.38	.34		Concordance coefficient		.35	.30	

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

*Median test, df = 1.

169

Seniors 1971-72 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	2.2636	9, 261	.0187
LHTVH	0.9827	9, 261	.4547
UHIVH	1.5584	9, 261	.1281
LHIVH	1.1611	9, 261	.3205

It was concluded that senior nontransfer students in Human Ecology significantly changed in their UHTVH, $p < .0187$, from 1971-72 to 1974-75. However, when single values were tested by the median test, three instrumental values, *cheerful, honest,* and *intellectual,* $p < .05$, appeared as significant contrasts between years for seniors, an appearance not indicated when comparing on value systems. Further, the terminal values that distinguished the seniors over the four-year span were *a sense of accomplishment* and *a world at peace,* $p < .05$.

Curiously, when the first six and last three ranked personal values in the terminal and instrumental value hierarchies were compared across the freshman and senior levels in 1971-72 and 1974-75, as in Table 32, the majority of values were the same for both levels and not significantly changed over the years. The first six ranked terminal values were *happiness, inner harmony, freedom, mature love, self respect,* and *true friendship.* The last three ranked terminal values (16th, 17th, and 18th positions) were *salvation, social recognition,* and *national security.* The values *freedom, self respect, true friendship,* and *social recognition* had only changed significantly, $p < .05+$, for the freshmen from 1971-72 to 1974-75. For freshmen *mature love* was the value that shifted by chance from fourth rank position to seventh rank position in 1971 to 1975.

Table 32. High and Low Ranked Values for Levels in the Years 1971-1972 and 1974-1975

		Freshmen			Seniors		
		1971-72	1974-75		1971-72	1974-75	
	N =	154	159	p*	192	79	p*
Terminal Value:							
Happiness		1[a]	3	——	2	3	——
Inner harmony		2	1	——	1	1	——
Freedom		3	5	.05	5	5	——
Mature love		4	7	——	4	4	——
Self respect		5	2	.001	3	2	——
True friendship		6	4	.05	6	6	——
Salvation		16	17	——	18	18	——
Social recognition		17	16	.05	16	16	——
National security		18	18	——	17	17	——
Instrumental Value:							
Honest		1	1	——	1	2	——
Loving		2	2	——	2	1	——
Broadminded		3	5	——	4	3	——
Responsible		4	3	——	3	4	——
Cheerful		5	9	——	5	9	.05
Forgiving		6	4	——	7	6	——
Polite		16	16	——	17	17	——
Clean		17	17	——	16	16	——
Obedient		18	18	——	18	18	——

[a]Figures indicate composite rank orders.

*Median test, df = 1.

The first six ranked instrumental values were *honest, loving, broadminded, responsible, cheerful,* and *forgiving.* The last three ranked instrumental values (16th, 17th, and 18th positions) were *polite, clean,* and *obedient.*

The value *cheerful* had only changed significantly, $p < .05$, from fifth position in 1971-72 to ninth position in 1974-75, for the seniors. For freshmen *cheerful* was the value that shifted by chance from fifth to ninth position in 1971 to 1975. For seniors *forgiving* was the value that shifted by chance from seventh to sixth position in 1971 to 1975.

The homogeneity of value ranking of a value system by level over the years 1971 to 1975 has changed. On the terminal value hierarchy, freshmen increased, $W = .30 \to .32$, and seniors decreased in homogeneity, $W = .38 \to .34$. For both levels the shift in homogeneity was in the opposite direction.

On the instrumental value hierarchy, freshmen increased, $W = .28 \to .30$, and seniors decreased in homogeneity, $W = .35 \to .30$. For both levels again the shift in homogeneity was in the opposite direction. Freshmen increased in homogeneity of value ranking by two points for both the terminal and instrumental value hierarchies. Seniors decreased in homogeneity of value ranking by, respectively, four points and five points on the terminal and instrumental value hierarchies. Hence, the amount of change in homogeneity in value ranking of a value system was twice as much for seniors as it was for freshmen from 1971-72 to 1974-75.

Null Hypothesis 2.6.1

There are no differences in the personal values held by freshman nontransfer undergraduate Human Ecology students among the majors, in the academic year 1971-1972, and similarly, in the years 1972-1973, 1973-1974, and 1974-1975.

This hypothesis was concerned with comparing the seven academic major clusters, as indicated in Tables 33 and 34, at the freshman non-transfer student level in the academic year 1971-72, and similarly in 1973-74. Years 1972-73 and 1974-75 were omitted as a major in each year was below minimum cell size necessary for testing of the hypothesis by the multivariate analysis of variance test on the four subgroups of the terminal and instrumental value hierarchies. Results of comparison of majors in a year could not be compared if there was a different mix of compared majors in each year. Hence, to allow comparison of results from year to year, only those years with adequate cell size for the seven academic major clusters were selected for testing the hypothesis. The null hypothesis was not rejected at the .05 alpha level with the following results:

1972-1972 Freshmen

Subgroup	Multivariate F	df	p
UHTVH	1.9232	54, 713.36	.0002
LHTVH	1.2379	54, 713.36	.1235
UHIVH	0.8692	54, 713.36	.7358
LHIVH	1.2728	54, 713.36	.0957

Table 33. Difference in Terminal Value System Among Majors[a] in Each Year[b] for Levels[c]

Terminal Value	Freshmen 1971-72 p*	Freshmen 1973-74 p*	Seniors 1971-72 p*
A comfortable life	.001	——	——
An exciting life	.01	——	——
A sense of accomplishment	.01	.05	——
A world at peace	——	.05	——
A world of beauty	——	——	——
Equality	.05	——	——
Family security	——	.05	.01
Freedom	——	——	——
Happiness	——	——	——
p**	.001+[d]	.020[e]	.068[f]
Inner harmony	.01	——	.05
Mature love	——	——	——
National security	——	——	——
Pleasure	——	——	——
Salvation	——	——	——
Self respect	——	——	——
Social recognition	——	——	.05
True friendship	——	——	——
Wisdom	——	——	——
p**	.124[g]	.813[h]	.009[i]

Note: Footnotes on next page.

Footnotes for Table 33:

[a]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Year: Academic years 1971-72 and 1973-74, Summer term omitted.

[c]Levels: Freshmen = Freshman nontransfer students; Seniors = Senior nontransfer students.

[d]Multivariate F = 1.9232; df = 54 and 713.36.

[e]Multivariate F = 1.4572; df = 54 and 861.23.

[f]Multivariate F = 1.3145; df = 54 and 902.1.

[g]Multivariate F = 1.2379; df = 54 and 713.36.

[h]Multivariate F = 0.8240; df = 54 and 861.23.

[i]Multivariate F = 1.5321; df = 54 and 902.1.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 34. Difference in Instrumental Value System Among Majors[a] in Each Year[b] for Levels[c]

Instrumental Value	Freshmen 1971-72 p*	Freshmen 1973-74 p*	Seniors 1971-72 p*
Ambitious	—	—	—
Broadminded	—	—	—
Capable	—	—	—
Cheerful	—	—	—
Clean	—	—	.05
Courageous	.01	—	.05
Forgiving	—	—	—
Helpful	—	.05	—
Honest	—	—	—
p**	.736[d]	.235[e]	.047[f]
Imaginative	.001	—	—
Independent	—	—	—
Intellectual	—	—	—
Logical	—	—	—
Loving	—	—	—
Obedient	—	—	—
Polite	—	—	—
Responsible	—	—	—
Self-controlled	—	—	—
p**	.096[g]	.281[h]	.215[i]

Note: Footnotes on next page.

Footnotes for Table 34:

[a]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Year: Academic years 1971-72 and 1973-74, Summer term omitted.

[c]Levels: Freshmen = Freshman nontransfer students; Seniors = Senior nontransfer students.

[d]Multivariate $F = 0.8692$; $df = 54$ and 713.36.

[e]Multivariate $F = 1.1382$; $df = 54$ and 861.23.

[f]Multivariate $F = 1.3576$; $df = 54$ and 902.1.

[g]Multivariate $F = 1.2728$; $df = 54$ and 713.36.

[h]Multivariate $F = 1.1073$; $df = 54$ and 861.23.

[i]Multivariate $F = 1.1528$; $df = 54$ and 902.1.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

The conclusion was that the seven majors at the freshman nontransfer student level, with an average of 22 cases, varied significantly, $p < .0002$, only on the UHTVH when the alpha level was set at .05. To differentiate the majors, the single personal values that were causing significant variance, $p < .05+$, were: *a comfortable life, an exciting life, a sense of accomplishment, equality, inner harmony, courageous,* and *imaginative.*

1973-1974 Freshmen

Subgroup	Multivariate	df	p
UHTVH	1.4572	54, 861.23	.0196
LHTVH	0.8240	54, 861.23	.8130
UHIVH	1.1382	54, 861.23	.2351
LHIVH	1.1073	54, 861.23	.2813

Here the conclusion was that the freshman majors only varied beyond chance on their UHTVH, $p < .0196$. The single personal values that created contrasts among majors were: *a sense of accomplishment, a world at peace, family security,* and *helpful* at $p < .05+$.

Null Hypothesis 2.6.2

There are no differences in the personal values held by senior nontransfer undergraduate Human Ecology students among the majors in the academic year 1971-1972, and similarly, in the years 1972-1973, 1973-1974, and 1974-1975.

The focus of this hypothesis was on comparing the seven academic major clusters at the senior nontransfer level in the academic year 1971-72. Years 1972-73, 1973-74, and 1974-75 were omitted since more

than one major in these years was below adequate cell size for testing by the multivariate analysis of variance test. Results across the years at the senior level could not be compared when the mix of majors were different in type and number. Results also could not be related to similar results at the freshman nontransfer student level as in hypothesis 2.6.1. Thus, to retain complete and consistent comparison, only the seven majors in 1971-1972 were compared on their value systems. The null hypothesis was not rejected since the results were:

1971-1972 Seniors

Subgroup	Multivariate F	df	p
UHTVH	1.3145	54, 902.1	.0675
LHTVH	1.5321	54, 902.1	.0094
UHIVH	1.3576	54, 902.1	.0473
LHIVH	1.1528	54, 902.1	.2146

The conclusion was that the seven majors at the senior level did differ from each other beyond chance on their LHTVH, p < .0094, and UHIVH, p < .0473. The UHTVH and LHIVH varied only by chance. Those single personal values that significantly contributed, p < .05+, to contrasting the majors by value systems were: *family security, inner harmony, social recognition, cheerful,* and *clean.*

The one significant personal value that was held in common by both levels for contrast among majors was *family security*: freshman level--p < .05; senior level--p < .01.

Null Hypothesis 2.7.1

There are no differences in the personal values held by freshman nontransfer undergraduate Human Ecology students in a major among the academic years 1971-1975.

The focus of hypothesis 2.7.1 was on comparing the freshman nontransfer Human Ecology students in a major in one academic year with the freshmen of the same major in another academic year. The academic years compared were 1971-72, 1972-73, 1973-74, and 1974-75. In total there were seven academic major clusters,[4] as indicated in Tables 35 and 36.

In terms of a freshman nontransfer major over the years 1971 to 1975 and subgrouping of personal values by upper and lower halves of terminal and instrumental value systems, the results of testing the hypothesis led to an acceptance of the null hypothesis at the .05 alpha level. For each major the results were as follows:

Major 1. Child Development & Teaching

Subgroup	Multivariate F	df	p
UHTVH	1.5452	27, 263.5	.0457
LHTVH	1.7462	27, 263.5	.0147
UHIVH	1.2328	27, 263.5	.2036
LHIVH	1.4672	27, 263.5	.0686

The conclusion was that freshmen in Major 1 differed over the four years only on the UHTVH and LHTVH. Major 1 freshmen did not differ on their instrumental values from 1971 to 1975. The values, *a sense of*

---

[4]Ibid.

accomplishment, a world at peace, national security, **and** *social recognition,* distinguished the majors over the four years.

Major 2. Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts

Subgroup	Multivariate F	df	p
UHTVH	0.7070	27, 321.4	.8582
LHTVH	0.8856	27, 231.4	.6325
UHIVH	1.0990	27, 231.4	.3420
LHIVH	0.6895	27, 231.4	.8752

The terminal and instrumental value hierarchies of Major 2 when compared from year to year at the freshman level were stable and variation of values from year to year was only by chance.

Major 3. Foods, Dietetics, Nutrition

Subgroup	Multivariate F	df	p
UHTVH	1.2919	27, 237.2	.1598
LHTVH	0.9500	27, 237.2	.5400
UHIVH	0.9410	27, 237.2	.5529
LHIVH	0.6546	27, 237.2	.9056

Similarly, it may be concluded that the freshman level by Major 3 had variation in value orientations from year to year only by chance. However, the value *happiness* was a significant contrast, $p < .05$.

Major 4. Home Economics Education

Subgroup	Multivariate F	df	p
UHTVH	0.8795	18, 72	.6038
LHTVH	0.9470	18, 72	.5278
UHIVH	0.6664	18, 72	.8322
LHIVH	1.1591	18, 72	.3172

Further, the two value orientations of freshmen in Major 4 were not significantly different in the years 1971-72, 1972-73, and 1973-74. Although not enough to create a distinguishing value orientation, the values *a comfortable life, pleasure,* and *clean* differed significantly over the four years, $p < .05+$.

Major 5. Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	1.5928	27, 278.1	.0349
LHTVH	1.1827	27, 278.1	.2486
UHIVH	1.2357	27, 278.1	.2004
LHIVH	1.5445	27, 278.1	.0454

However, with the freshmen in Major 5 it was concluded that the difference in the UHTVH and LHIVH was not by chance. The values *a comfortable life, family security, self respect,* and *forgiving* were significant contrasts for the years, $p < .05+$.

Major 6. Interior Design, Human Environment & Design

Subgroup	Multivariate F	df	p
UHTVH	1.3727	27, 432.9	.1033
LHTVH	0.9570	27, 432.9	.5290
UHIVH	0.9636	27, 432.9	.5193
LHIVH	0.8032	27, 432.9	.7492

The conclusion was that the two freshman value hierarchies in Major 6 have not varied over the four years. Any variation in value systems was by chance.

Major 7. Retailing of Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	2.2547	18, 100	.0058
LHTVH	1.4476	18, 100	.1265
UHIVH	0.7341	18, 100	.7687
LHIVH	0.7978	18, 100	.6984

Only the UHTVH was concluded as being significantly different over the years 1971-72, 1973-74, and 1974-75 for freshmen in Major 7. Also, the values of *a sense of accomplishment* and *self respect* were varying beyond chance, $p < .05+$.

Null Hypothesis 2.7.2

There are no differences in the personal values held by senior nontransfer undergraduate Human Ecology students in a major among the academic years 1971-1975.

The focus of hypothesis 2.7.2 was on comparing the senior nontransfer Human Ecology students in a major in one academic year with the seniors of the same major in another academic year. The academic years compared were 1971-72, 1972-73, 1973-74, and 1974-75. In total there were six academic majors, as shown in Tables 35 and 36. Major 5, Clothing & Textiles was omitted as three of the four years had a cell size less than nine, the minimum number of dependent variables taken at one time when testing with the multivariate analysis of variance test on the value systems, nine values at a time. The multivariate analysis of variance will not accept a cell size of an independent variable smaller than the number of dependent variables being analyzed at one time.

Table 35. Difference in Terminal Value System Between Levels[a] in Each Major[b] Over the Academic Years 1971-72, 1972-73, 1973-74, and 1974-75 (Summer Term Omitted)

Terminal Value	Major[b] 1 Freshmen p*	1 Seniors p*	2 Freshmen p*	2 Seniors p*	3 Freshmen p*	3 Seniors p*	4 Freshmen p*	4 Seniors p*	5 Freshmen p*	6 Freshmen p*	6 Seniors p*	7 Freshmen p*	7 Seniors p*
A comfortable life	—	—	—	—	—	—	.01	—	.05	—	—	—	—
An exciting life	—	—	—	.01	—	—	—	—	—	—	—	—	—
A sense of accomplishment	.005	—	—	—	—	—	—	—	—	—	—	.05	—
A world at peace	.001	—	—	—	—	—	—	.001	—	—	—	—	—
A world of beauty	—	—	—	—	—	—	—	—	—	—	—	—	—
Equality	—	—	—	—	—	—	—	—	—	—	—	—	—
Family security	—	—	—	—	—	—	—	—	.05	—	—	—	—
Freedom	—	—	—	.01	—	—	—	—	—	—	.05	—	—
Happiness	—	—	—	—	.05	—	—	—	—	—	—	—	—
p**	.046[c]	.177[d]	.858[e]	.041[f]	.160[g]	.147[h]	.604[i]	.003[j]	.035[k]	.103[l]	.271[m]	.006[n]	.350[o]
Inner harmony	—	—	—	—	—	—	—	—	—	—	—	—	—
Mature love	—	—	—	—	—	—	—	—	—	—	—	—	—
National security	.05	—	—	—	—	—	—	.005	—	—	—	—	—
Pleasure	—	—	—	—	—	—	.05	—	—	—	—	—	—
Salvation	—	—	—	.01	—	—	—	—	—	—	.05	—	—
Self respect	—	—	—	—	—	—	—	.05	.05	—	—	.01	—
Social recognition	.05	—	—	—	—	—	—	—	—	—	—	—	—
True friendship	—	—	—	—	—	—	—	—	—	—	—	—	—
Wisdom	—	—	—	—	—	—	—	.05	—	—	—	—	—
p**	.015[p]	.580[q]	.633[r]	.029st	.540[t]	.146[u]	.528[v+]	.032[w+]	.249[x]	.529[y]	.697[z+]	.127[aa+]	.115[bb]

Note: Footnotes on next page.

Footnotes for Table 35:

[a]Levels: Freshmen = Freshman nontransfer students; Seniors = Senior nontransfer students.

[b]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[c]Multivariate F = 1.5452; df = 27 and 263.5.   [d]Multivariate F = 1.2658; df = 27 and 263.5.   [e]Multivariate F = 0.7070; df = 27 and 231.4.

[f]Multivariate F = 1.8014; df = 18 and 74.   [g]Multivariate F = 1.2919; df = 27 and 237.2.   [h]Multivariate F = 1.8014; df = 27 and 158.4.

[i]Multivariate F = 0.8795; df = 18 and 72.   [j]Multivariate F = 3.4215; df = 9 and 40.   [k]Multivariate F = 1.5928; df = 27 and 278.1.

[l]Multivariate F = 1.3727; df = 27 and 432.9.   [m]Multivariate F = 1.2079; df = 18 and 94.   [n]Multivariate F = 2.2547; df = 18 and 100.

[o]Multivariate F = 1.0909; df = 27 and 272.3.   [p]Multivariate F = 1.7462; df = 27 and 263.5.   [q]Multivariate F = 0.9224; df = 27 and 263.5.

[r]Multivariate F = 0.8856; df = 27 and 231.4.   [s]Multivariate F = 1.9036; df = 18 and 74.   [t]Multivariate F = 0.9500; df = 27 and 237.2.

[u]Multivariate F = 1.3255; df = 27 and 158.4.   [v]Multivariate F = 0.9470; df = 18 and 72.   [w]Multivariate F = 2.3362; df = 9 and 40.

[x]Multivariate F = 1.1827; df = 27 and 278.1.   [y]Multivariate F = 0.9570; df = 27 and 432.9.   [z]Multivariate F = 0.7991; df = 18 and 94.

[aa]Multivariate F = 1.4476; df = 18 and 100.   [bb]Multivariate F = 1.3609; df = 27 and 272.3.   [†]Omitted 1974-75.

[†]Omitted 1973-74 and 1974-75.   [‡]Omitted 1973-74.   [§]Omitted 1972-73.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

185

Table 36. Difference in Instrumental Value System Between Levels[a] in Each Major[b] Over the Academic Years 1971-72, 1972-73, 1973-74, and 1974-75 (Summer Term Omitted)

Instrumental Value	Major[a]												
	1		2		3		4		5	6		7	
	Freshmen	Seniors	Freshmen	Seniors	Freshmen	Seniors	Freshmen	Seniors	Freshmen	Freshmen	Seniors	Freshmen	Seniors
	p*	p*	p*	p*	p*	p*	p*	p*	p*	p*	p*	p*	p*
Ambitious	—	—	—	—	—	—	—	—	—	—	.05	—	—
Broadminded	—	—	—	.01	—	—	—	—	—	—	—	—	—
Capable	—	—	—	—	—	—	—	—	—	—	—	—	—
Cheerful	—	—	—	.001	—	—	—	.05	—	—	—	—	—
Clean	—	—	—	—	—	—	.05	—	—	—	.05	—	—
Courageous	—	—	—	—	—	—	—	—	—	—	—	—	—
Forgiving	—	—	—	—	—	—	—	—	.01	—	—	—	—
Helpful	—	—	—	.05	—	—	—	—	—	—	—	—	—
Honest	—	—	—	—	—	—	—	—	—	—	—	—	—
p**	.204[c]	.292[d]	.342[e]	.001+[f]	.553[g]	.940[h]	.832[i]	.254[j]	.200[k]	.519[l]	.396[m]	.769[n]	.299[o]
Imaginative	—	—	—	—	—	—	—	—	—	—	.005	—	—
Independent	—	—	—	.005	—	—	—	—	—	—	—	—	—
Intellectual	—	—	—	—	—	—	—	—	—	—	—	—	—
Logical	—	—	—	.005	—	—	—	—	—	—	—	—	—
Loving	—	—	—	—	—	—	—	.01	—	—	—	—	—
Obedient	—	—	—	—	—	—	—	—	—	—	—	—	—
Polite	—	—	—	—	—	—	—	—	—	—	—	—	—
Responsible	—	—	—	—	—	—	—	—	—	—	—	—	—
Self-controlled	—	—	—	—	—	—	—	—	—	—	—	—	—
p**	.069[p]	.404[q]	.875[rr]	.015st	.906[t]	.761[u]	.317[v†]	.283[w‡]	.045[x]	.749[y]	.634[z†]	.698[aa‡]	.409[bb]

186

Note: Footnotes on next page.

Footnotes for Table 36:

[a]Levels: Freshmen = Freshman nontransfer students; Seniors = Senior nontransfer students.

[b]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 4 = Home Economics Education; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[c]Multivariate F = 1.2328; df = 27 and 263.5;

[d]Multivariate F = 1.1414; df = 27 and 263.5.

[e]Multivariate F = 1.0990; df = 27 and 231.4.

[f]Multivariate F = 3.0098; df = 18 and 74.

[g]Multivariate F = 0.9410; df = 27 and 237.2.

[h]Multivariate F = 0.6012; df = 27 and 158.4.

[i]Multivariate F = 0.6664; df = 18 and 72.

[j]Multivariate F = 1.3265; df = 9 and 40.

[k]Multivariate F = 1.2357; df = 27 and 278.1.

[l]Multivariate F = 0.9636; df = 27 and 432.9.

[m]Multivariate F = 1.0677; df = 18 and 94.

[n]Multivariate F = 0.7341; df = 18 and 100.

[o]Multivariate F = 1.1347; df = 27 and 272.3.

[p]Multivariate F = 1.4672; df = 27 and 263.5.

[q]Multivariate F = 1.0484; df = 27 and 263.5.

[r]Multivariate F = 0.6895; df = 27 and 231.4.

[s]Multivariate F = 2.0805; df = 18 and 74.

[t]Multivariate F = 0.6546; df = 27 and 237.2.

[u]Multivariate F = 0.7889; df = 27 and 158.4.

[v]Multivariate F = 1.1591; df = 18 and 72.

[w]Multivariate F = 1.2695; df = 9 and 40.

[x]Multivariate F = 1.5445; df = 27 and 278.1.

[y]Multivariate F = 0.8032; df = 27 and 432.9.

[z]Multivariate F = 0.8538; df = 18 and 94.

[aa]Multivariate F = 0.7978; df = 18 and 100.

[bb]Multivariate F = 1.0439; df = 27 and 272.3.

[†]Omitted 1974-75.

[†]Omitted 1973-74 and 1974-75.

[♦]Omitted 1973-74.

[♦]Omitted 1972-73.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

In terms of a senior nontransfer major over the years 1971 to 1975 and subgrouping of the terminal and instrumental value systems, the results of testing the hypothesis led to an acceptance of it at the .05 alpha level. For each major the results were as follows:

Major 1. Child Development & Teaching

Subgroup	Multivariate F	df	p
UHTVH	1.2658	27, 263.5	.1771
LHTVH	0.9224	27, 263.5	.5797
UHIVH	1.1414	27, 263.5	.2920
LHIVH	1.0484	27, 263.5	.4038

It was concluded that senior students in Major 1 had terminal and instrumental value hierarchies that varied only by chance over the years 1971 to 1975.

Major 2. Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts

Subgroup	Multivariate F	df	p
UHTVH	1.8014	18, 74	.0410
LHTVH	1.9036	18, 74	.0285
UHIVH	3.0098	18, 75	.0005
LHIVH	2.0805	18, 75	.0150

The results led to the conclusion that the senior students in Major 2 were different in each of the three years 1971-72, 1972-73, and 1973-74 on both the upper and lower halves of the terminal and instrumental value hierarchies. The specific values that discriminated, $p < .01+$, the majors in the three years were: *an exciting life, freedom, salvation, broadminded, cheerful, helpful, independent,* and *loving.*

Major 3. Foods, Dietetics, Nutrition

Subgroup	Multivariate F	df	p
UHTVH	1.3238	27, 158.4	.1469
LHTVH	1.3255	27, 158.4	.1458
UHIVH	0.6012	27, 158.4	.9396
LHIVH	0.7889	27, 158.4	.7612

To contrast, the conclusion was that seniors in Major 3 have only varied by chance over the four years, 1971 to 1975, on their value orientations.

Major 4. Home Economics Education

Subgroup	Multivariate F	df	p
UHTVH	3.4215	9, 40	.0034
LHTVH	2.3362	9, 40	.0320
UHIVH	1.3265	9, 40	.2543
LHIVH	1.2695	9, 40	.2832

The results led to the conclusion that senior students in Major 4 were varying more than by chance in the years 1971-72 and 1972-73 on only the terminal value hierarchy. Seven values did contribute to the significant contrast of the majors from 1971 to 1973, $p < .05+$: *a world at peace, freedom, national security, self respect, true friendship, cheerful,* and *loving.*

Major 6. Interior Design, Human Environment & Design

Subgroup	Multivariate F	df	p
UHTVH	1.2079	18, 94	.2711
LHTVH	0.7991	18, 94	.6966
UHIVH	1.0677	18, 94	.3964
LHIVH	0.8538	18, 94	.6337

On the other hand, the value orientations of seniors in Major 6 varied only by chance over the years 1971-72, 1972-73, and 1974-75, however, the values *freedom, salvation, ambitious, clean,* and *imaginative* did distinguish the years, $p < .05+$.

Major 7. Retailing of Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	1.0909	27, 272.3	.3499
LHTVH	1.3609	27, 272.3	.1149
UHIVH	1.1347	27, 272.3	.2991
LHIVH	1.0439	27, 272.3	.4094

The conclusion was that both the terminal and instrumental value hierarchies of seniors in Major 7 were varying only by chance over the years 1971 to 1975.

Null Hypothesis 3.1

There is no difference in the personal values held between freshman undergraduate Human Ecology students in Fall and Spring term of each year 1971-1975.

In this hypothesis freshman nontransfer students in Fall term were compared, on the terminal and instrumental value systems, to freshman nontransfer students in Spring term of the same academic year. The Human Ecology freshman personal value comparison by term was done in the academic years 1971-72, 1972-73, 1973-74, and 1974-75.

In Tables 37 and 38, the results of comparing freshman non-transfer students over terms for four years led to the acceptance of the null hypothesis.

Table 37. Difference in Terminal Value System for Freshman Nontransfer Students Between Fall and Spring Term of Each Year

Terminal Value	1971-72 N = 105 p*	1972-73 N = 164 p*	1973-74 N = 163 p*	1974-75 N = 140 p*
A comfortable life	——	——	——	——
An exciting life	——	——	.05	——
A sense of accomplishment	.05	——	——	——
A world at peace	——	——	——	——
A world of beauty	——	——	——	——
Equality	——	——	——	——
Family security	——	——	——	——
Freedom	——	——	——	——
Happiness	——	——	——	——
p**	$.066^{aa}$	$.941^{b}$	$.367^{c}$	$.997^{d}$
Inner harmony	.05	——	——	——
Mature love	——	.05	——	——
National security	——	.01	——	——
Pleasure	——	——	——	——
Salvation	.05	——	——	——
Self respect	——	——	——	——
Social recognition	——	——	——	——
True friendship	——	——	——	——
Wisdom	——	.05	——	——
p**	$.303^{e}$	$.035^{f}$	$.618^{g}$	$.812^{h}$

Note: Footnotes on next page.

Footnotes for Table 37:

[a]Multivariate F = 1.8723; df = 9 and 95.

[b]Multivariate F = 0.3854; df = 9 and 154.

[c]Multivariate F = 1.0989; df = 9 and 153.

[d]Multivariate F = 0.1688; df = 9 and 130.

[e]Multivariate F = 1.2017; df = 9 and 95.

[f]Multivariate F = 2.0739; df = 9 and 154.

[g]Multivariate F = 0.7993; df = 9 and 153.

[h]Multivariate F = 0.5798; df = 9 and 130.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 38. Difference in Instrumental Value System for Freshman Nontransfer Students Between Fall and Spring Term of Each Year

		1971-72	1972-73	1973-74	1974-75
	N =	105	164	163	140
Instrumental Value		p*	p*	p*	p*
Ambitious Broadminded Capable Cheerful Clean Courageous Forgiving Helpful Honest					
	p**	$.611^a$	$.931^b$	$.627^c$	$.337^d$
Imaginative Independent Intellectual Logical Loving Obedient Polite Responsible Self-controlled					
	p**	$.615^e$	$.492^f$	$.705^g$	$.479^h$

Note: Footnotes on next page.

Footnotes for Table 38:

[a]Multivariate F = 0.8074; df = 9 and 95.

[b]Multivariate F = 0.4049; df = 9 and 154.

[c]Multivariate F = 0.7886; df = 9 and 153.

[d]Multivariate F = 1.1437; df = 9 and 130.

[e]Multivariate F = 0.8027; df = 9 and 95.

[f]Multivariate F = 0.9402; df = 9 and 154.

[g]Multivariate F = 0.7039; df = 9 and 153.

[h]Multivariate F = 0.9571; df = 9 and 130.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Freshmen in Fall & Spring Term, 1971-72

Subgroup	Multivariate F	df	p
UHTVH	1.8723	9, 95	.0655
LHTVH	1.2017	9, 95	.3032
UHIVH	0.8074	9, 95	.6106
LHIVH	0.8027	9, 95	.6148

It was concluded that the 105 freshman nontransfer students in Human Ecology did not have significantly different terminal and instrumental value systems during Fall and Spring term in 1971-72 when the alpha level was set at .05. While the two value systems between terms varied by chance, the values *a sense of accomplishment, inner harmony,* and *salvation* did separate the freshmen by term at p < .05.

Freshmen in Fall & Spring Term, 1972-73

Subgroup	Multivariate F	df	p
UHTVH	0.3854	9, 154	.9408
LHTVH	2.0739	9, 154	.0351
UHIVH	0.4049	9, 154	.9311
LHIVH	0.9402	9, 154	.4922

But in 1972-73 it was concluded that the 164 freshman nontransfer students in Human Ecology did differ significantly on the LHTVH at p < .0351 in Fall and Spring terms. The significant contrast values for the freshmen in Fall and Spring terms were *mature love* and *national security,* p < .05+.

Freshmen in Fall & Spring Term, 1973-74

Subgroup	Multivariate F	df	p
UHTVH	1.0989	9, 153	.3669
LHTVH	0.7993	9, 153	.6175
UHIVH	0.7886	9, 153	.6273
LHIVH	0.7039	9, 153	.7047

The conclusion was that the 163 Human Ecology freshman nontransfer students varied only by chance, where the alpha level was .05, on the two value systems between Fall and Spring term in 1973-74. However, the personal value *an exciting life* did contrast the two terms at $p < .05$.

Freshmen in Fall & Spring Term, 1974-75

Subgroup	Multivariate F	df	p
UHTVH	0.1688	9, 130	.9968
LHTVH	0.5798	9, 130	.8118
UHIVH	1.1437	9, 130	.3370
LHIVH	0.9571	9, 130	.4786

Similarly, in 1974-75 the 140 freshman nontransfer students varied only by chance on the terminal and instrumental value systems in Fall and Spring term. No single personal value contrasted the two terms, which was a reduction in number of contrasting values between terms from the previous years 1971-1974. The instrumental values changed by chance in all of the four years.

Null Hypothesis 3.2

There is no difference in the personal values held between transfer undergraduate Human Ecology students in Fall and Spring term of each year 1971-1975.

In this hypothesis transfer students in Fall term were compared on the terminal and instrumental value systems to transfer students in Spring term of the same academic year. The Human Ecology transfer student personal value comparison by term was done in the academic years 1972-73, 1973-74, and 1974-75. The 1971-72 comparison of transfer student values could not be done since the 1971 Fall term cell for transfer students was empty.

In Table 39, the results of comparing the transfers' value systems in Fall and Spring of three years led to the acceptance of the null hypothesis.

Transfers in Fall & Spring Term, 1972-73

Subgroup	Multivariate F	df	p
UHTVH	1.8910	9, 121	.0595
LHTVH	1.9582	9, 121	.0500
UHIVH	0.7953	9, 121	.6213
LHIVH	0.5659	9, 121	.8227

The conclusion was that the 131, 1972-73 transfer students in Human Ecology varied beyond chance on the LHTVH in Fall and Spring term, $p < .05$. *Salvation* was the only value that significantly, $p < .01$, contrasted the transfers' value systems in Fall and Spring term.

Table 39. Differences in Value Systems for Transfer Students Between Fall and Spring Term of Each Year

	1972-73	1973-74	1974-75		1972-73	1973-74	1974-75
N =	131	136	100	N =	131	136	100
Terminal Value	p*	p*	p*	Instrumental Value	p*	p*	p*
A comfortable life	—	—	—	Ambitious	—	—	—
An exciting life	—	—	—	Broadminded	—	—	—
A sense of accomplishment	—	—	—	Capable	—	—	—
A world at peace	—	—	—	Cheerful	—	—	—
A world of beauty	—	—	—	Clean	—	—	.05
Equality	—	—	—	Courageous	—	—	—
Family security	—	—	—	Forgiving	—	—	—
Freedom	—	—	—	Helpful	—	—	—
Happiness	—	—	—	Honest	—	—	—
p**	.060[a]	.281[b]	.992[c]	p**	.621[d]	.663[e]	.478[f]
Inner harmony	—	—	—	Imaginative	—	.05	—
Mature love	—	—	—	Independent	—	—	—
National security	—	—	—	Intellectual	—	—	.05
Pleasure	—	—	—	Logical	—	—	—
Salvation	.01	—	—	Loving	—	—	—
Self respect	—	—	—	Obedient	—	—	—
Social recognition	—	—	—	Polite	—	—	—
True friendship	—	—	—	Responsible	—	—	—
Wisdom	—	—	—	Self-controlled	—	—	—
p**	.050[g]	.663[h]	.885[i]	p**	.823[j]	.362[k]	.256[l]

Note: Footnotes on next page.

198

Footnotes for Table 39:

[a]Multivariate $F = 1.8910$; df = 9 and 121.

[b]Multivariate $F = 1.2328$; df = 9 and 126.

[c]Multivariate $F = 0.2113$; df = 9 and 90.

[d]Multivariate $F = 0.7953$; df = 9 and 121.

[e]Multivariate $F = 0.7496$; df = 9 and 126.

[f]Multivariate $F = 0.9600$; df = 9 and 90.

[g]Multivariate $F = 1.9582$; df = 9 and 121.

[h]Multivariate $F = 0.7500$; df = 9 and 126.

[i]Multivariate $F = 0.4793$; df = 9 and 90.

[j]Multivariate $F = 0.5659$; df = 9 and 121.

[k]Multivariate $F = 1.1080$; df = 9 and 126.

[l]Multivariate $F = 1.2846$; df = 9 and 90.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Transfers in Fall & Spring Term, 1973-74

Subgroup	Multivariate F	df	p
UHTVH	1.2328	9, 126	.2809
LHTVH	0.7500	9, 126	.6625
UHIVH	0.7496	9, 126	.6630
LHIVH	1.1080	9, 126	.3620

It was concluded that the terminal and instrumental value systems of
136 transfer students in Fall and Spring terms of 1973-74 were not
significantly different at p < .05. However, as in 1972-73, one value,
imaginative did contrast the value systems in the two terms at p < .05.

Transfers in Fall & Spring Term, 1974-75

Subgroup	Multivariate F	df	p
UHTVH	0.2113	9, 90	.9922
LHTVH	0.4793	9, 90	.8851
UHIVH	0.9600	9, 90	.4784
LHIVH	1.2846	9, 90	.2563

Similarly, the conclusion in 1974-75 was that the Fall and Spring
term value orientations of transfer students were not different at
p < .05. But, as in the previous years 1972-73 and 1973-74, one value,
cheerful at p < .05 did vary significantly between the two terms.

Null Hypothesis 3.3

There are no differences in the personal values held by freshman undergraduate Human Ecology students in Fall term over the years 1971-1974.

The concern in hypothesis 3.3 was contrasting the terminal and instrumental value systems of Fall term freshman nontransfer Human Ecology students in the years 1971 to 1974.

The results shown in Tables 40 and 41, of comparing the value systems of 462 Fall freshmen over the four years led to the acceptance of the null hypothesis:

Freshmen in Fall Term, 1971-1974

Subgroup	Multivariate F	df	p
UHTVH	2.1980	27, 1314.87	.0004
LHTVH	1.9045	27, 1314.87	.0036
UHIVH	1.6045	27, 1314.87	.0261
LHIVH	1.0525	27, 1314.87	.3916

The conclusion was that freshman nontransfers in Fall term varied beyond chance only on the upper and lower half of the terminal value system and on the upper half of the instrumental value system at respectively, p < .0004, p < .0036, and p < .0261. The seven significant values in the terminal value systems that differentiated the Fall freshmen over the years were: *a world at peace, a world of beauty, equality, happiness, inner harmony, self respect,* and *social recognition* at p < .05+. Similarly, the instrumental values *ambitious*, at p < .05, and *cheerful*, at p < .01, were significant contrasts for freshmen over the four years.

Table 40. Difference in Terminal Value System for Freshman and
Transfer Students in Each Term Over the Years 1971-1975

Terminal Value	Fall		Spring	
	Freshmen[a]	Transfers[b]	Freshmen	Transfers
N =	462	64	110	361
	p*	p*	p*	p*
A comforting life	——	——	——	——
An exciting life	——	——	——	——
A sense of accomplishment	——	——	——	——
A world at peace	.001	——	.01	.01
A world of beauty	.01	——	——	——
Equality	.05	——	——	.01
Family security	——	——	——	——
Freedom	——	——	——	——
Happiness	.05	——	——	——
p**	.001+[c]	.767[d]	.716[e]	.001+[f]
Inner harmony	.005	——	——	.05
Mature love	——	——	——	——
National security	——	——	——	——
Pleasure	——	——	——	——
Salvation	——	——	——	——
Self respect	.005	——	——	——
Social recognition	.01	——	.05	——
True friendship	——	——	——	——
Wisdom	——	——	——	——
p**	.004[g]	.899[h]	.386[i]	.024[j]

Note: Footnotes on next page.

Footnotes for Table 40:

^{a}Freshmen = Freshman nontransfer students; Transfers = transfer students.

^{b}Years 1972-1975.

^{c}Multivariate F = 2.1980; df = 27 and 1314.87.

^{d}Multivariate F = 0.7359; df = 18 and 106.

^{e}Multivariate F = 0.8270; df = 27 and 286.85.

^{f}Multivariate F = 2.2474; df = 27 and 1019.90.

^{g}Multivariate F = 1.9045; df = 27 and 1314.87.

^{h}Multivariate F = 0.5919; df = 18 and 106.

^{i}Multivariate F = 1.0619; df = 27 and 286.85.

^{j}Multivariate F = 1.6186; df = 27 and 1019.90.

*Multivariate of analysis of variance test for each value.

**Multivariate of analysis of variance test for the value system, nine values at one time.

Table 41. Difference in Instrumental Value System for Freshman and Transfer Students in Each Term Over the Years 1971-1975

Instrumental Value	Fall		Spring	
	Freshmen[a]	Transfers[b]	Freshmen	Transfers
	462	64	110	361
	p*	p*	p*	p*
Ambitious	.05	——	——	——
Broadminded	——	——	——	.05
Capable	——	——	——	——
Cheerful	.01	——	——	——
Clean	——	——	——	——
Courageous	——	——	——	——
Forgiving	——	——	——	——
Helpful	——	——	——	——
Honest	——	——	——	——
p**	.026[c]	.631[d]	.237[e]	.378[f]
Imaginative	——	——	——	.05
Independent	.05	——	——	——
Intellectual	——	——	——	——
Logical	——	——	——	——
Loving	——	——	——	——
Obedient	——	——	——	——
Polite	——	——	——	——
Responsible	——	——	——	——
Self-controlled	——	——	——	——
p**	.392[g]	.441[h]	.892[i]	.128[j]

Note: Footnotes on next page.

Footnotes for Table 41:

[a]Freshmen = Freshman nontransfer students; Transfers = transfer students.

[b]Years 1972-1975.

[c]Multivariate F = 1.6045; df = 27 and 1314.87.

[d]Multivariate F = 0.8567; df = 18 and 106.

[e]Multivariate F = 1.1942; df = 27 and 286.85.

[f]Multivariate F = 1.0630; df = 27 and 1019.90.

[g]Multivariate F = 1.0525; df = 27 and 1314.87.

[h]Multivariate F = 1.0228; df = 18 and 106.

[i]Multivariate F = 0.6728; df = 27 and 286.85.

[j]Multivariate F = 1.3189; df = 27 and 1019.90.

*Multivariate of analysis of variance test for each value.

**Multivariate of analysis of variance test for the value system, nine values at one time.

Null Hypothesis 3.4

There are no differences in the values held by transfer undergraduate Human Ecology students in Fall term over the years 1971-1974.

The focus in this hypothesis was comparing the terminal and instrumental value systems of Fall term transfer students in Human Ecology across the years 1971-1974.

As shown in Tables 40 and 41 the results of comparing the 64 Fall transfers' value systems over the four years led to the acceptance of the null hypothesis:

Transfers in Fall Term, 1971 to 1974

Subgroup	Multivariate F	df	p
UHTVH	0.7359	18, 106	.7673
LHTVH	0.5919	18, 106	.8986
UHIVH	0.8567	18, 106	.6305
LHIVH	1.0228	18, 106	.4413

It was concluded that the transfers in Fall term did not vary beyond chance in the four values of the terminal and instrumental value hierarchies, when the alpha level was set at .05. No single personal value provided contrast in value systems for transfers over the four years.

Null Hypothesis 3.5

There are no differences in personal values held by freshman undergraduate Human Ecology students in Spring term over the years 1971-1975.

In this hypothesis the attention was on comparing two value systems of the Spring term freshmen in Human Ecology across the years 1972, 1973, 1974, and 1975.

The results of comparing the terminal and instrumental value systems of FE 110 Spring term freshmen over four years led to the acceptance of the null hypothesis:

Freshmen in Spring Term, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	0.8270	27, 286.85	.7155
LHTVH	1.0619	27, 286.85	.3856
UHIVH	1.1942	27, 286.85	.2372
LHIVH	0.6728	27, 286.85	.8918

Similar to hypothesis 3.4, the conclusion was that the two value systems of Spring freshmen over the years 1972-1975 varied only by chance as none of the four halves of the value systems were significant at $p < .05$. However, the two values *a world at peace* and *social recognition* were significant contrasts across the years at respectively $p < .01$ and $p < .05$.

Null Hypothesis 3.6

There are no differences in the personal values held by transfer undergraduate Human Ecology students in Spring term over the years 1971-1975.

In this hypothesis the focus was on comparing the terminal and instrumental value systems of 361 Spring term transfers in Human Ecology over four years, 1972-1975.

The results of comparing the two value systems of Spring transfers in 1972, 1973, 1974, and 1975 led to the acceptance of the null hypothesis:

Transfers in Spring Term, 1971 to 1975.

Subgroup	Multivariate F	df	p
UHTVH	2.2474	27, 1019.90	.0003
LHTVH	1.6186	27, 1019.90	.0244
UHIVH	1.0630	27, 1019.90	.3782
LHIVH	1.3189	27, 1019.90	.1284

As in hypothesis 3.3, the conclusion was that the two value systems of Spring transfers over the years 1972-1975 varied beyond chance on the UHTVH at $p < .001+$ and on the LHTVH at $p < .024$. The three terminal values that significantly differentiated the Spring transfers over the years were: *a world at peace*, $p < .01$; *equality*, $p < .01$; and *inner harmony*, $p < .05$. Similarly, the instrumental value *broadminded* at $p < .05$ was a significant contrast for transfers over the four years.

Null Hypothesis 3.7

There are no differences in the personal values held between freshman and transfer undergraduate Human Ecology students in the academic year 1971-1972, and similarly, in the years 1972-1973, 1973-1974, and 1974-1975.

The focus in this hypothesis was on the comparison of the terminal and instrumental value systems and separate values of freshman nontransfer and transfer students in, first, the academic year 1971-72 and, second, in the year 1974-75.

To compare the value systems of the freshmen and transfers in 1971-72 and in 1974-75, analysis was by first comparing the freshmen in the two years to the transfers in the two years; second, the year 1971-72 of freshmen and transfers to those in 1974-75; and third, the year to the level, i.e., test for interaction of the two independent variables.

The three-part results of comparing freshmen and transfers on value systems in the two years 1971-72 and 1974-75 led to the rejection of the null hypothesis:

I. Years 1971-72 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	7.9413	9, 391	.0001
LHTVH	4.7308	9, 391	.0001
UHIVH	2.4604	9, 391	.0098
LHIVH	1.5671	9, 391	.1231

The conclusion was that the freshman and transfer value systems in 1971-72 were different from those in 1974-75 on the: UHTVH, p < .0001; LHTVH, p < .0001; and UHIVH, p < .0098.

II. Freshmen 1971-72, 1974-75 to Transfers 1971-72, 1974-75

Subgroup	Multivariate F	df	p
UHTVH	1.1143	9, 391	.3513
LHTVH	6.3480	9, 391	.0001
UHIVH	3.5286	9, 391	.0004
LHIVH	1.5631	9, 391	.1244

The conclusion was that the two levels, freshman and transfer did differ significantly on the LHTVH, p < .0001 and on the UHIVH, p < .0004.

III. Interaction of Levels & Years, 1971-72 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	0.9365	9, 391	.4932
LHTVH	1.2340	9, 391	.2725
UHIVH	1.4021	9, 391	.1851
LHIVH	1.0050	9, 391	.4353

The conclusion was that there was no significant relation between the levels and the years, hence no interaction of the independent variables, year, and level.

Thus, freshmen and transfers differed in the year 1971-72 and in 1974-75.

As shown in Tables 43 and 44, in the year 1971-72 freshmen differed from transfers on six values: *a comfortable life, self respect, ambitious, imaginative, loving,* and *polite* at p < .05+.

Table 42. Terminal Value Medians and Composite Rank Orders for Levels[a] and Year[b]

Terminal Value N =	1971-72			1974-75			1971-72-73-74[b] Fr & Tr 163-295-299-240
	Freshmen 105	Transfer 58	p•	Freshmen 141	Transfer 99	p•	p*
A comfortable life	13.1(14)[c]	14.9(15)	.01	13.0(14)	13.3(14)	—	—
An exciting life	13.1(15)	12.2(15)	—	11.6(12)	12.1(13)	—	—
A sense of accomplishment	9.6(11)	6.8(7)	—	8.6(9)	8.1(8)	—	—
A world at peace	6.8(5)	6.5(4)	—	10.8(11)	10.4(10)	—	.001
A world of beauty	10.1(12)	10.3(11)	—	11.8(13)	11.8(12)	—	.005
Equality	8.9(10)	7.0(8)	—	10.7(10)	11.1(11)	—	.001
Family security	8.6(9)	10.9(12)	—	8.0(8)	8.6(9)	—	—
Freedom	6.1(2)	6.7(5)	—	6.2(4)	6.2(5)	—	—
Happiness	3.6(1)	3.5(1)	—	5.8(3)	5.1(3)	—	.01
p**							.001+[d]
Inner harmony	6.7(4)	5.2(2)	—	4.5(1)	3.2(1)	—	.001
Mature love	6.9(7)	7.3(9)	—	7.6(7)	5.2(4)	.01	—
National security	16.6(18)	15.7(17)	—	16.7(18)	16.2(17)	—	—
Pleasure	13.0(13)	14.4(14)	—	13.6(15)	13.9(15)	—	—
Salvation	15.2(16)	16.7(18)	—	15.1(17)	16.8(18)	.05	—
Self respect	6.6(3)	5.8(3)	.05	4.6(2)	4.0(2)	—	.001
Social recognition	16.1(17)	14.9(16)	—	14.5(16)	14.8(16)	—	.05
True friendship	6.8(6)	8.6(10)	—	6.4(5)	7.1(7)	—	—
Wisdom	7.8(8)	6.8(6)	—	7.2(6)	6.8(6)	—	—
p**							.005[e]
Concordance coefficient	.31	.38		.31	.38		

Note: Footnotes on next page.

211

Footnotes for Table 42:

[a]Level: Freshmen or Fr = Freshman transfer students; Transfer or Tr = Transfer students.

[b]Year: Academic years, 1971-72, 1972-73, 1973-74, 1974-75, Summer term and Winter term omitted.

[c]Figures indicate median rankings and, in parentheses, composite rank orders.

[d]Multivariate F = 3.5249; df = 27 and 2877.35.

[e]Multivariate F = 2.0177; df = 27 and 2877.35.

*Median test, df = 1.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 43. Instrumental Value Medians and Composite Rank Orders for Levels[a] and Year[b]

Instrumental Value	N =	1971-72			1974-75			1971-72-73-74[b]
		Freshmen	Transfer	p*	Freshmen	Transfer	p*	Fr & Tr
		105	58		141	99		163-295-299-240
								p*
Ambitious		7.9(7)[c]	9.7(12)	.05	8.4(7)	8.9(9)	—	.01
Broadminded		6.0(3)	4.7(2)	—	6.9(5)	6.1(3)	—	—
Capable		10.2(9)	9.0(8)	—	11.1(12)	8.8(8)	.05	—
Cheerful		6.6(6)	8.5(7)	—	8.7(9)	9.7(10)	—	.001
Clean		14.9(17)	15.3(16)	—	14.9(17)	14.3(16)	—	—
Courageous		11.8(13)	9.5(10)	—	10.0(10)	11.6(14)	—	—
Forgiving		6.0(4)	7.0(5)	—	6.2(4)	8.1(6)	—	—
Helpful		8.9(8)	8.3(6)	—	7.9(6)	8.8(7)	—	—
Honest		3.3(2)	2.4(1)	—	2.3(1)	2.5(1)	—	—
p**								.005[d]
Imaginative		11.7(12)	9.5(9)	.05	11.4(14)	11.3(13)	—	—
Independent		10.3(11)	9.5(11)	—	8.5(8)	7.6(5)	—	.05
Intellectual		12.3(15)	10.3(13)	—	11.2(13)	10.1(11)	—	—
Logical		12.3(14)	11.8(14)	—	12.9(15)	12.7(15)	—	—
Loving		3.1(1)	5.2(3)	.05	3.5(2)	3.7(2)	—	—
Obedient		16.3(18)	17.5(18)	—	16.7(18)	17.6(18)	.05	—
Polite		13.2(16)	15.6(17)	.005	13.6(16)	14.5(17)	—	—
Responsible		6.3(5)	6.5(4)	—	5.9(3)	6.4(4)	—	—
Self-controlled		10.3(10)	12.8(15)	—	10.4(11)	11.2(12)	—	—
p**								.093[e]
Concordance coefficient		.31	.33		.30	.32		

Note: Footnotes on next page.

213

Footnotes for Table 43:

[a]Level: Freshmen or Fr = Freshman transfer students; Transfer or Tr = Transfer students.

[b]Year: Academic years, 1971-72, 1972-73, 1973-74, 1974-75, Summer term and Winter term omitted.

[c]Figures indicate median rankings and, in parentheses, composite rank orders.

[d]Multivariate $F = 1.9952$; df = 27 and 2877.35.

[e]Multivariate $F = 1.3782$; df = 27 and 2877.35.

•Median test, df = 1.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

In 1974-75 the freshmen and transfers contrasted on the values *mature love, salvation, capable,* and *obedient* at p .05+.

The homogeneity scores of freshmen and transfers on the terminal value system from 1971-72 to 1974-75 had a constant average of W = .34: for freshmen in both years, W = .31; and for transfers in both years, W = .38.

When the homogeneity scores of group ranking of the instrumental value system were compared, the average concordance coefficient for freshmen and transfers in 1971-72 was W = .32 and in 1974-75 W = .31.

Null Hypothesis 3.8

There are no differences in the personal values held in the combined group of freshman and transfer undergraduate Human Ecology students over the years 1971-1975.

In hypothesis 3.8 the concern was to contrast the terminal and instrumental value systems of the combined group of freshman and transfer Human Ecology students in the academic year 1971-72 to those same combined groups in the years 1972-73, 1973-74, and 1974-75.

In Tables 42 and 43, the outcome of comparing the two value systems of the combined freshman and transfer group across four years allowed acceptance of the null hypothesis:

Combined Freshmen & Transfers, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	3.5249	27, 2877.35	.0001
LHTVH	2.0177.	27, 2877.35	.0015
UHIVH	1.9952	27, 2877.35	.0018
LHIVH	1.3782	27, 2877.35	.0926

The conclusion was that over the years 1971 to 1975 the combined group of freshman and transfer Human Ecology students varied beyond chance on three out of four halves of the value systems: UHTVH, $p < .001+$; LHTVH, $p < .005$; and UHIVH, $p < .005$. The single personal values in the terminal value system that significantly varied over the four years were: *a world at peace, a world of beauty, equality, happiness, self respect,* and *social recognition* at $p < .05+$. The single instrumental values that significantly varied in ranking over the four years were: *ambitious, cheerful,* and *independent,* at $p < .05+$.

Null Hypothesis 3.9

There are no differences in the personal values held by the combined group of freshman and transfer undergraduate Human Ecology students in Fall term over the years 1971-1975.

The focus in this hypothesis was on contrasting the value orientation of Fall term group of freshmen and transfers in 1971 to those in 1972, 1973, and 1974.

The null hypothesis was accepted, given the results of the comparing of the four Fall term groups from 1971 to 1974 on terminal and instrumental value systems and shown in Table 44:

Combined Freshmen & Transfers, Fall Term, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	2.2720	27, 1501.79	.0003
LHTVH	1.8804	27, 1501.79	.0042
UHIVH	1.6814	27, 1501.79	.0159
LHIVH	1.0068	27, 1501.79	.4550

Table 44. Differences in Value Systems for the Combined Group of Freshmen and Transfer Students in a Term Over the Years 1971-1975

Terminal Value	N =	Fall 526 p*	Spring 471 p*	Instrumental Value	N =	Fall 526 p*	Spring 471 p*
A comfortable life		—	—	Ambitious		.05	—
An exciting life		—	—	Broadminded		—	—
A sense of accomplishment		—	—	Capable		—	—
A world at peace		.005	.001+	Cheerful		.005	—
A world of beauty		.01	—	Clean		—	—
Equality		.01	.05	Courageous		—	—
Family security		—	—	Forgiving		—	—
Freedom		—	—	Helpful		—	—
Happiness		.05	.05	Honest		—	—
	p**	.001+[a]	.001+[b]		p**	.016[c]	.214[d]
Inner harmony		.005	.01	Imaginative		—	.05
Mature love		—	—	Independent		—	—
National security		—	—	Intellectual		—	—
Pleasure		—	—	Logical		—	—
Salvation		—	—	Loving		—	—
Self respect		.001	.05	Obedient		—	—
Social recognition		.01	—	Polite		—	—
True friendship		—	—	Responsible		—	—
Wisdom		—	—	Self-controlled		—	—
	p**	.004[e]	.018[f]		p**	.455[g]	.156[h]

Note: Footnotes on next page.

217

Footnotes for Table 44:

[a] Multivariate $F = 2.2720$; $df = 27$ and 1501.79.

[b] Multivariate $F = 2.4235$; $df = 27$ and 1341.16.

[c] Multivariate $F = 1.6814$; $df = 27$ and 1501.79.

[d] Multivariate $F = 1.2067$; $df = 27$ and 1341.16.

[e] Multivariate $F = 1.8804$; $df = 27$ and 1501.79.

[f] Multivariate $F = 1.6627$; $df = 27$ and 1341.16

[g] Multivariate $F = 1.0068$; $df = 27$ and 1501.79.

[h] Multivariate $F = 1.2764$; $df = 27$ and 1341.16.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

It was concluded, as in hypothesis 3.8, that the combined group of Fall freshmen and transfers did differ beyond chance from year to year on the: UHTVH, p < .001+; LHTVH, p < .004; and UHIVH, p < .016. Again, with the alpha level set at .05, the nine signficant personal values that contrasted the Fall term student value systems over the years were: *a world at peace, a world of beauty, equality, happiness, inner harmony, self respect, social recognition, ambitious,* and *cheerful,* p < .05+.

Null Hypothesis 3.10

There are no differences in the personal values held by the combined group of freshman and transfer undergraduate Human Ecology students in Spring term over the years 1971-1975.

In this hypothesis the concern was on comparing the Spring term freshman and transfer students in 1972 to the combined group in 1973, 1974, and 1975 on the terminal and instrumental value systems.

From the results reported in Table 44, for comparing Spring freshmen and transfers over four years on two value systems, the null hypothesis was accepted:

Combined Freshmen & Transfers, Spring Term, 1971 to 1975

Subgroup	Multivariate F	df	p
UHTVH	2.4235	27, 1341.16	.0001
LHTVH	1.6627	27, 1341.16	.0181
UHIVH	1.2067	27, 1341.16	.2144
LHIVH	1.2764	27, 1341.16	.1564

Similar to the conclusion in hypothesis 3.8, the conclusion in hypothesis 3.10 was that the value systems differed for the combined groups of Spring freshmen and transfers in the years 1972, 1973, 1974, and 1975. The UHTVH at $p < .001+$ and the LHTVH at $p < .018$ were the parts of the value systems that differed beyond chance with the alpha level at .05.

Both the Fall and Spring groups of freshmen and transfers when compared over the four years had four personal terminal values in common that contrasted their value systems over time: *a world at peace*, $p < .005+$; *a world of beauty*, $p < .05+$; *happiness*, $p < .05$; and *salvation*, $p < .05+$.

Null Hypothesis 4.1

There are no differences in the personal values held between Home Economics students in 1968-1969 and Human Ecology students in 1974-1975.

The focus in this hypothesis was on contrasting the group of 339 freshman and senior nontransfer students in the academic year 1968-69 to a similar group of 238 students in 1974-75, on their terminal and instrumental value orientations.

From the results of comparing the two years on two value systems as shown in Tables 45 and 46, the null hypothesis was rejected:

Years 1968-69 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	5.9017	9, 567	.0001
LHTVH	11.3053	9, 567	.0001
UHIVH	3.3745	9, 567	.0005
LHIVH	4.6400	9, 567	.0001

Table 45. Terminal Value Medians and Composite Rank Orders for Freshman and Senior Nontransfer Undergraduate Students in 1968-1969 and 1974-1975

Terminal Values	N =	1968-69 339	1974-75 238	p$\bullet$
A comfortable life		13.3(15)[a]	12.7(14)	——
An exciting life		12.5(12)	10.7(12)	.0005
A sense of accomplishment		8.4(10)	8.7(9)	——
A world at peace		7.1(6)	10.7(11)	.0001
A world of beauty		12.9(14)	11.4(13)	.01
Equality		9.3(11)	10.4(10)	.05
Family security		7.5(7)	8.7(8)	.05
Freedom		6.8(5)	6.4(4)	——
Happiness		5.2(1)	5.7(3)	——
	p**			.001+[b]
Inner harmony		6.6(4)	4.1(1)	.0001
Mature love		5.4(2)	6.7(6)	.05
National security		14.3(16)	16.5(18)	.0001
Pleasure		14.6(17)	13.2(15)	.0005
Salvation		12.7(13)	15.9(17)	.005
Self respect		5.7(3)	4.7(2)	.01
Social recognition		15.6(18)	14.8(16)	.05
True friendship		7.9(8)	6.5(5)	.001
Wisdom		8.1(9)	7.1(7)	.05
	p**			.001+[c]
Coefficient of concordance		.28	.32	

[a]Figures indicate median ranking and, in parentheses, composite rank orders.

[b]Multivariate F = 5.9017; df = 9 and 567.

[c]Multivariate F = 11.3053; df = 9 and 567.

$\bullet$Median test; df = 1.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 46. Instrumental Value Medians and Composite Rank Orders for Freshman and Senior Nontransfer Undergraduate Students in 1968-1969 and 1974-1975

Instrumental Values	N =	1968-69 339	1974-75 238	p[*]
Ambitious		8.9(8)[a]	8.9(9)	——
Broadminded		6.7(5)	6.8(4)	——
Capable		10.6(10)	10.0(10)	——
Cheerful		7.0(6)	8.8(8)	.01
Clean		12.1(13)	14.8(17)	.0005
Courageous		10.9(12)	10.2(11)	——
Forgiving		6.2(4)	7.3(5)	.05
Helpful		8.4(7)	8.2(7)	——
Honest		3.1(1)	2.8(1)	——
	p**			.001+[b]
Imaginative		12.7(16)	10.9(13)	.001
Independent		10.7(11)	7.8(6)	.0001
Intellectual		12.3(15)	10.9(12)	.05
Logical		13.2(17)	12.8(15)	——
Loving		3.6(2)	3.8(2)	——
Obedient		15.6(18)	17.0(18)	.0001
Polite		12.2(14)	14.1(16)	.0001
Responsible		6.1(3)	5.9(3)	——
Self-controlled		10.3(9)	11.4(14)	.05
	p**			.001+[c]
Coefficient of concordance		.26	.29	

[a]Figures indicate median ranking and, in parentheses, composite rank orders.

[b]Multivariate $F = 3.3745$; df = 9 and 567.

[c]Multivariate $F = 4.6400$; df = 9 and 567.

[*]Median test; df = 1.

**Multivariate analysis of variance test for the value system, nine values at one time.

The conclusion was that the 1968-69 group of Home Economics freshman and senior nontransfer students were different beyond chance, at $p < .001+$, from the 1974-75 group of Human Ecology freshman and senior nontransfer students on the terminal and instrumental value systems.

As indicated in Table 47, the comparisons of the two years on the separate personal values resulted in 23 significant contrasting values at $p < .05$ to $p < .001$. The four terminal values that did not vary beyond chance, when the alpha level was set at .05 were: *a comfortable life, a sense of accomplishment, freedom,* and *happiness.* The nine instrumental values that varied by chance over the years were: *ambitious, broadminded, capable, courageous, helpful, honest, logical, loving,* and *responsible.*

The first five ranked personal terminal values in the UHTVH, *happiness, mature love, self respect, inner harmony,* and *freedom* were the same five values in 1968-69 as in 1974-75. However, the median rankings significantly differed, $p < .05+$ on *mature love, self respect,* and *inner harmony.* The values *happiness* and *freedom* varied only by chance over the years.

The three terminal values that were in the rank positions, 15th, 16th, 17th, and 18th, of the LHTVH for both 1968-69 and 1974-75 were: *national security,* $p < .0001$; *pleasure,* $p < .0005$; and *social recognition,* $p < .05$. The three last terminal values did vary beyond chance in their rankings over the years but the values remained in the last four rank positions of the LHTVH.

Table 47. Terminal and Instrumental Value Differences for Freshman and Senior Nontransfer Undergraduate Students in 1968-1969 and 1974-1975

		1968-69	1974-75	
N =		339	238	p[*]
Terminal Values:				
Happiness		5.2(1)[a]	5.7(3)	——
Mature love		5.4(2)	6.7(6)	.05
Self respect		5.7(3)	4.7(2)	.01
Inner harmony		6.6(4)	4.1(1)	.0001
Freedom		6.8(5)	6.4(4)	——
A world at peace		7.1(6)	10.7(11)	.0001
National security		14.3(16)	16.5(18)	.0001
Pleasure		14.6(17)	13.2(15)	.0005
Social recognition		15.6(18)	14.8(16)	.05
Instrumental Values:				
Honest		3.1(1)	2.8(1)	——
Loving		3.6(2)	3.8(2)	——
Responsible		6.1(3)	5.9(3)	——
Forgiving		6.2(4)	7.3(5)	.05
Broadminded		6.7(5)	6.8(4)	——
Cheerful		7.0(6)	8.8(8)	.01
Imaginative		12.7(16)	10.9(13)	.001
Logical		13.2(17)	12.8(15)	——
Obedient		15.6(18)	17.0(18)	.0001

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

[*]Median test; df = 1.

Similarly, the instrumental values *honest, loving, responsible, forgiving,* and *broadminded* remained in the first six ranked positions of the UHIVH from 1968-69 to 1974-75. While the instrumental values *honest, loving, responsible,* and *broadminded* varied by chance over the years, the value *forgiving* significantly varied, $p < .05$, changing from the composite rank position of four to five in the UHIVH.

Only the instrumental values *logical* and *obedient* remained in the range 15th to 18th rank position of the LHIVH over the eight years. Nevertheless, the value *obedient* did vary beyond chance at $p < .0001$ with a change in median ranking from 15.6 to 17.0

In the terminal value system, the value *true friendship* significantly changed, $p < .001$, rank position from the eighth position in 1968-69 to fifth position in 1974-75. In the opposite direction the terminal value *salvation* shifted beyond chance, $p < .005$, from the 13th rank position in 1968-69 to the 17th position in 1974-75.

Similarly, within the instrumental value system there were significant value rank position shifts at the upper and lower ends of the value hierarchy from 1968-69 to 1974-75. In the UHIVH, the value *independent* moved from eighth to fifth rank position at $p < .0001$. In the LHIVH, the value *polite* moved downward from 14th to 16th rank position, $p < .0001$, and the value *clean* moved from 13th to 17th rank position, $p < .0005$.

The 1974-75 group of freshman and senior nontransfer Human Ecology students were more homogeneous in their group ranking of the two value systems than the 1968-69 group of freshman and senior nontransfer Home Economics students. The concordance coefficients for

the group ranking of the two value systems changed from W = .28 and .26 to respectively W = .32 and .29.

Null Hypothesis 4.2

There are no differences in the personal values held between Home Economics students of 1968-1969 and Human Ecology students of 1974-1975 level.

The concern in hypothesis 4.2 was the comparison of 246 freshman nontransfer Home Economics students in 1968-69 with 159 freshman non-transfer Human Ecology students in 1974-75 on personal values, as terminal and instrumental value systems and as separate entities. Parallel to the freshman level comparison, the senior nontransfer students in 1968-69, n = 93, were compared to the 1974-75 seniors, n = 79, on personal values.

As shown in Table 48, the results of comparing two freshman value systems over the years led to the rejection of the null hypothesis:

Freshman Nontransfers in 1968-69 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	5.0352	9, 395	.0001
LHTVH	9.0644	9, 395	.0001
UHIVH	3.4699	9, 395	.0005
LHIVH	3.2602	9, 395	.0008

The conclusion was that the Home Economics freshmen in 1968-69 held a different value orientation from the Human Ecology freshmen in 1974-75, p < .001+. The freshmen significantly changed median rankings

Table 48. Difference in Value Systems by Level[a] Between the Years 1968-1969 and 1974-1975

Terminal Value	Freshmen p*	Seniors p*	Instrumental Value	Freshmen p*	Seniors p*
A comfortable life	—	.001	Ambitious	—	—
An exciting life	—	.05	Broadminded	—	—
A sense of accomplishment	—	—	Capable	—	—
A world at peace	.001	.005	Cheerful	.005	—
A world of beauty	.01	—	Clean	.001	—
Equality	.01	—	Courageous	—	—
Family security	.05	.05	Forgiving	—	—
Freedom	—	—	Helpful	—	—
Happiness	—	—	Honest	—	—
p**	.001+[b]	.001+[c]	p**	.001+[d]	.692[e]
Inner harmony	.001	—	Imaginative	.05	.05
Mature love	.005	.05	Independent	.001	.01
National security	.001	.001	Intellectual	.05	—
Pleasure	.005	—	Logical	—	—
Salvation	.005	—	Loving	—	.05
Self respect	.01	—	Obedient	.005	—
Social recognition	.01	—	Polite	.001	.05
True friendship	.001	—	Responsible	—	—
Wisdom	—	—	Self-controlled	—	—
p**	.001+[f]	.001+[g]	p**	.001+[h]	.107[i]

Note: Footnotes on next page.

227

Footnotes for Table 48:

[a]Freshmen = Freshman nontransfer students; Seniors = Senior nontransfer students.

[b]Multivariate F = 5.0352; df = 9 and 395.

[c]Multivariate F = 3.7026; df = 9 and 162.

[d]Multivariate F = 9.0644; df = 9 and 395.

[e]Multivariate F = 3.8852; df = 9 and 162.

[f]Multivariate F = 3.4699; df = 9 and 395.

[g]Multivariate F = 0.7184; df = 9 and 162.

[h]Multivariate F = 3.2602; df = 9 and 395.

[i]Multivariate F = 1.6422; df = 9 and 162.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

of 19 personal values, p < .05 to p < .0001. The 12 terminal values that shifted position beyond chance were: *a comfortable life, an exciting life, a world at peace, a world of beauty, equality, inner harmony, mature love, national security, pleasure, salvation, self respect, social recognition,* and *true friendship.* The seven significant instrumental values that shifted over the years with freshmen were: *cheerful, clean, imaginative, independent, intellectual, obedient,* and *polite.*

The results indicated in Tables 48 and 49 for comparing the two senior value systems over the years led to the acceptance of the null hypothesis:

Senior Nontransfers in 1968-69 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	3.7026	9, 162	.0004
LHTVH	3.8852	9, 162	.0002
UNIVH	0.7184	9, 162	.6915
LHIVH	1.6422	9, 162	.1074

The conclusion was that the 1968-69 Home Economics seniors were significantly different from the 1974-75 Human Ecology seniors on the UHTVH, p < .0004, and LHTVH, p < .0002. The terminal values that contrasted the seniors in the two years were: *a comfortable life, an exciting life, a world at peace, national security,* and *pleasure* at p < .05+. The significant instrumental values that separated the seniors apart by year were: *independent, obedient,* and *polite* at p < .05+.

Table 49. Significant Value Differences Between the Years 1968-1969 and 1974-1975 in Nontransfer Undergraduate Students

| | | Freshmen | | | Seniors | | |
| | | 1968-69 | 1974-75 | | 1968-69 | 1974-75 | |
N =		246	159	p*	93	79	p*
Terminal Value							
A comfortable life		—	—	—	14.3(15)	12.1(14)	.005
An exciting life		12.9(14)[a]	11.3(12)	.05	11.4(12)	9.7(9)	.05
A world at peace		7.3(6)	10.8(11)	.0001	6.6(6)	10.3(12)	.01
A world of beauty		13.4(15)	11.7(13)	.01	—	—	—
Equality		8.9(10)	10.7(10)	.05	—	—	—
Inner harmony		7.4(7)	4.3(1)	.001	—	—	—
Mature love		5.5(2)	7.5(7)	.05	—	—	—
National security		14.3(16)	16.6(18)	.0001	14.1(14)	16.2(17)	.0001
Pleasure		14.6(17)	13.7(15)	.01	14.4(16)	12.5(15)	.01
Salvation		10.2(12)	15.3(17)	.001	—	—	—
Self respect		6.2(3)	4.5(2)	.005	—	—	—
Social recognition		15.7(18)	14.4(16)	.01	—	—	—
True friendship		7.7(8)	6.2(4)	.001	—	—	—
Instrumental Value							
Cheerful		6.8(5)	8.6(7)	.05	—	—	—
Clean		11.4(13)	14.9(17)	.0001	—	—	—
Imaginative		13.1(16)	11.2(14)	.01	—	—	—
Independent		10.9(10)	8.5(8)	.0001	9.4(10)	6.3(5)	.005
Intellectual		12.9(15)	10.9(12)	.01	—	—	—
Obedient		15.2(18)	16.8(18)	.001	16.4(18)	12.5(18)	.05
Polite		11.8(14)	13.8(16)	.0005	12.7(15)	14.6(17)	.01

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

*Median test ; df = 1.

230

Thus, between 1968-69 and 1974-75, freshmen have changed on both the terminal and instrumental value systems, p < .001, whereas seniors have only changed on the terminal value system, p < .001+. Since the freshmen reranked significantly 19 values and seniors reordered significantly only 8 personal values, the freshmen changed twice as much as seniors on personal value rankings from 1968-69 to 1974-75.

In Table 50, there were seven significant personal values held in common by freshmen and seniors and which contrasted 1968-69 from 1974-75 by level: *an exciting life, pleasure, independent, a world at peace, national security, obedient,* and *polite,* p < .05+. For both freshmen and seniors, the seven common contrast values shifted rank positions over the years in the same direction and by approximately the same number of rank positions. The personal values that moved to a higher priority position were: *an exciting life, pleasure, independent* with an average change in rank position of 2 for freshmen and 3 for seniors. The personal values that moved to a lower priority position were: *a world at peace, national security, obedient, polite* with an average change in rank position of 2.3 for freshmen and 2.8 for seniors. The freshmen changed rank positions of values from both the upper and lower halves of the two value systems whereas the seniors changed ranked positions of five of eight values from the lower half of the two value systems.

Table 50. Common Value Changes of Freshman and Senior Nontransfer Undergraduate Students Between the Years 1968-1969 and 1974-1975

| | 1974-1975 | | | |
| | Freshmen | | Seniors | |
	Rank[a]	Change	Rank	Change
Higher Ranked Values:				
Terminal Value:				
An exciting life	(12)	+2	(9)	+3
Pleasure	(15)	+2	(15)	+1
Instrumental Value:				
Independent	(8)	+2	(5)	+5
Lower Ranked Values:				
Terminal Value:				
A world of peace	(11)	-5	(12)	-6
National security	(18)	-2	(17)	-3
Instrumental Value:				
Obedient	(18)	-0	(18)	-0
Polite	(16)	-2	(17)	-2

[a]Figures shown are number and direction of rank orders changed from 1968-69 to 1974-75 and, in parentheses, composite rank orders.

Null Hypothesis 4.3

There are no differences in the personal values held between Home Economics students of 1968-1969 and Human Ecology students of 1974-1975 by major.

As the first focus of this hypothesis an academic major in 1968-69 composed of freshman and senior nontransfer students was compared to the same major in 1974-75. Six majors were compared over the four years on the terminal and instrumental value systems.

Major 4 was omitted from comparison as the cell size in 1974-75 was inadequate for analysis by the multivariate analysis of variance test.

The second focus of this hypothesis was the comparison of a college department between the two academic years 1968-69 and 1974-75 on the two value systems and the separate personal values. The four departments compared over the years were FE, FCS, HED, and FSHN.

With the first focus, the results from comparing the value systems of all of the seven majors between 1968-69 and 1974-75 led to the acceptance of the null hypothesis, as indicated in Tables 51 and 52:

Major 1 in 1968-69 and 1974-75--Child Development & Teaching

Subgroup	Multivariate F	df	p
UHTVH	1.3592	9, 58	.2279
LHTVH	2.6098	9, 58	.0133
UHIVH	2.3396	9, 58	.0252
LHIVH	1.1927	9, 58	.3172

Table 51. Difference in Terminal Value Systems Between the Years 1968-1969 and 1974-1975 for Majors[a]

	Majors[a]					
	1	2	3	5	6	7
Terminal Value	p*	p*	p*	p*	p*	p*
A comfortable life	—	—	—	—	—	—
An exciting life	—	—	.05	—	—	—
A sense of accomplishment	—	—	.05	—	—	—
A world at peace	—	.05	—	—	.01	.01
A world of beauty	—	—	.05	—	—	—
Equality	—	—	—	—	.01	—
Family security	—	—	.05	—	—	—
Freedom	—	—	—	—	—	—
Happiness	—	—	—	—	—	—
p**	$.228^b$	$.492^c$	$.110^d$	$.826^e$	$.023^f$	$.134^g$
Inner harmony	—	—	—	—	—	—
Mature love	—	—	.01	—	—	.05
National security	—	.01	—	.05	.05	.05
Pleasure	—	—	.05	—	.05	—
Salvation	.05	—	—	.05	—	—
Self respect	—	—	—	.05	—	.05
Social recognition	—	—	—	—	—	.05
True friendship	.05	.05	—	—	—	—
Wisdom	—	—	—	—	—	—
p**	$.013^h$	$.004^i$	$.010^j$	$.161^k$	$.024^l$	$.038^m$

Note: Footnotes on next page.

Footnotes for Table 51:

[a]Major 1 = Child Development & Teaching; Major 2 = Consumer-
Community Services, Family Ecology, Family Ecology-Communication Arts;
Major 3 = Foods, Dietetics, Nutrition; Major 5 = Clothing & Textiles;
Major 6 = Interior Design, Human Environment & Design; and Major 7 =
Retailing of Clothing & Textiles.

[b]Multivariate $F = 1.3592$; df = 9 and 58.

[c]Multivariate $F = 0.9497$; df = 9 and 51.

[d]Multivariate $F = 1.6824$; df = 9 and 69.

[e]Multivariate $F = 0.5523$; df = 9 and 34.

[f]Multivariate $F = 2.2621$; df = 9 and 11.

[g]Multivariate $F = 1.5705$; df = 9 and 105.

[h]Multivariate $F = 2.6098$; df = 9 and 158.

[i]Multivariate $F = 3.1673$; df = 9 and 51.

[j]Multivariate $F = 2.6638$; df = 9 and 69.

[k]Multivariate $F = 1.5814$; df = 9 and 34.

[l]Multivariate $F = 2.2505$; df = 9 and 11.

[m]Multivariate $F = 2.0825$; df = 9 and 105.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system,
nine values at one time.

Table 52. Difference in Instrumental Value Systems Between the Years 1968-1969 and 1974-1975 for Majors[a]

Instrumental Value	Majors[a]					
	1	2	3	5	6	7
	p*	p*	p*	p*	p*	p*
Ambitious	.05	——	.01	——	——	——
Broadminded	——	——	——	——	——	——
Capable	——	——	——	——	——	——
Cheerful	.01	——	——	——	——	——
Clean	——	.05	——	——	——	.05
Courageous	——	——	——	——	——	——
Forgiving	——	.05	——	——	——	——
Helpful	.05	——	——	——	——	——
Honest	——	.05	——	——	——	——
p**	.025[b]	.043[c]	.298[d]	.647[e]	.808[f]	.040[g]
Imaginative	——	——	——	——	——	——
Independent	——	.05	.05	——	.05	——
Intellectual	——	——	——	——	.05	——
Logical	.05	——	——	.05	——	.05
Loving	——	——	——	——	——	——
Obedient	——	——	——	.05	.01	——
Polite	——	.05	——	——	.05	.05
Responsible	——	——	——	——	——	——
Self-controlled	——	.05	——	——	——	——
p**	.317[h]	.010[i]	.523[j]	.001[k]	.122[l]	.370[m]

Note: Footnotes on next page.

Footnotes for Table 52:

[a]Major 1 = Child Development & Teaching; Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Multivariate F = 2.3396; df = 9 and 158.

[c]Multivariate F = 2.1328; df = 9 and 51.

[d]Multivariate F = 1.2194; df = 9 and 69.

[e]Multivariate F = 0.7668; df = 9 and 34.

[f]Multivariate F = 0.5844; df = 9 and 11.

[g]Multivariate F = 2.0575; df = 9 and 105.

[h]Multivariate F = 1.1927; df = 9 and 158.

[i]Multivariate F = 2.8029; df = 9 and 51.

[j]Multivariate F = 0.9089; df = 9 and 69.

[k]Multivariate F = 4.7908; df = 9 and 34.

[l]Multivariate F = 1.6054; df = 9 and 11.

[m]Multivariate F = 1.0998; df = 9 and 105.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

The conclusion was that Major 1 significantly varied over the years on the LHTVH, p < .0133, and UHIVH, p < .0252, when the alpha level was at .05. The six personal values that contrasted Major 1 over the years were: *salvation, true friendship, amibitous, cheerful, helpful,* and *logical* at p < .05+.

Major 2 in 1968-69 and 1974-75--Consumer-Community Services et al.

Subgroup	Multivariate F	df	p
UHTVH	0.9497	9, 51	.4917
LHTVH	3.1673	9, 51	.0042
UHIVH	2.1328	9, 51	.0434
LHIVH	2.8029	9, 51	.0095

It was concluded that Major 2 varied beyond chance on LHTVH at p < .0042, UHIVH at p < .0434, and LHIVH at p < .0095. Values that significantly differed between the two years in Major 2 were: *a world at peace, national security, true friendship, clean, forgiving, honest, independent, polite,* and *self-controlled* at p < .05+.

Major 3 in 1968-69 and 1974-75--Foods, Dietetics, Nutrition

Subgroup	Multivariate F	df	p
UHTVH	1.6824	9, 69	.1100
LHTVH	2.6638	9, 69	.0104
UHIVH	1.2194	9, 69	.2977
LHIVH	0.9089	9, 69	.5228

Major 3 varied beyond chance on only the LHTVH at p < .0104 between the years 1968-69 and 1974-75. The personal values that differed across the years were: *an exciting life, a sense of accomplishment, a world*

of beauty, family security, mature love, pleasure, ambitious, and *independent* at $p < .05+$.

Major 5 in 1968-69 and 1974-75--Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	0.5523	9, 34	.8256
LHTVH	1.5814	9, 34	.1605
UHIVH	0.7668	9, 34	.6471
LHIVH	4.1908	9, 34	.0011

The conclusion was that the LHIVH did vary significantly, $p < .001$, between the years 1968-69 and 1974-75 in Major 5. The significant contrast values for the two years in Major 5 were: *national security, salvation, self respect, logical,* and *obedient* at $p < .05$.

Major 6 in 1968-69 and 1974-75--Interior Design et al.

Subgroup	Multivariate F	df	p
UHTVH	2.2621	9, 11	.0230
LHTVH	2.2505	9, 11	.0238
UHIVH	0.5844	9, 11	.8076
LHIVH	1.6054	9, 11	.1223

It was concluded that Major 6 varied beyond chance on the UHTVH at $p < .0230$ and LHTVH at $p < .0238$ over the years. The significant contrast values were: *a world at peace, equality, national security, pleasure, independent, intellectual, obedient,* and *polite* at $p < .05+$.

Major 7 in 1968-69 and 1974-75--Retailing of Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	1.5705	9, 105	.1337
LHTVH	2.0825	9, 105	.0375
UHIVH	2.0575	9, 105	.0400
LHIVH	1.0998	9, 105	.3695

Further, Major 7 varied beyond chance from 1968-69 to 1974-75, as with Major 1, on the LHTVH at p < .0375 and UHIVH at p<.0400. The personal values, *a world at peace, mature love, national security, self respect, social recognition, clean, logical,* and *polite* did vary significantly at p < .05+.

In the second focus of this hypothesis, as shown in Tables 53, 54, and 55, the results of observing the four departments in 1968-69 and 1974-75 led to the acceptance of the null hypothesis:

HED Department in 1968-69 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	3.6785	9, 270	.0003
LHTVH	4.7647	9, 270	.0001
UHIVH	2.1624	9, 270	.0290
LHIVH	1.8794	9, 270	.0551

The conclusion was that HED varied beyond chance from 1968 to 1975 on the UHTVH at p < .0003, LHTVH at p < .0001, and UHIVH at p < .0290. The eleven values which varied significantly, p < .05+, between the two years were: *a world at peace, mature love, national security, salvation, self respect, social recognition, cheerful, independent, obedient, polite.*

Table 53. Differences in Terminal Value Systems and Instrumental Value Systems Between the Years 1968-1969 and 1974-1975 for Departments[a]

Terminal Value	FE	FCS	HED	FSHN	Instrumental Value	FE	FCS	HED	FSHN
A comfortable life					Ambitious				
An exciting life					Broadminded				
A sense of accomplishment					Capable				
A world at peace					Cheerful				
A world of beauty					Clean				
Equality					Courageous				
Family security					Forgiving				
Freedom					Helpful				
Happiness					Honest				
p**	$.049^b$	$.228^c$	$.001^d$	$.110^e$	p**	$.004^f$	$.025^g$	$.029^h$	$.298^i$
Inner harmony					Imaginative				
Mature love					Independent				
National security					Intellectual				
Pleasure					Logical				
Salvation					Loving				
Self respect					Obedient				
Social recognition					Polite				
True friendship					Responsible				
Wisdom					Self-controlled				
p**	$.001^j$	$.013^k$	$.001^l$	$.010^m$	p**	$.004^n$	$.317^o$	$.055^p$	$.523^q$

241

Note: Footnotes on next page.

Footnotes for Table 53:

[a] Departments: FE = Family Ecology; FCS = Family & Child Sciences; HED = Human Environment & Design; and FSHN = Food Science & Human Nutrition.

[b] Multivariate $F = 1.9594$; $df = 9$ and 140.

[c] Multivariate $F = 1.6824$; $df = 9$ and 69.

[d] Multivariate $F = 3.6785$; $df = 9$ and 270.

[e] Multivariate $F = 1.3592$; $df = 9$ and 58.

[f] Multivariate $F = 2.8514$; $df = 9$ and 140.

[g] Multivariate $F = 1.2194$; $df = 9$ and 69.

[h] Multivariate $F = 2.1624$; $df = 9$ and 270.

[i] Multivariate $F = 2.3396$; $df = 9$ and 58.

[j] Multivariate $F = 3.6387$; $df = 9$ and 140.

[k] Multivariate $F = 2.6638$; $df = 9$ and 69.

[l] Multivariate $F = 4.7647$; $df = 9$ and 270.

[m] Multivariate $F = 2.6098$; $df = 9$ and 58.

[n] Multivariate $F = 2.8407$; $df = 9$ and 140.

[o] Multivariate $F = 0.9089$; $df = 9$ and 69.

[p] Multivariate $F = 1.8794$; $df = 9$ and 270.

[q] Multivariate $F = 1.1927$; $df = 9$ and 58.

**Multivariate analysis of variance test for the value system, nine values at one time.

243

Table 54. Significant Value Differences Between the Years 1968-1969 and 1974-1975 in Department of Human Environment and Design

	N =	1968-69 165	1975-75 115	p[*]
Terminal Values:				
A world at peace		6.6(5)[a]	11.2(12)	.0001
Mature love		5.3(2)	7.3(6)	.05
National security		14.5(17)	16.4(18)	.0005
Salvation		13.3(15)	15.9(17)	.05
Self respect		6.6(4)	4.5(1)	.001
Social recognition		15.6(18)	14.5(16)	.05
Instrumental Values:				
Cheerful		7.2(6)	9.1(8)	.05
Independent		10.1(9)	8.0(6)	.05
Intellectual		11.7(14)	10.3(11)	.05
Obedient		16.0(18)	17.1(18)	.01
Polite		12.2(15)	13.8(16)	.01

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

[*]Median test; df = 1.

Table 55. Significant Value Differences Between the Years 1968-1969 and 1974-1975 in Department of Family Ecology

	N =	1968-69 115	1974-75 35	p*
Terminal Values:				
An exciting life		13.9(16)[a]	10.9(12)	.01
Inner harmony		7.6(8)	4.9(2)	.05
National security		13.8(15)	16.6(18)	.0001
Instrumental Values:				
Broadminded		7.7(6)	5.0(4)	.05
Clean		11.6(12)	15.8(17)	.0005
Courageous		12.4(14)	9.7(10)	.001
Polite		11.7(13)	14.4(16)	.05
Self-controlled		9.3(9)	13.1(14)	.05

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

*Median test; df = 1.

FE Department in 1968-69 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	1.9594	9, 140	.0485
LHTVH	3.6387	9, 140	.0005
UHIVH	2.8514	9, 140	.0041
LHIVH	2.8407	9, 140	.0043

It was concluded that FE differed significantly over the eight-year span on all four halves of the value systems: UHTVH at $p < .0485$; LHTVH at $p < .0005$; UHIVH at $p < .0041$; and LHIVH at $p < .0043$. The eight values that differed over the years were: *an exciting life, inner harmony, national security, broadminded, clean, courageous, polite,* and *self-controlled,* $p < .05+$.

FSHN Department in 1968-69 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	1.3592	9, 58	.2279
LHTVH	2.6098	9, 58	.0133
UHIVH	2.3396	9, 58	.0252
LHIVH	1.1927	9, 58	.3172

The conclusion as shown in Table 56 was that FSHN changed only on the LHTVH at $p < .0133$, and UHIVH at $p < .0252$, from 1968 to 1975. Nevertheless, the six values that indicated change were: *a sense of accomplishment, a world of beauty, equality, pleasure, salvation,* and *ambitious,* $p < .05+$.

Table 56. Significant Value Differences Between the Years 1968-1969 and 1974-1975 in Department of Food Science and Human Nutrition

	1968-69	1974-75	
N =	39	40	p[*]
Terminal Values:			
A sense of accomplishment	7.3(6)[a]	9.3(9)	.05
A world of beauty	13.6(13)	10.3(10)	.01
Equality	9.0(11)	11.3(12)	.05
Pleasure	15.8(18)	13.6(15)	.01
Salvation	11.3(12)	16.8(18)	.01
Instrumental Value:			
Ambitious	7.0(6)	11.3(12)	.05

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

[*]Median test; df = 1.

FCS Department in 1968-69 and 1974-75

Subgroup	Multivariate F	df	p
UHTVH	1.6824	9, 69	.1100
LHTVH	2.6638	9, 69	.0104
UHIVH	1.2194	9, 69	.2977
LHIVH	0.9089	9, 69	.5228

It was concluded, as shown on Table 57, that from 1968 to 1975, FCS varied beyond chance on the LHTVH, $p < .0104$. However, the three values in contrast over the years were: *ambitious, logical,* and *polite,* $p < .05$.

Table 57. Significant Value Differences Between the Years 1968-1969 and 1974-1975 in Department of Family and Child Sciences

		1968-69	1974-75	
	N =	20	48	p*
Terminal Values				
Instrumental Values:				
Ambitious		12.5(14)[a]	9.0(7)	.05
Logical		15.8(18)	13.0(15)	.05
Polite		12.9(15)	15.0(17)	.05

[a]Figures indicate median rankings and, in parentheses, composite rank orders.

*Median test; df = 1.

To summarize, the highest amount of change from 1968-69 to 1974-75 was in HED with eleven values and three halves of values that varied beyond chance. In between, FE varied beyond chance over the eight-year span on the four halves of the value systems and eight personal values. FSHN differed significantly on two halves of the value systems and six values. The lowest amount of change was in FCS with significant change in only one-half of a value system and three values. Thus, the departments have over the years 1968-69 and 1974-75 varied in amount of significant change on the terminal and instrumental value systems and separate personal values.

There is no common single significant value that provided contrast over the years for the four departments. Rather, the significant contrast values for the departments were specific to the department. Hence, there was not an identification of common values that provided significant change in department value systems. All the departments have shown a change in the value *ambitious* to the rank position of 7 or 8 except in FSHN where the value *ambitious* has moved significantly, p .05, to 12th rank position. Too, all the departments have upwardly reranked the value *a world of beauty* in the 13th position, whereas FSHN has reranked the value in 10th position in the terminal value hierarchy.

In 1968-69 the departments ranked the values in the terminal and instrumental value systems with a range in group concensus of $W = .45$ to $W = .26$ and in 1974-75 a $W = .37$ to $W = .29$. Thus, the range in group homogeneity of value ranking in 1974-75 was a decrease from that in 1968-69. The departments, FE and HED, in 1974-75, have increased in

homogeneity from that of 1968-69 with an average increase of .055 points. The department, FCS, in 1974-75 decreased in homogeneity from 1968-69 with .06 points. However, the department FSHN in 1974-75 increased by .02 points on the instrumental value system and decreased by .04 points on the terminal value system.

Null Hypothesis 4.4.1

There are no differences in the personal values held between freshman nontransfer Home Economics students of 1968-1969 and freshman nontransfer Human Ecology students of 1974-1975 in each major.

The focus of this hypothesis was on the comparison of the terminal and instrumental value systems of a specific academic major at the freshman nontransfer level in the academic years 1968-69 and 1974-75.

When there was inadequate cell size in either one or both years of certain majors, the major was omitted for comparison by value systems over the years 1968-69 and 1974-75. The omitted majors were Major 1 and Major 4.

The results of comparison of value systems of freshman majors in 1968-69 and 1974-75 led to the acceptance of the null hypothesis, as shown in Tables 58 and 59:

Major 2. Freshmen in 1968-69 and 1974-75--(Consumer-Community Services et al.

Subgroup	Multivariate F	df	p
UHTVH	0.8979	9, 38	.5366
LHTVH	3.2466	9, 38	.0052
UHIVH	2.2020	9, 38	.0438
LHIVH	2.1833	9, 38	.0455

Table 58. Differences in Terminal Value Systems Between the Years 1968-1969 and 1974-1975 for Freshman Nontransfer Majors[a]

		Major[a]			
	2	3	5	6	7
Terminal Value	p*	p*	p*	p*	p*
A comfortable life	——	——	——	——	——
An exciting life	——	——	——	——	——
A sense of accomplishment	——	——	——	——	——
A world at peace	.05	——	——	.01	.05
A world of beauty	——	——	——	——	——
Equality	——	——	——	.01	——
Family security	——	——	——	——	——
Freedom	——	——	——	——	——
Happiness	——	——	——	——	——
p**	$.537^b$	$.571^c$	$.815^d$	$.008^e$	$.215^f$
Inner harmony	——	——	.05	——	.05
Mature love	——	.01	——	——	——
National security	.001	——	.05	.05	——
Pleasure	——	——	——	.05	——
Salvation	——	——	.05	.05	——
Self respect	——	——	.05	——	.01
Social recognition	——	——	——	.05	——
True friendship	.05	——	——	——	.05
Wisdom	——	——	——	——	——
p**	$.005^g$	$.081^h$	$.027^i$	$.058^j$	$.024^k$

Note: Footnotes on next page.

Footnotes for Table 58:

[a]Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Multivariate F = 0.8979; df = 9 and 38.

[c]Multivariate F = 0.8562; df = 9 and 41.

[d]Multivariate F = 0.5611; df = 9 and 25.

[e]Multivariate F = 2.7230; df = 9 and 89.

[f]Multivariate F = 1.3803; df = 9 and 66.

[g]Multivariate F = 3.2466; df = 9 and 38.

[h]Multivariate F = 1.8790; df = 9 and 41.

[i]Multivariate F = 2.6419; df = 9 and 25.

[j]Multivariate F = 1.9302; df = 9 and 89.

[k]Multivariate F = 2.3317; df = 9 and 66.

*Multivariate analysis of variance t est for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 59. Differences in Instrumental Value Systems Between the Years 1968-1969 and 1974-1975 for Freshman Nontransfer Majors[a]

	Major[a]				
	2	3	5	6	7
Instrumental Value	p*	p*	p*	p*	p*
Ambitious	—	—	—	—	—
Broadminded	—	—	—	—	—
Capable	—	—	—	—	—
Cheerful	—	—	—	—	—
Clean	.01	—	—	—	.01
Courageous	—	—	—	—	—
Forgiving	.05	—	—	—	—
Helpful	—	—	—	—	—
Honest	—	—	—	—	.01
p**	.044[b]	.611[c]	.128[d]	.592[e]	.090[f]
Imaginative	—	—	—	—	—
Independent	.05	—	—	.05	—
Intellectual	—	—	—	.05	—
Logical	—	—	—	—	—
Loving	—	—	.05	—	—
Obedient	—	—	—	.01	—
Polite	—	—	.05	—	—
Responsible	—	.05	—	—	—
Self-controlled	—	—	.05	—	—
p**	.046[g]	.569[h]	.005[i]	.109[j]	.432[k]

Note: Footnotes on next page.

Footnotes for Table 59:

[a]Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts; Major 3 = Foods, Dietetics, Nutrition; Major 5 = Clothing & Textiles; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Multivariate F = 2.2020; df = 9 and 38.

[c]Multivariate F = 0.8089; df = 9 and 41.

[d]Multivariate F = 1.7557; df = 9 and 25.

[e]Multivariate F = 0.8284; df = 9 and 89.

[f]Multivariate F = 1.7748; df = 9 and 66.

[g]Multivariate F = 2.1833; df = 9 and 38.

[h]Multivariate F = 0.8585; df = 9 and 41.

[i]Multivariate F = 3.6474; df = 9 and 25.

[j]Multivariate F = 1.6663; df = 9 and 89.

[k]Multivariate F = 1.0217; df = 9 and 66.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

The conclusion was that the freshmen in Major 2 varied significantly only on the LHTVH, p < .0052, and UHIVH, p < .0438, from 1968-69 to 1974-75. The six values, *a world at peace, national security, true friendship, clean, forgiving,* and *independent* provided significant differentiation, p < .05+, in Major 2 over the years.

Major 3.   Freshmen in 1968-69 and 1974-75--{Foods, Dietetics, Nutrition

Subgroup	Multivariate F	df	p
UHTVH	0.8562	9, 41	.5705
LHTVH	1.8690	9, 41	.0829
UHIVH	0.8089	9, 41	.6108
LHIVH	0.8585	9, 41	.5686

It was concluded that the freshmen in Major 3 did not vary beyond chance when the alpha level was set at .05, on the four halves of the terminal and instrumental value systems from 1968-69 to 1974-75. However, two single values that did significantly vary over the years were: *mature love,* p .01; and *responsible,* p .05. Out of the five freshman level majors examined, Major 3 was the only major that did not significantly vary on any or part of the terminal and instrumental value systems over the years.

Major 5.   Freshmen in 1968-69 and 1974-75--Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	0.5611	9, 25	.8154
LHTVH	2.6419	9, 25	.0266
UHIVH	1.7557	9, 25	.1284
LHIVH	3.6474	9, 25	.0050

Only the LHTVH at p < .0266 and LHIVH at p < .0050 were significantly varying from 1968-69 to 1974-75 at the freshman level in Major 5. Similarly, the seven single contrasting values of significance over the years for Major 2 freshmen were: *inner harmony, national security, salvation, self respect, loving, polite,* and *self-controlled* at p < .05.

Major 6. Freshmen in 1968-69 and 1974-75--{Interior Design et al.

Subgroup	Multivariate F	df	p
UHTVH	2.7230	9, 89	.0075
LHTVH	1.9302	9, 89	.0576
UHIVH	0.8284	9, 89	.5918
LHIVH	1.6663	9, 89	.1091

The conclusion was that the freshmen in Major 6 were varying beyond chance over the years on only the UHTVH at p < .0075 when the alpha level was set at .05. But nine personal values did contrast the two years in Major 6 freshmen: *a world at peace, equality, national security, pleasure, salvation, social recognition, independent, intellectual,* and *obedient* at p < .05+.

Major 7. Freshmen in 1968-69 and 1974-75--{Retailing of Clothing et al.

Subgroup	Multivariate F	df	p
UHTVH	1.3803	9, 66	.2151
LHTVH	2.3317	9, 66	.0240
UHIVH	1.7748	9, 66	.0899
LHIVH	1.0217	9, 66	.4324

It was concluded that Major 7 freshmen were different in 1968-69 and 1974-75 on the LHTVH at p < .0240. Nevertheless, six single significant

values that contrasted the two years were *a world at peace, inner harmony, self respect, true friendship, clean,* and *honest* at p < .05+.

There were no specific values that were held in common as contrasts between years by all the freshman majors. Nonetheless, eight values were held in common by two or more freshman majors. The value *a world at peace* was held in common as a significant contrast by Majors 2, 6, and 7. Similarly, the value *national security* was held in common by Majors 2, 5, and 6. Values held in common by only two majors were: *inner harmony* by Majors 5 and 7; *salvation* by Majors 5 and 6; *self respect* by Majors 5 and 7; *true friendship* by Majors 2 and 7; *clean* by Majors 2 and 7; and lastly, *independent* by Majors 2 and 7.

Null Hypothesis 4.4.2

There are no differences in the personal values held between senior nontransfer Home Economics students in 1968-1969 and senior nontransfer Human Ecology students of 1974-1975 in each major.

The concern in this hypothesis was the comparison of the terminal and instrumental value systems of a specified academic major at the senior nontransfer level in the academic years 1968-69 and 1974-75.

Majors 2, 4, and 5 were omitted since there was an inadequate cell size in either one or both years of the specific major.

The results of comparison of the two value systems of senior majors in 1968-69 and 1974-75 led to the acceptance of the null hypothesis, as shown in Tables 60 and 61:

Table 60. Difference in Terminal Value Systems Between the Years 1968-1969 and 1974-1975 for Senior Nontransfer Majors[a]

| Terminal Value | Major[a] | | | |
| | 1 | 3 | 6 | 7 |
	p*	p*	p*	p*
A comfortable life	—	—	—	.01
An exciting life	—	—	—	—
A sense of accomplishment	—	.05	—	—
A world at peace	—	—	—	—
A world of beauty	—	—	—	—
Equality	—	—	—	—
Family security	—	.05	—	—
Freedom	—	—	.05	—
Happiness	—	—	—	—
p**	.101[b]	.081[c]	.437[d]	.006[e]
Inner harmony	—	—	—	—
Mature love	—	—	—	.05
National security	.05	—	—	—
Pleasure	—	.05	—	—
Salvation	—	—	—	—
Self respect	—	—	—	—
Social recognition	—	—	—	—
True friendship	.05	—	—	—
Wisdom	—	—	—	—
p**	.100[f]	.416[g]	.250[h]	.225[i]

Note: Footnotes on next page.

Footnotes for Table 60:

[a]Major 1 = Child Development & Teaching; Major 3 = Foods, Dietetics, Nutrition; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Multivariate F = 1.8582; df = 9 and 28.

[c]Multivariate F = 2.1439; df = 9 and 18.

[d]Multivariate F = 1.0862; df = 9 and 12.

[e]Multivariate F = 3.3916; df = 9 and 29.

[f]Multivariate F = 1.8637; df = 9 and 28.

[g]Multivariate F = 1.0905; df = 9 and 18.

[h]Multivariate F = 1.5049; df = 9 and 12.

[i]Multivariate F = 1.4219; df = 9 and 29.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Table 61. Difference in Instrumental Value Systems Between the Years 1968-1969 and 1974-1975 for Senior Nontransfer Majors[a]

Instrumental Value	Major[a]			
	1	3	6	7
	p*	p*	p*	p*
Ambitious	——	.01	.05	——
Broadminded	——	——	——	——
Capable	——	——	——	——
Cheerful	.05	.05	——	——
Clean	——	——	——	——
Courageous	——	——	——	——
Forgiving	——	——	——	.05
Helpful	.05	——	——	——
Honest	——	——	——	——
p**	.062[b]	.024[c]	.568[d]	.455[e]
Imaginative	——	——	——	——
Independent	——	——	——	——
Intellectual	——	——	——	——
Logical	.05	——	——	——
Loving	——	——	——	——
Obedient	——	——	——	——
Polite	——	——	——	——
Responsible	——	——	——	——
Self-controlled	——	——	——	——
p**	.278[f]	.835[g]	.676[h]	.737[i]

Note: Footnotes on next page.

Footnotes for Table 61:

[a]Major 1 = Child Development & Teaching; Major 3 = Foods, Dietetics, Nutrition; Major 6 = Interior Design, Human Environment & Design; and Major 7 = Retailing of Clothing & Textiles.

[b]Multivariate F = 2.1208; df = 9 and 28.

[c]Multivariate F = 2.9470; df = 9 and 18.

[d]Multivariate F = 0.8791; df = 9 and 12.

[e]Multivariate F = 1.0096; df = 9 and 29.

[f]Multivariate F = 1.3054; df = 9 and 28.

[g]Multivariate F = 0.5296; df = 9 and 18.

[h]Multivariate F = 0.7314; df = 9 and 12.

[i]Multivariate F = 0.6600; df = 9 and 29.

*Multivariate analysis of variance test for each value.

**Multivariate analysis of variance test for the value system, nine values at one time.

Major 1. Seniors in 1968-69 and 1974-75--{Child Development & Teaching

Subgroup	Multivariate F	df	p
UHTVH	1.8582	9, 28	.1014
LHTVH	1.8637	9, 28	.1003
UHIVH	2.1208	9, 28	.0620
LHIVH	1.3054	9, 28	.2782

The conclusion was that when the alpha level was set at .05, Major 1 seniors did not vary beyond chance on either the terminal or instrumental value system from 1968-69 to 1974-75. However, five personal values did vary beyond chance over the years at p < .05: *national security, true friendship, cheerful, helpful,* and *logical.*

Major 3. Seniors in 1968-69 and 1974-75--{Foods, Dietetics Nutrition

Subgroup	Multivariate F	df	p
UHTVH	2.1439	9, 18	.0806
LHTVH	1.0905	9, 18	.4158
UHIVH	2.9470	9, 18	.0244
LHIVH	0.5296	9, 18	.8345

It was concluded that from 1968-69 to 1974-75, seniors in Major 3 were different on the UHIVH at p < .0244. Single values that pinpointed the significant contrast for the Major 3 seniors over the years were: *a world at peace, family security, pleasure, ambitious,* and *cheerful,* p < .05+.

Major 6. Seniors in 1968-69 and 1974-75--Interior Design et al.

Subgroup	Multivariate F	df	p
UHTVH	1.0862	9, 12	.4366
LHTVH	1.5049	9, 12	.2502
UHIVH	0.8791	9, 12	.5679
LHIVH	0.7314	9, 12	.6755

Similar to Major 3 freshmen and Major 1 seniors, Major 6 seniors did not vary beyond chance on any part of the terminal and instrumental value system over the years when the alpha level was set at .05. Nevertheless, two single personal values did vary beyond chance over the years in Major 6 seniors: *freedom* at $p < .05$; and *ambitious* at $p < .05$.

Major 7. Seniors in 1968-69 and 1974-75--{Retailing of Clothing & Textiles

Subgroup	Multivariate F	df	p
UHTVH	3.3916	9, 29	.0059
LHTVH	1.4219	9, 29	.2246
UHIVH	1.0096	9, 29	.4551
LHIVH	0.6600	9, 29	.7372

The conclusion was that Major 7 seniors in 1968-69 were different from those in 1974-75 on the UHTVH at $p < .0059$: the same conclusion for Major 6 freshmen. The three significant contrasting values over the eight year span were: *a comfortable life* at $p < .01$; *inner harmony* at $p < .05$; and *forgiving* at $p < .05$.

As with the freshmen majors from 1968-69 to 1974-75, there were no specific values that were held in common as contrasts between years by all the senior majors. However, the value *ambitious* was held in

common by Major 3 and Major 6 seniors and the value *cheerful* was held in common by Major 1 and Major 3 seniors. The values held in common by senior majors were not held in common by freshman majors.

Summary of the Findings

Results from the comparison of values held by Human Ecology students by major, college department, and level for the block period 1971-1975 indicated the following:

(1) Majors significantly varied on the entire terminal and instrumental value systems.

(2) Freshman level majors differed more than senior level majors on value systems. Freshman majors varied significantly on the upper and lower halves of the terminal value hierarchy and lower half of the instrumental value hierarchy, while senior majors varied on upper halves of the terminal and instrumental value hierarchy. Contrast values for majors and held in common by freshman and senior majors were *a sense of accomplishment, helpful,* and *imaginative.*

(3) Freshmen were significantly different from seniors on the entire terminal and instrumental value systems.

(4) The college departments significantly varied on the entire terminal and instrumental value systems. Highest homogeneity was in Family & Child Sciences and lowest homogeneity was in Human Environment & Design.

For the determination of differences in personal values held by Human Ecology students among majors, college departments, levels, and academic years 1971-72 to 1974-75, the results were as follows:

(1) In 1971-72 there were nine values that contrasted the majors: *a comfortable life, a sense of accomplishment, a world of beauty, equality, inner harmony, social recognition, ambitious, courageous,* and *imaginative.* In 1974-75 the one contrast value was *social recognition.*

(2) The college departments decreased in variance from 1971-72 to 1974-75 to the point of differing significantly on only the personal value *family security* in 1974-75. While Food Science & Human Nutrition gave least preference to *family security* in 11th position, Family Ecology and Family & Child Sciences placed the value in 8th position and Human Environment & Design in 9th position. Department homogeneity was greatest in Family Ecology and least in Human Environment & Design in 1974-75.

(3) Value differences between freshmen and seniors from 1971-72 to 1974-75 have decreased, respectively, from 12 to 7 personal values. By 1974-75, freshmen ranked the values *salvation, family security, honest,* and *ambitious* higher than seniors. Seniors ranked the values *an exciting life, capable,* and *independent* higher than freshmen.

(4) Contrast among the academic years 1971-72 to 1974-75 was significant on the entire terminal value system and the upper half of the instrumental value system. Significant contrasting values over the four years were: *an exciting life, a world at peace, family security, happiness, social recognition, true friendship,* and *cheerful.*

Findings from the comparison of freshman nontransfers to transfers on personal values in Fall and Spring term of the years 1971-72 to 1974-75 were:

(1) Freshmen significantly differed from transfer students from 1971-72 to 1974-75 on the upper and lower halves of the terminal value hierarchy and upper half of the instrumental value hierarchy. The significant contrast values for the levels in the four academic years were: *a world at peace, a world of beauty, equality, happiness, inner harmony, self respect, social recognition, ambitious, capable,* and *independent.*

(2) By 1974-75 freshmen had only greater significant preference for *salvation* and *obedient* while transfers had only greater significant preference for *mature love* and *capable.*

(3) Neither freshmen nor transfers were significantly different in Fall and Spring term of each academic year from 1971 to 1975. Freshmen and transfers significantly varied over the years 1971 to 1975 in Fall and Spring terms.

For the determination of differences in personal values held by Home Economics students in 1968-69 and Human Ecology students in 1974-75 by major, college department, level, and year the results were as follows:

(1) From 1968-69 to 1974-75 each major changed significantly on only part of the terminal and instrumental value systems. Contrast values over the years for each major were unique to the major.

(2) From 1968-69 to 1974-75 the four college departments varied in significant change on the terminal and instrumental value

systems. The Human Environment & Design department changed significantly on 11 values, Family Ecology on 8 values, Food Science & Human Nutrition on 6 values, and Family & Child Sciences on 3 values.

(3) From 1968-69 to 1974-75 freshmen have significantly changed more than seniors. Freshmen varied on the entire terminal and instrumental value systems with 19 contrast values. Seniors varied on the entire terminal value system with 8 contrast values. For both freshman and senior levels, by 1974-75, greater preference was placed on *an exciting life, pleasure, independent,* and less preference was placed on *a world at peace, national security, obedient,* and *polite.*

(4) Home Economics students in 1968-69 significantly differed from Human Ecology students in 1974-75 on the entire terminal and instrumental value systems with 23 contrasting personal values. Highest five priority terminal values were the same over the years: *happiness, mature love, self respect, inner harmony,* and *freedom.* Highest five priority instrumental values were the same over the years: *honest, loving, responsible, forgiving,* and *broadminded.* While the values remained in the highest six ranked positions, the rank position of the value shifted over the years.

In Table 62 a summary of the statistical tests and results for each corresponding null hypothesis is presented. An alpha level of .05 was set for rejection of each null hypothesis.

Table 62. Summary of the Null Hypothesis Tests

Hypothesis	Statistical[a] Procedure	Independent Variable	Dependent[b] Variable	Value of Test Statistic	df	p	Decision
Ho 1.1	MANOVA	Majors:[c] 1971-1975	UHTVH	2.6837	54, 5424.85	.0001	Reject Ho
			LHTVH	1.5435	54, 5424.85	.0067	Reject Ho
			UHIVH	2.0413	54, 5424.85	.0001	Reject Ho
			LHIVH	1.8473	54, 5424.85	.0002	Reject Ho
Ho 1.2	MANOVA Median	Levels: Freshman nontransfer to senior nontransfer, 1971-1975	UHTVH	4.9803	9, 1063	.0001	Reject Ho
			LHTVH	8.1234	9, 1063	.0001	Reject Ho
			UHIVH	7.9177	9, 1063	.0001	Reject Ho
			LHIVH	5.7893	9, 1063	.0001	Reject Ho
Ho 1.3.1	MANOVA	Levels in Major, 1971-1975	UHIVH	1.6143	9, 194	.1134	Accept Ho
			LHTVH	2.5620	9, 194	.0084	Reject Ho
		Major 1	UHIVH	2.7320	9, 194	.0051	Reject Ho
			LHIVH	2.0789	9, 194	.0332	Reject Ho
			UHTVH	1.2259	9, 127	.2849	Accept Ho
		Major 2	LHTVH	2.9640	9, 127	.0032	Reject Ho
			UHIVH	1.1204	9, 127	.3532	Accept Ho
			LHIVH	2.1162	9, 127	.0327	Reject Ho
			UHTVH	1.2781	9, 134	.2545	Accept Ho
		Major 3	LHTVH	0.6898	9, 134	.7172	Accept Ho
			UHIVH	2.2974	9, 134	.0198	Reject Ho
			LHIVH	1.8376	9, 134	.0670	Accept Ho
			UHTVH	2.6117	9, 90	.0100	Reject Ho
		Major 4	LHTVH	3.0827	9, 90	.0029	Reject Ho
			UHIVH	1.6870	9, 90	.1037	Accept Ho
			LHIVH	1.9179	9, 90	.0592	Accept Ho

		Major 5	UHTVH	0.4980	9, 125	.8736	Accept Ho
			LHTVH	2.2634	9, 125	.0221	Reject Ho
			UHIVH	2.9263	9, 125	.0036	Reject Ho
			LHIVH	1.5323	9, 125	.1436	Accept Ho
		Major 6	UHTVH	1.5329	9, 195	.1386	Accept Ho
			LHTVH	0.9106	9, 195	.5170	Accept Ho
			UHIVH	2.2127	9, 195	.0228	Reject Ho
			LHIVH	0.5281	9, 195	.8531	Accept Ho
		Major 7	UHTVH	2.0973	9, 150	.0331	Reject Ho
			LHTVH	1.4589	9, 150	.1683	Accept Ho
			UHIVH	1.3989	9, 150	.1934	Accept Ho
			LHIVH	1.7871	9, 150	.0751	Accept Ho
Ho 1.3.2	MANOVA	Majors in Freshman nontransfer level, 1971-1975	UHTVH	1.8943	54, 3359.75	.0001	Reject Ho
			LHTVH	1.1743	54, 3359.75	.1809	Accept Ho
			UHIVH	1.5501	54, 3359.75	.0064	Reject Ho
			LHIVH	1.4460	54, 3359.75	.0188	Reject Ho
Ho 1.3.3	MANOVA	Majors in Senior nontransfer level, 1971-1975	UHTVH	1.7313	54, 2028.91	.0009	Reject Ho
			LHTVH	1.3140	54, 2028.91	.0639	Accept Ho
			UNIVH	1.5061	54, 2028.91	.0107	Reject Ho
			LHIVH	1.3205	54, 2028.91	.0605	Accept Ho
Ho 1.4	MANOVA Median	Departments,[d] 1971-1975	UHTVH	3.3102	27, 3338.79	.0001	Reject Ho
			LHTVH	1.8974	27, 3338.79	.0035	Reject Ho
			UHIVH	2.6563	27, 3338.79	.0001	Reject Ho
			LHIVH	2.6731	27, 3338.79	.0001	Reject Ho
Ho 2.1	MANOVA	Years, 1971-72, 1972-73, 1973-74, 1974-75	UHTVH	3.0513	27, 3338.79	.0001	Reject Ho
			LHTVH	2.2301	27, 3338.79	.0003	Reject Ho
			UHIVH	1.5648	27, 3338.79	.0319	Reject Ho
			LHIVH	1.0737	27, 3338.79	.3623	Accept Ho
	MANOVA Median	Years, 1971-72, 1974-75	UHTVH	5.0207	9, 574	.0001	Reject Ho
			LHTVH	3.9763	9, 574	.0001	Reject Ho
			UHIVH	2.3732	9, 574	.0123	Reject Ho
			LHIVH	0.9801	9, 574	.4554	Accept Ho

Table 62--Continued

Hypothesis	Statistical[a] Procedure	Independent Variable	Dependent[b] Variable	Value of Test Statistic	df	p	Decision
Ho 2.2	MANOVA	Majors in year, 1971-72	UHTVH	1.6628	54, 1692.37	.0020	Reject Ho
			LHTVH	1.3670	54, 1692.37	.0410	Reject Ho
			UHIVH	1.2739	54, 1692.37	.0892	Accept Ho
			LHIVH	1.3644	54, 1692.37	.0419	Reject Ho
		Majors in year, 1972-73	UHTVH	1.6229	54, 1462.91	.0033	Reject Ho
			LHTVH	1.1181	54, 1462.91	.2612	Accept Ho
			UHIVH	1.1949	54, 1462.91	.1602	Accept Ho
			LHIVH	1.3947	54, 1462.91	.0324	Reject Ho
		Majors in year, 1973-74	UHTVH	1.6074	54, 1304.84	.0039	Reject Ho
			LHTVH	0.8925	54, 1304.84	.6943	Accept Ho
			UHIVH	1.3683	54, 1304.84	.0414	Reject Ho
			LHIVH	1.1753	54, 1304.84	.1834	Accept Ho
		Majors in year, 1974-75--Major 4 omitted	UHTVH	0.8503	45, 969.32	.7476	Accept Ho
			LHTVH	1.2824	45, 969.32	.1035	Accept Ho
			UHIVH	1.0233	45, 969.32	.4315	Accept Ho
			LHIVH	1.1418	45, 969.32	.2456	Accept Ho
	MANOVA Median	Departments in year, 1971-72	UHTVH	1.9179	27, 976.1	.0034	Reject Ho
			LHTVH	1.6034	27, 976.1	.0268	Reject Ho
			UHIVH	0.9290	27, 976.1	.5699	Accept Ho
			LHIVH	1.6237	27, 976.1	.0237	Reject Ho
		Departments in year, 1974-75	UHTVH	0.9644	27, 660.7	.5176	Accept Ho
			LHTVH	1.3888	27, 660.7	.0922	Accept Ho
			UHIVH	1.1725	27, 660.7	.2510	Accept Ho
			LHIVH	1.0837	27, 660.7	.3529	Accept Ho

Ho 2.3	MANOVA Median	Levels in year, 1971-72	UHTVH	3.0849	9, 336	.0015	Reject Ho
			LHTVH	5.3099	9, 336	.0001	Reject Ho
			UHIVH	3.2802	9, 336	.0008	Reject Ho
			LHIVH	3.5964	9, 336	.0003	Reject Ho
	MANOVA	Levels in year, 1972-73	UHTVH	3.4986	9, 291	.0004	Reject Ho
			LHTVH	2.8128	9, 291	.0035	Reject Ho
			UHIVH	2.0003	9, 291	.0392	Reject Ho
			LHIVH	3.2317	9, 291	.0010	Reject Ho
	MANOVA	Levels in year, 1973-74	UHTVH	2.2441	9, 285	.0196	Reject Ho
			LHTVH	1.0852	9, 285	.3737	Accept Ho
			UHIVH	3.8072	9, 285	.0002	Reject Ho
			LHIVH	1.6941	9, 285	.0900	Accept Ho
	MANOVA Median	Levels in year, 1974-75	UHTVH	2.2444	9, 203	.0207	Reject Ho
			LHTVH	1.9095	9, 203	.0524	Reject Ho
			UHIVH	3.5272	9, 203	.0005	Reject Ho
			LHIVH	1.1531	9, 203	.3273	Accept Ho
Ho 2.4	MANOVA	Major over the years, 1971-72, 1972-73, 1973-74, 1974-75--Major 1	UHTVH	1.2896	27, 561.38	.1513	Accept Ho
			LHTVH	1.3795	27, 561.38	.0978	Accept Ho
			UHIVH	1.2712	27, 561.38	.1647	Accept Ho
			LHIVH	1.2212	27, 561.38	.2056	Accept Ho
		Major 2	UHTVH	0.9649	27, 389.07	.5176	Accept Ho
			LHTVH	1.2691	27, 389.07	.1696	Accept Ho
			UHIVH	1.2924	27, 389.07	.1527	Accept Ho
			LHIVH	1.0056	27, 389.07	.4596	Accept Ho
		Major 3	UHTVH	1.3492	27, 429.96	.1160	Accept Ho
			LHTVH	0.8312	27, 429.96	.7113	Accept Ho
			UHIVH	0.4579	27, 429.96	.9919	Accept Ho
			LHIVH	0.4385	27, 429.96	.9943	Accept Ho
		Major 4 (Year 1974-75 omitted)	UHTVH	1.8391	18, 188	.0235	Reject Ho
			LHTVH	1.1245	18, 188	.3313	Accept Ho
			UHIVH	0.3563	18, 188	.9933	Accept Ho
			LHIVH	1.3812	18, 188	.1447	Accept Ho

Table 62--Continued

Hypothesis	Statistical[a] Procedure	Independent Variable	Dependent[b] Variable	Value of Test Statistic	df	p	Decision
		Major 5	UHTVH	1.3160	27, 365.71	.1376	Accept Ho
			LHTVH	1.0727	27, 365.71	.3701	Accept Ho
			UHIVH	1.2773	27, 365.71	.1642	Accept Ho
			LHIVH	1.3728	27, 365.71	.1047	Accept Ho
		Major 6	UHTVH	1.2347	27, 619.79	.1931	Accept Ho
			LHTVH	1.0417	27, 619.79	.4081	Accept Ho
			UHIVH	1.0059	27, 619.79	.4577	Accept Ho
			LHIVH	0.9918	27, 619.79	.4779	Accept Ho
		Major 7	UHTVH	1.1955	27, 470.85	.2307	Accept Ho
			LHTVH	1.2407	27, 470.85	.1902	Accept Ho
			UHIVH	1.0409	27, 470.85	.4102	Accept Ho
			LHIVH	1.0528	27, 470.85	.3944	Accept Ho
	MANOVA Median	Departments in years 1971-72 and 1974-75 FE	UHTVH	1.6030	9, 119	.1220	Accept Ho
			LHTVH	1.9452	9, 119	.0519	Reject Ho
			UHIVH	1.0876	9, 119	.3771	Accept Ho
			LHIVH	1.6418	9, 119	.1111	Accept Ho
		FCS	UHTVH	2.0186	9, 94	.0455	Reject Ho
			LHTVH	1.3298	9, 94	.2322	Accept Ho
			UHIVH	2.2761	9, 94	.0236	Reject Ho
			LHIVH	1.0981	9, 94	.3719	Accept Ho
		HED	UHTVH	3.3864	9, 265	.0006	Reject Ho
			LHTVH	2.5660	9, 265	.0077	Reject Ho
			UHIVH	1.7027	9, 265	.0885	Accept Ho
			LHIVH	1.3436	9, 265	.2145	Accept Ho
		FSHN	UHTVH	1.2353	9, 66	.2893	Accept Ho
			LHTVH	0.9858	9, 66	.4602	Accept Ho
			UHIVH	0.2368	9, 66	.9878	Accept Ho
			LHIVH	0.7295	9, 66	.6804	Accept Ho

271

Ho 2.5	MANOVA	Level over the	UHTVH	2.6341	27, 1931.10	.0001	Reject Ho
		years 1971-72,	LHTVH	1.9890	27, 1931.10	.0019	Reject Ho
		etc. to 1974-75	UHIVH	1.9058	27, 1931.10	.0034	Reject Ho
		Freshmen	LHIVH	1.0563	27, 1931.10	.3859	Accept Ho
			UHTVH	2.2422	27, 1373.29	.0003	Reject Ho
		Seniors	LHTVH	0.8654	27, 1373.29	.6646	Accept Ho
			UHIVH	1.2016	27, 1373.29	.2192	Accept Ho
			LHIVH	0.9106	27, 1373.29	.5975	Accept Ho
	MANOVA	Level over the	UHTVH	4.9563	9, 303	.0001	Reject Ho
	Median	years 1971-72	LHTVH	3.5087	9, 303	.0004	Reject Ho
		and 1974-75	UHIVH	2.2973	9, 303	.0166	Reject Ho
		Freshmen	LHIVH	0.9777	9, 303	.4585	Accept Ho
			UHTVH	2.2636	9, 261	.0187	Reject Ho
		Seniors	LHTVH	0.9827	9, 261	.4547	Accept Ho
			UHIVH	1.5584	9, 261	.1281	Accept Ho
			LHIVH	1.1611	9, 261	.3205	Accept Ho
Ho 2.6.1	MANOVA	Freshman nontrans-	UHTVH	1.9232	54, 713.36	.0002	Reject Ho
		fer Majors in year	LHTVH	1.2379	54, 713.36	.1235	Accept Ho
		1971-72	UHIVH	0.8692	54, 713.36	.7358	Accept Ho
			LHIVH	1.2728	54, 713.36	.0957	Accept Ho
		Freshman nontrans-	UHTVH	1.4572	54, 861.23	.0196	Reject Ho
		fer Majors in year	LHTVH	0.8240	54, 861.23	.8130	Accept Ho
		1973-74	UHIVH	1.1382	54, 861.23	.2351	Accept Ho
			LHIVH	1.1073	54, 861.23	.2813	Accept Ho
Ho 2.6.2	MANOVA	Senior nontransfer	UHTVH	1.3145	54, 902.1	.0675	Accept Ho
		Majors in year	LHTVH	1.5321	54, 902.1	.0094	Reject Ho
		1971-72	UHIVH	1.3576	54, 902.1	.0473	Reject Ho
			LHIVH	1.1528	54, 902.1	.2146	Accept Ho
Ho 2.7.1	MANOVA	Freshman nontrans-	UHTVH	1.5452	27, 263.5	.0457	Reject Ho
		fers in a Major	LHTVH	1.7462	27, 263.5	.0149	Reject Ho
		over years 1971-75	UHIVH	1.2328	27, 263.5	.2036	Accept Ho
		Major 1	LHIVH	1.4672	27, 263.5	.0686	Accept Ho

Table 62--<u>Continued</u>

Hypothesis	Statistical[a] Procedure	Independent Variable	Dependent[b] Variable	Value of Test Statistic	df	p	Decision
		Major 2	UHTVH	0.7070	27, 231.4	.8582	Accept Ho
			LHTVH	0.8856	27, 231.4	.6325	Accept Ho
			UHIVH	1.0990	27, 231.4	.3420	Accept Ho
			LHTVH	0.6895	27, 231.4	.8752	Accept Ho
		Major 3	UHTVH	1.2919	27, 237.2	.1598	Accept Ho
			LHTVH	0.9500	27, 237.2	.5400	Accept Ho
			UHIVH	0.9410	27, 237.2	.5529	Accept Ho
			LHIVH	0.6546	27, 237.2	.9056	Accept Ho
		Major 4	UHTVH	0.8795	18, 72	.6038	Accept Ho
			LHTVH	0.9470	18, 72	.5278	Accept Ho
			UHIVH	0.6664	18, 72	.8322	Accept Ho
			LHIVH	1.1591	18, 72	.3172	Accept Ho
		Major 5	UHTVH	1.5928	27, 278.1	.0349	Reject Ho
			LHTVH	1.1827	27, 278.1	.2486	Accept Ho
			UHIVH	1.2357	27, 278.1	.2004	Accept Ho
			LHIVH	1.5445	27, 278.1	.0454	Reject Ho
		Major 6	UHTVH	1.3727	27, 432.9	.1033	Accept Ho
			LHTVH	0.9570	27, 432.9	.5290	Accept Ho
			UHIVH	0.9636	27, 432.9	.5193	Accept Ho
			LHIVH	0.8032	27, 432.9	.7492	Accept Ho
		Major 7	UHTVH	2.2547	18, 100	.0058	Reject Ho
			LHTVH	1.4476	18, 100	.1265	Accept Ho
			UHIVH	0.7341	18, 100	.7687	Accept Ho
			LHIVH	0.7978	18, 100	.6984	Accept Ho

Ho 2.7.2	MANOVA	Senior nontrans- fers in a Major over years 1971- 1975--Major 1	UHTVH LHTVH UHIVH LHIVH	1.2658 0.9224 1.1414 1.0484	27, 263.5 27, 263.5 27, 263.5 27, 263.5	.1771 .5797 .2920 .4038	Accept Ho Accept Ho Accept Ho Accept Ho
		Major 2 (Year 1974-75 omitted)	UHTVH LHTVH UHIVH LHIVH	1.8014 1.9036 3.0098 2.0805	18, 74 18, 74 18, 74 18, 74	.0410 .0285 .0005 .0150	Reject Ho Reject Ho Reject Ho Reject Ho
		Major 3	UHTVH LHTVH UHIVH LHIVH	1.3238 1.3255 0.6012 0.7889	27, 158.4 27, 158.4 27, 158.4 27, 158.4	.1469 .1458 .9396 .7612	Accept Ho Accept Ho Accept Ho Accept Ho
		Major 4 (Years 1973-1975 omitted)	UHTVH LHTVH UHIVH LHIVH	3.4215 2.3362 1.3265 1.2695	9, 40 9, 40 9, 40 9, 40	.0034 .0320 .2543 .2832	Reject Ho Reject Ho Accept Ho Accept Ho
		Major 6 (Year 1973-74 omitted)	UHTVH LHTVH UHIVH LHIVH	1.2079 0.7991 1.0677 0.8538	18, 94 18, 94 18, 94 18, 94	.2711 .6966 .3964 .6337	Accept Ho Accept Ho Accept Ho Accept Ho
		Major 7	UHTVH LHTVH UHIVH UHIVH	1.0909 1.3609 1.1347 1.0439	27, 272.3 27, 272.3 27, 272.3 27, 272.3	.3499 .1149 .2991 .4094	Accept Ho Accept Ho Accept Ho Accept Ho
Ho 3.1	MANOVA	Freshman nontrans- fers in Fall & Spring term 1971-72	UHTVH LHTVH UHIVH LHIVH	1.8723 1.2017 0.8074 0.8027	9, 95 9, 95 9, 95 9, 95	.0655 .3032 .6106 .6148	Accept Ho Accept Ho Accept Ho Accept Ho
		1972-73	UHTVH LHTVH UHIVH LHIVH	0.3854 2.0739 0.4049 0.9402	9, 154 9, 154 9, 154 9, 154	.9408 .0351 .9311 .4922	Accept Ho Reject Ho Accept Ho Accept Ho

274

Table 62--Continued

Hypothesis	Statistical[a] Procedure	Independent Variable	Dependent[b] Variable	Value of Test Statistic	df	p	Decision
		1973-74	UHTVH	1.0989	9, 153	.3669	Accept Ho
			LHTVH	0.7993	9, 153	.6175	Accept Ho
			UHIVH	0.7886	9, 153	.6273	Accept Ho
			LHIVH	0.7039	9, 153	.7047	Accept Ho
		1974-75	UHTVH	0.1688	9, 130	.9968	Accept Ho
			LHTVH	0.5798	9, 130	.8118	Accept Ho
			UHIVH	1.1437	9, 130	.3370	Accept Ho
			LHIVH	0.9571	9, 130	.4786	Accept Ho
Ho 3.2	MANOVA	Transfers in Fall & Spring term 1972-73	UHIVH	1.8910	9, 121	.0595	Accept Ho
			LHTVH	1.9582	9, 121	.0500	Reject Ho
			UHIVH	0.7953	9, 121	.6213	Accept Ho
			LHIVH	0.5659	9, 121	.8227	Accept Ho
		1973-74	UHTVH	1.2328	9, 126	.2809	Accept Ho
			LHTVH	0.7500	9, 126	.6625	Accept Ho
			UHIVH	0.7496	9, 126	.6630	Accept Ho
			LHIVH	1.1080	9, 126	.3620	Accept Ho
		1974-75	UHTVH	0.2113	9, 90	.9922	Accept Ho
			LHTVH	0.4793	9, 90	.8851	Accept Ho
			UHIVH	0.9600	9, 90	.4784	Accept Ho
			LHIVH	1.2846	9, 90	.2563	Accept Ho
Ho 3.3	MANOVA	Freshman nontransfers in Fall term over the years 1971-1975	UHTVH	2.1980	27, 1314.87	.0004	Reject Ho
			LHTVH	1.9045	27, 1314.87	.0036	Reject Ho
			UHIVH	1.6045	27, 1314.87	.0261	Reject Ho
			LHIVH	1.0525	27, 1314.87	.3916	Accept Ho
Ho 3.4	MANOVA	Transfers in Fall term over the years 1972-1975	UHTVH	0.7359	18, 106	.7673	Accept Ho
			LHTVH	0.5919	18, 106	.8986	Accept Ho
			UHIVH	0.8567	18, 106	.6305	Accept Ho
			LHIVH	1.0228	18, 106	.4413	Accept Ho

Ho 3.5	MANOVA	Freshman nontrans-	UHTVH	0.8270	27, 286.85	.7155	Accept Ho
		fers in Spring term	LHTVH	1.0619	27, 286.85	.3856	Accept Ho
		over the years	UHIVH	1.1942	27, 286.85	.2372	Accept Ho
		1971-1975	LHIVN	0.6728	27, 286.85	.8918	Accept Ho
Ho 3.6	MANOVA	Transfers in Spring	UHTVH	2.2474	27, 1019.90	.0003	Reject Ho
		term over the years	LHTVH	1.6186	27, 1019.90	.0244	Reject Ho
		1971-1975	UHIVH	1.0630	27, 1019.90	.3782	Accept Ho
			LHIVH	1.3189	27, 1019.90	.1284	Accept Ho
Ho 3.7	MANOVA Median	Levels in Year	UHTVH	7.9413	9, 391	.0001	Reject Ho
		1971-72 to levels	LHTVH	4.7308	9, 391	.0001	Reject Ho
		in year 1974-75	UHIVH	2.4040	9, 391	.0098	Reject Ho
			LHIVH	1.5671	9, 391	.1231	Accept Ho
		Level over the	UHTVH	1.1143	9, 391	.3513	Accept Ho
		Years 1971-72 and	LHTVH	6.3480	9, 391	.0001	Reject Ho
		1974-75: Freshmen	UHIVH	3.5286	9, 391	.0004	Reject Ho
		to Transfers	LHIVH	1.5631	9, 391	.1244	Accept Ho
		Levels to years	UHTVH	1.0050	9, 391	.4353	Accept Ho
			LHTVH	1.4021	9, 391	.1851	Accept Ho
			UHIVH	1.2340	9, 391	.2725	Accept Ho
			LHIVH	0.9365	9, 391	.4932	Accept Ho
Ho 3.8	MANOVA	Combined Freshmen	UHTVH	3.5249	27, 2877.35	.0001	Reject Ho
		& Transfers over	LHTVH	2.0177	27, 2877.35	.0015	Reject Ho
		the years 1971-	UHIVH	1.9952	27, 2877.35	.0018	Reject Ho
		1975	LHIVH	1.3782	27, 2877.35	.0926	Accept Ho
Ho 3.9	MANOVA	Combined Freshmen	UHTVH	2.2720	27, 1501.79	.0003	Reject Ho
		& Transfers in Fall	LHTVH	1.8804	27, 1501.79	.0042	Reject Ho
		term over the years	UHIVH	1.6814	27, 1501.79	.0159	Reject Ho
		1971-1975	LHIVH	1.0068	27, 1501.79	.4550	Accept Ho
Ho 3.10	MANOVA	Combined Freshmen	UHTVH	2.4235	27, 1341.16	.0001	Reject Ho
		& Transfers in	LHTVH	1.6627	27, 1341.16	.0181	Reject Ho
		Spring term over	UHIVH	1.2067	27, 1341.16	.2144	Accept Ho
		years, 1971-1975	LHIVH	1.2764	27, 1341.16	.1564	Accept Ho

Table 62--<u>Continued</u>

Hypothesis	Statistical[a] Procedure	Independent Variable	Dependent[b] Variable	Value of Test Statistic	df	p	Decision
Ho 4.1	MANOVA Median	Year 1968-69 to year 1974-75	UHTVH	5.9017	9, 567	.0001	Reject Ho
			LHTVH	11.3053	9, 567	.0001	Reject Ho
			UHIVH	3.3745	9, 567	.0005	Reject Ho
			LHIVH	4.6400	9, 567	.0001	Reject Ho
Ho 4.2	MANOVA	Level in year 1968-69 & 1974-75 Freshman nontransfer	UHTVH	5.0352	9, 395	.0001	Reject Ho
			LHTVH	9.0644	9, 395	.0001	Reject Ho
			UHIVH	3.4699	9, 395	.0004	Reject Ho
			LHIVH	3.2602	9, 395	.0008	Reject Ho
		Senior nontransfer	UHTVH	3.7026	9, 162	.0004	Reject Ho
			LHTVH	3.8852	9, 162	.0002	Reject Ho
			UHIVH	0.7184	9, 162	.6915	Accept Ho
			LHIVH	1.6422	9, 162	.1074	Accept Ho
Ho 4.3	MANOVA	Major in year 1968-69 & 1974-75 Major 1	UHTVH	1.3592	9, 58	.2279	Accept Ho
			LHTVH	2.6098	9, 58	.0133	Reject Ho
			UHIVH	2.3396	9, 58	.0252	Reject Ho
			LHIVH	1.1927	9, 58	.3172	Accept Ho
		Major 2	UHTVH	0.9497	9, 51	.4917	Accept Ho
			LHTVH	3.1673	9, 51	.0042	Reject Ho
			UHIVH	2.1328	9, 51	.0434	Reject Ho
			LHIVH	2.8029	9, 51	.0095	Reject Ho
		Major 3	UHTVH	1.6824	9, 69	.1100	Accept Ho
			LHTVH	2.6638	9, 69	.0104	Reject Ho
			UHIVH	1.2194	9, 69	.2977	Accept Ho
			LHIVH	0.9089	9, 69	.5228	Accept Ho
		Major 5	UHTVH	0.5523	9, 34	.8256	Accept Ho
			LHTVH	1.5814	9, 34	.1605	Accept Ho
			UHIVH	0.7668	9, 34	.6471	Accept Ho
			LHIVH	4.1908	9, 34	.0011	Reject Ho

			UHTVH	2.2621	9, 111	.0230	Reject Ho
		Major 6	LHTVH	2.2505	9, 111	.0238	Reject Ho
			UHIVH	0.5844	9, 111	.8076	Accept Ho
			LHIVH	1.6054	9, 111	.1223	Accept Ho
			UHTVH	1.5705	9, 105	.1337	Accept Ho
		Major 7	LHTVH	2.0825	9, 105	.0375	Reject Ho
			UHIVH	2.0575	9, 105	.0400	Reject Ho
			LHIVH	1.0998	9, 105	.3695	Accept Ho
	MANOVA Median	Department in year 1968-69 & 1974-75:	UHTVH	1.9594	9, 140	.0485	Reject Ho
			LHTVH	3.6387	9, 140	.0005	Reject Ho
			UHIVH	2.8514	9, 140	.0041	Reject Ho
		FE	LHIVH	2.8407	9, 140	.0043	Reject Ho
			UHTVH	1.3592	9, 58	.2279	Accept Ho
		FCS	LHTVH	2.6098	9, 58	.0133	Reject Ho
			UHIVH	2.3396	9, 58	.0252	Reject Ho
			LHIVH	1.1927	9, 58	.3172	Accept Ho
			UHTVH	3.6785	9, 270	.0003	Reject Ho
		HED	LHTVH	4.7647	9, 270	.0001	Reject Ho
			UHIVH	2.1624	9, 270	.0290	Reject Ho
			LHIVH	1.8794	9, 270	.0551	Accept Ho
			UHTVH	0.8979	9, 38	.5366	Accept Ho
		FSHN	LHTVH	2.6638	9, 38	.0104	Reject Ho
			UHIVH	1.2194	9, 38	.2977	Accept Ho
			LHIVH	0.9089	9, 38	.5228	Accept Ho
Ho 4.4.1	MANOVA	Freshman nontransfer level Major in year 1968-69 & 1974-75: Major 2	UHTVH	0.8979	9, 38	.5366	Accept Ho
			LHTVH	3.2466	9, 38	.0052	Reject Ho
			UHIVH	2.2020	9, 38	.0438	Reject Ho
			LHIVH	2.1833	9, 38	.0455	Reject Ho
			UHTVH	0.8562	9, 41	.5705	Accept Ho
		Major 3	LHTVH	1.8790	9, 41	.0829	Accept Ho
			UHIVH	0.8089	9, 41	.6108	Accept Ho
			LHIVH	0.8585	9, 41	.5686	Accept Ho

Table 62--<u>Continued</u>

Hypothesis	Statistical[a] Procedure	Independent Variable	Dependent[b] Variable	Value of Test Statistic	df	p	Decision
		Major 5	UHTVH	0.5611	9, 25	.8154	Accept Ho
			LHTVH	2.6419	9, 25	.0266	Reject Ho
			UHIVH	1.7556	9, 25	.1284	Accept Ho
			LHIVH	3.6474	9, 25	.0050	Reject Ho
		Major 6	UHTVH	2.7230	9, 89	.0075	Reject Ho
			LHTVH	1.9302	9, 89	.0576	Accept Ho
			UHIVH	0.8284	9, 89	.5918	Accept Ho
			LHIVH	1.6663	9, 89	.1091	Accept Ho
		Major 7	UHTVH	1.3803	9, 66	.2151	Accept Ho
			LHTVH	2.3317	9, 66	.0240	Reject Ho
			UHIVH	1.7748	9, 66	.0899	Accept Ho
			LHIVH	1.0217	9, 66	.4324	Accept Ho
Ho 4.4.2	MANOVA	Senior nontransfer level Major in year 1968-69 & 1974-75: Major 1	UHTVH	1.8582	9, 28	.1014	Accept Ho
			LHTVH	1.8637	9, 28	.1003	Accept Ho
			UHIVH	2.1208	9, 28	.0620	Accept Ho
			LHIVH	1.3054	9, 28	.2782	Accept Ho
		Major 3	UHTVH	2.1439	9, 18	.0806	Accept Ho
			LHTVH	1.0905	9, 18	.4158	Accept Ho
			UHIVH	2.9470	9, 18	.0244	Reject Ho
			LHIVH	0.5296	9, 18	.8345	Accept Ho
		Major 6	UHTVH	1.0862	9, 12	.4366	Accept Ho
			LHTVH	1.5049	9, 12	.2502	Accept Ho
			UHIVH	0.8791	9, 12	.5679	Accept Ho
			LHIVH	0.7314	9, 12	.6755	Accept Ho
		Major 7	UHTVH	3.3916	9, 29	.0059	Reject Ho
			LHTVH	1.4219	9, 29	.2246	Accept Ho
			UHIVH	1.0096	9, 29	.4551	Accept Ho
			LHIVH	0.6600	9, 29	.7372	Accept Ho

[a]MANOVA = Multivariate analysis of variance test;

[b]UHTVH = Upper half terminal value hierarchy;

 LHTVH = Lower half terminal value hierarchy;

 UHIVH= Upper half instrumental value hierarchy; and

 LHIVH = Lower half instrumental value hierarchy.

[c]Major 1 = Child Development & Teaching;

 Major 2 = Consumer-Community Services, Family Ecology, Family Ecology-Communication Arts;

 Major 3 = Foods, Dietetics, Nutrition;

 Major 4 = Home Economics Education;

 Major 5 = Clothing & Textiles;

 Major 6 = Interior Design, Human Environment & Design; and

 Major 7 = Retailing of Clothing & Textiles.

[d]Departments: FE = Family Ecology;

                FCS = Family & Child Sciences;

                HED = Human Environment & Design; and

                FSHN = Food Science & Human Nutrition.

CHAPTER V

SUMMARY

The outline of Chapter V starts with stating the conclusions corresponding to the questions asked in the statement of the problem in Chapter I. A discussion of the findings and conclusions follow. Lastly, implications related to College of Human Ecology program and future research recommendations are presented.

Conclusions

Derivation of the conclusions for the study came from the reported findings which in turn answered specific null hypotheses based upon the original questions and objectives of the study established for examination of the problem.

At the outset then, for the problem of study answers to six questions were sought:

1. What is the value orientation and trend of youth attending the college of Human Ecology?

2. Are students generally all the same or do they differ by subgroup or specific major or level?

3. Do college departmental divisions really differ?

4. Are entering undergraduate students different in orientation from the graduating students?

5. With college name and program change in 1970 from Home Economics to Human Ecology, is there a different kind of student orientation, given a change in college orientation? Hence, do the 1968-69 Home Economics students differ from the 1974-75 Human Ecology students in general? Do student value orientations change over time?

6. Can predictions be made about groups and their orientations and priorities?

In turn, the purpose of the study was to compare the personal values of Home Economics and Human Ecology undergraduate female students at Michigan State University over the time 1968-1975 and by the student academic major and/or college department and level status.

Following the purpose of the study, the overall design compared students by majors and/or departments, levels, and years on 36 dependent variables, personal values, in separate and group form.

Hence, data on the personal value orientations were collected with the Rokeach Value Survey, Form D and Form F, from Home Economics female undergraduates in 1968-69 and Human Ecology female undergraduates from 1971-75, a representative sample, n = 2,351.

Findings resulted from comparing groups first on value systems of 18 values, subdivided into two lists of nine, and testing the null hypotheses by applying the multivariate analysis of variance test. Similarly, findings were derived by comparing groups on separate personal values and testing by use of the Median test and concordance coefficient.

Thus, the conclusions were as follows:

1.   In the last year, 1974-75, the Human Ecology freshmen and seniors were concerned at foremost with their own self-development: being competent, expanding self, relating to others, and gaining self respect and identity. The six terminal values given priority were: *inner harmony, self respect, happiness, freedom, true friendship,* and *mature love.* Of second importance and greater importance than in prior years (1968-69) to the Human Ecology students was the focus on being other-directed towards micro groups rather than a macro group. On the macro group level, the values *national security* and *a world at peace* are now ranked low on the terminal value hierarchy at, respectively, 18th and 11th position, $p < .0001$. On the micro group level, the values *family security, ambitiou:, responsible,* and *capable* average a composite rank order position of 7.5. There was no definite position on a time span for reaching end goals since there was expression for both immediate and delayed gratification. Respectively, on the one hand the significant values *an exciting life* and *pleasure,* $p < .0005$, were stressed more and, on the other hand, the values *wisdom* and *inner harmony,* $p < .05+$, were also stressed more. In brief, the Human Ecology students have shifted their terminal goals to a self conscious-awareness and development orientation on a micro group level. However, the students still considered the dominant means to the ends as being *honest, loving, responsible, broadminded, forgiving,* and *independent.* Further, as a group in the College of Human Ecology, the students had greater agreement on their value orientation as there was an average increase

over the years of 3.5 points in concordance to a current W = .32 on terminal values and W = .29 on instrumental values.

2. Human Ecology undergraduate woman students differed by majors and by level during 1971-1975. Overall from 1971-1975 the majors in each academic year have become less contrasting. In 1971-72 there were nine contrast values: *a comfortable life, a sense of accomplishment, a world of beauty, equality, inner harmony, social recognition, ambitious, courageous,* and *imaginative,* and difference on the terminal value hierarchy, p < .05+, whereas, in 1974-75 there was one contrast value *social recognition* and no difference on the terminal and instrumental value hierarchies. The two years 1971-72 and 1972-73 held in common the significant contrast values *a comfortable life, equality,* and *imaginative,* p < .05+. The two years 1973-74 and 1974-75 did not hold any contrast values in common. However, in conclusion of the block period 1971-1975, majors significantly varied on both the terminal and instrumental value systems, p < .01+.

The comparison of majors at the freshman and senior levels for the block period 1971-1975 led to the conclusion that freshman majors contrasted more than senior majors. The freshman level majors were significantly different on the UHTVH, UHIVH, and LHIVH, p < .05+, while the senior level majors were significantly different, p < .01+, on the UHTVH and UHIVH. Contrast values among majors and held in common by freshmen and seniors were *a sense of accomplishment, helpful,* and *imaginative.* No conclusion was made about the differences among majors by level for each year as there was incomplete information.

It was concluded that Human Ecology students during 1971-1975 differed at the freshman and transfer levels on the UHTVH, LHTVH, and UHIVH, p< .005+. The two groups were distinguished by the terminal values *a world at peace, a world of beauty, equality, happiness, inner harmony, self respect,* and *social recognition.* Contrast instrumental values were *ambitious, capable,* and *independent.* However, to date, 1974-1975, freshmen differed from transfers on only five values: *inner harmony, mature love, salvation, capable,* and *obedient.* Over the years, then, the contrast values changed for freshmen and transfers but the quantity was reduced only by one value. Transfers placed higher priority on values concerned with self-fulfillment than did freshmen.

When freshmen and transfers were subgrouped by term within an academic year, neither freshmen nor transfers in Fall term were different from those in Spring term. Thus, freshmen and transfers as two groups were the same throughout the academic year.

3. For the block period of 1971-1975, the Human Ecology departments, FE, FCS, HED, and FSHN, have differed on both the terminal and instrumental value systems at p < .005+. The departments varied in their amount of group consensus on ranking of the two value hierarchies with FCS having the highest agreement and HED the lowest agreement. The department average concordance coefficient was W = .33 with a range of a high of W = .37 and a low of W = .29.

However, the departments have decreased in variance from 1971 to 1975 to a point of being homogeneous on both terminal and instrumental value systems. In 1974-75, *family security* was the only value that separated the departments. The department FSHN placed the least

priority, 11th position, on *family security* and hence was the farthest away from the human ecological systems' focus on the family as an ecosystem.

Departmental agreement on ranking values varied but remained at the same average of $W = .33$ and HED still was least homogeneous $W = .295$. Highest agreement was in FE with $W = .365$.

4. The conclusion was that during the block period 1971-1975 freshman nontransfers differed from senior nontransfers on both their terminal and instrumental value systems at $p < .01+$ and on 17 personal values: *an exciting life, family security, inner harmony, mature love, national security, salvation, true friendship, ambitious, capable, courageous, forgiving, imaginative, independent, intellectual, obedient, polite,* and *self controlled*.

When broken down by separate academic years, freshmen were still different from seniors on the two value systems. However, differences between the two levels has been narrowed to five values which have over the years been significant contrasts. Freshmen tended to rank the values *salvation, family security,* and *ambitious* higher than seniors. Seniors have tended to rank the values *capable* and *independent* higher than freshmen. Thus, the difference was that freshmen tended to be more idealistic than seniors or seniors tended to be more realistic in their goals about themselves. The contrast values between levels may be an indication of a basic maturing of university women in the average age range of 18 to 22 years rather than an indication of contrasts between levels in Human Ecology.

5. The Human Ecology students in 1974-75 were different from the Home Economics students in 1968-69 since their terminal and instrumental value systems varied at p < .001+ and there was contrast on 23 values. Over the years, freshmen were different on the two value systems with 19 values in contrast. Seniors changed only their terminal value system and eight values. Hence, freshmen changed twice as much as seniors from 1968-69 to 1974-75. However, with the contrast values held in common by both freshmen and seniors the direction of change and amount of change in rank positions was similar. Freshmen and seniors changed over the years on the values, *an exciting life, a world at peace, national security, pleasure, independent, intellectual, obedient,* and *polite.* The seven common contrast values may be an indicator of value change over the years in the College of Home Economics/Human Ecology and/or in campus youth.

The majors and college departments have both partially changed on their value systems over the years, however, the groups have varied in amount of change. The order for four departments from highest amount of change to lowest amount of change in value orientations was FE, HED, FCS, and FSHN.

6. It was concluded that from 1968-69 to 1974-75, the subdivisions at freshman and senior level, within the College, have changed from being distinct separate enclaves to homogeneous subgroups. However, with current division by academic majors the value *social recognition* separated the seven groups. With division by departments the value *family security* separated the four groups. Time has not merged the freshman and senior levels. Freshmen still differed from

seniors in 1974-75 on the five values, *family security, salvation, ambitious, capable,* and *independent*. In brief, the value orientation of Human Ecology students in 1974-75 could be characterized by a concern for self-fulfillment and development with an interest in being involved at the micro social group level, however, the subdivisions of Human Ecology showed differences in concern for social interaction. The Human Ecology students were similar to the general trend in campus youth towards concern for self-fulfillment. Specific value differences or similarities towards other social groups could not be determined.

Discussion

One of the problems in the data collection and analysis of value orientations of people is the interdependent and diverse way in which values are acquired and held. It is difficult to control for all factors that contribute to the ordering of values in a hierarchy which an individual may hold. Thus, in the present study of comparison of student personal values there has been difficulty in controlling for the influence of the general campus youth and societal value orientations upon the female students in Human Ecology. The findings have shown a decline in the priority upon the values *national security* and *a world at peace*. There are doubts as to the two values being unique indicators akin to Human Ecology students as campus youth studies in the 1970's. Flacks (1971), Lystad (1973), and Yankelovitch (1974b) have indicated a decline in radical protests for peace and current social issues and a willingness to accept social rules of school and work in order to get ahead as youths have now recognized the limits of power of their

minority group status. Further, the end of the Viet Nam War and military draft (Robinson, 1975) and shift to the political ethics of Watergate and priorities in international negotiations of raw resources and political interventions have refocused the country's attention and position on priorities of survival.

Similarly, the trend of Human Ecology students to be concerned about self-fulfillment and self-development is also parallel to the guestimate of an increased humanistic trend in youth (Lystad, 1973). However, the combination of increase towards self development and concern for relating to a micro level social group may be unique to Human Ecology. Accurate social trends are not available for comparison of the study's sample to another group, hence hypothesizing is the alternative consideration. Further, the upward use in woman's rights and a peaking in 1975 with International Woman's Year is parallel to the current higher ranking of the values *capable, ambitious, independent, social recognition,* and *responsible.* Does the decrease in ranking of the value *cheerful* (lighthearted, joyful) imply an increase in a serious tone towards life?

When the 1968-69 Home Economics students as one group were compared to the 1974-75 Human Ecology students, the top five ranked values in the terminal and instrumental value hierarchies remained in the same bracket. Thus, in order to compare the 1974-75 Human Ecology female students to Rokeach's latest national woman sample in 1968, the use of the Home Economics 1968-69 group can be used as an intermediate link to compare in another time period. The 1974-75 Human Ecology students then do differ from the American woman sample since the

value priorities are in contrast. While the 1974-75 Human Ecology women place priority on *inner harmony, self respect, happiness, freedom, true friendship,* and *mature love,* the national sample of women preferred *a world at peace, family security, freedom, salvation, happiness,* and *self respect.* Similarly, with instrumental values, both the 1968-69 Home Economics and 1974-75 Human Ecology students placed priority on the instrumental values, *honest, loving, responsible, forgiving, independent,* and *broadminded.* However, the national 1968 female sample preferred *honest, forgiving, responsible, ambitious, broadminded,* and *courageous.*

The current Home Economics and Human Ecology student sample has not been controlled for differences in value orientations according to differences in age. However, a maximum of 97 percent, or 97 times out of 100, of the students do cluster in the 18 to 22 year age range. Rokeach (1973, pp. 72-82) has noted that value priorities do shift with age. Results from the 1974-75 Human Ecology sample do follow partially the age difference patterns in value holding and thus an explanation for part of the sample's value orientation is provided. To elaborate on 13 identified developmental patterns during the college years, in the first pattern, *a sense of accomplishment, wisdom,* and *responsible* do fall into the middle to upper part of the value scale as predicted.

In pattern two, instead of becoming moderately important, *imaginative, intellectual,* and *logical* remained less than moderately important while *inner harmony* was given first rank position.

In pattern three, *a world of beauty* and *polite* are of lesser importance and in accord, however, *true friendship* is in discord by being important in the fifth rank position.

In pattern four, *obedient* is consistent by being in 18th rank position during college years.

In pattern five, *an exciting life* and *pleasure* do not follow the pattern of being at the bottom of the value hierarchy. Rather the two values are in 12th and 15th positions.

In pattern six, *self respect, ambitious,* and *broadminded* do fit into the correct position of being of major importance.

In pattern seven, *loving* is in second rank position as found for eleven-year-olds.

In pattern eight, *mature love* fits the sharp rise to an average of fifth place during college years.

And in pattern nine, *a world at peace* in 11th place, *family security* in 8th place, and *capable* in 10th place are parallel to the college year pattern.

For pattern ten, *independent* rose to 6th rank position in opposition to the pattern's sharp decrease in college years.

In pattern eleven, *salvation* is another value that does not follow the college year pattern as it is ranked 17th rather than 14th.

In pattern twelve, *national security* is similar as it is ranked in 18th position rather than 17th position for those in college.

Lastly, the value *honest* over the years 1968-69 shows the same stability of being ranked in first place over time and by groups. Thus, from the comparison of 1974-75 Human Ecology student value orientation

to the developmental value patterns, the Human Ecology orientation is for a part a function of age rather than Human Ecology per se.

There is some chance error in the results of the present study as some factors were not controlled. One error could be the variation in general wording of initial directives at the time of the survey administration since there were a minimum of five different administrators over the eight year span. However, the respondent was directed to read the simple, brief, self explanatory directions on the back of the front cover sheet of the survey and then proceed to complete the survey. The trade-off may come from the fact that the starting points for survey administration were in variance but there was an immediate consistent course correction by the respondents' reading directions. Reader misinterpretation of written directions could be a further error.

Similarly, since the survey can be quickly done in a single session of 20 minutes by an individual unassisted, the differences in environmental settings for survey completion, e.g., classroom versus respondent's home, may have little bearing upon the results. Attrition of those surveys completed at home was not greater than those done in the classroom. However, discussion of the survey while completing the survey would not have been controlled when done at home. Value acquisition and reranking can be influenced and/or learned through socialization. e.g., sharing different viewpoints and rationales on an issue. For purposes of the study it was assumed that the environment difference would not be a significant influencing factor upon data results.

In the same way it was assumed that the equivalence reliability of Form D and Form F of the survey gave no significant difference of result reporting, aside from Form F's increased attrition rate over Form D due to repetition of writing out a value and thus omitting another value.

It is possible that there was a Hawthorne effect when a student completed a value survey as a freshman and later as a senior. Reliabilities over a three to four year span have not been done, hence no ascertaining of the presence of a Hawthorne effect can be detected. The longest time span on reliabilities has been 14 to 16 months with a median rho of .69 and .61. Future research could entail the follow-through of respondents from freshman to senior year to derive the consistency or inconsistency in responding. However, change over time due to age development must also be considered.

There may be a built-in bias into senior student value orientations as the class theme in Spring term of the years varied and students would attempt to select the term in which the class theme was of personal appeal. The senior class varied in Winter and Spring, 1972-1975, from consumer scenerio to equality of women and/or minorities. However, an underlying theme of the classes was equality. The consumer group had objectivity and a broad scope of interrelated facets--government, business, consumer. The woman's equality class dealt also with the basic humanistic issue of rights and voicing of concerns for a group but the empathy was personal and singular versus concern and group community-oriented. In the woman's issue the student can more easily express and act out a position than in a consumer issue in class. Thus,

the terminal value orientation for women's rights and consumer arena may have the same stance in freedom and equality. It may be the instrumental value orientation that is in contrast as the means to express a position may require different vehicles since one class was more individual and personal in orientation than the other class.

Error due to incorrect identification of surveys can exist since there was a post hoc identification plan without a complete and/or possible validation technique. Validation that was possible allowed for an error of an average, two out of one hundred cases. The primary area of error would have been with incorrect academic major identification. Some certainty of student level was determined immediately by knowledge of the term and level of the course and class in which the survey was administered.

Lastly, since the sample is representative by major and less by level, generalizations to the College of Human Ecology population can be made with safety and also since the sample includes 41 to 70 percent of the population in any one year. However, when referring to the findings and subsequent conclusions about levels, the weighting in a specified direction should be remembered.

The class theme at the time of the senior student survey administration should also be considered when reference is made to senior students.

Implications

College Program

Since the Human Ecology students lean towards a humanistic and self searching value orientation, they are interested in relating to other people and being involved at a micro group level. There is a possible gap in the college program since the Marcus (1974, 1975) study indicated that the college was proficient in providing alumni with a satisfaction in meeting self development needs. The college program gap may be the lack of opportunities and learnings that express the concept of the relationship of a student, in a functional role, to a micro social group, e.g., a professional role in relation to the family.

Opportunities to apply and create relevance need to be increased within the college program and courses. The point is well taken when reference is made to Yankelovitch's (1974a) observation about the current bipolar functional/nonfunctional direction of professional home economists. If youth are setting professional trends, the Human Ecology students are being placed in an underdeveloped situation at the university because they may not be provided with learnings that create relevance especially with a professional focus. The question is now, who makes the moves for change in the college program--the professional Human Ecologists? --the Human Ecology students? --a team of student-faculty?

The College of Human Ecology is an interface between the Human Ecology profession and the community, i.e., between the people and their

environment. The college has a definite role to play in providing a two-way information flow between the fact sources and fact use in the environment, i.e., lead paths and provide opportunities to develop application techniques for students.

At present, FSHN has remained the most stable college department in value orientation from 1968 to 1974, since there was change on only three values. However, out of the four college departments, FSHN placed least preference on the value *family security* in 1974-75. Further, *family security* was the only contrast value for the departments in 1974-75. Thus, an examination of the reasons for the value position variance and recommendations could be done since the college philosophy includes the family as the focal social group.

Considering the idealistic orientation of freshmen, there is a need to increase practical experiences through group process and application to real situations, if possible, in a professional light.

Transfer students are different from freshmen in that they place the values *capable* and *independent* at a higher priority position than freshmen, thus implying a more realistic position. Hence, transfers need to be considered as farther along in their realistic self development than freshmen, i.e., not to treat like freshmen. However, since transfers are new to the physical environment of the College of Human Ecology and possibly the university, there is a need for a human/material resource orientation to facilitate an easy, quick, and functioning entry.

Future Research

Possibilities for future research are:

1. Continue to assess the value orientation of freshmen in FE 110, Fall term and seniors in FE 401, Fall, Winter, and Spring term of every second year.

2. Compare past College value orientation to current value orientation to determine the stability of the College value orientation. Compare the College value orientation to other Michigan State University College value orientations, and if possible, a national sample.

3. Assess the value orientation of male students in Human Ecology and compare with that of female students in Human Ecology.

4. Compare the Human Ecology faculty value orientation to that of students.

5. Compare the student perceived value orientation of the College of Human Ecology to the student's own value orientation in order to measure the people-environment fit and hence degree of alienation. Follow-up methods of creating a closer student-college niche could be developed especially in the realm of student advising.

6. Observe the developmental value patterns from freshman to senior level of the same student.

7. Develop and evaluate a value clarification and application of value orientation course for undergraduates as part of a self development program and as part of understanding clients as a professional.

8. On a national level, compare the value orientations of other colleges of Human Ecology and/or Home Economics, preferably with freshmen in the Fall and seniors in the Spring. Use another instrument, tested for reliability to examine perceptions about the application of Human Ecology in a professional role and/or the meaning of the concept (professional future directions).

9. Use student forecasting of future value orientation of professional Human Ecologists, or impact of society on values to plan College program changes for a closer people-environment fit.

APPENDIX

ROKEACH VALUE SURVEY, FORM D AND FORM F

VALUE SURVEY

.

BIRTH DATE_____**SEX: MALE**_____**FEMALE**_____

CITY and STATE OF BIRTH_____

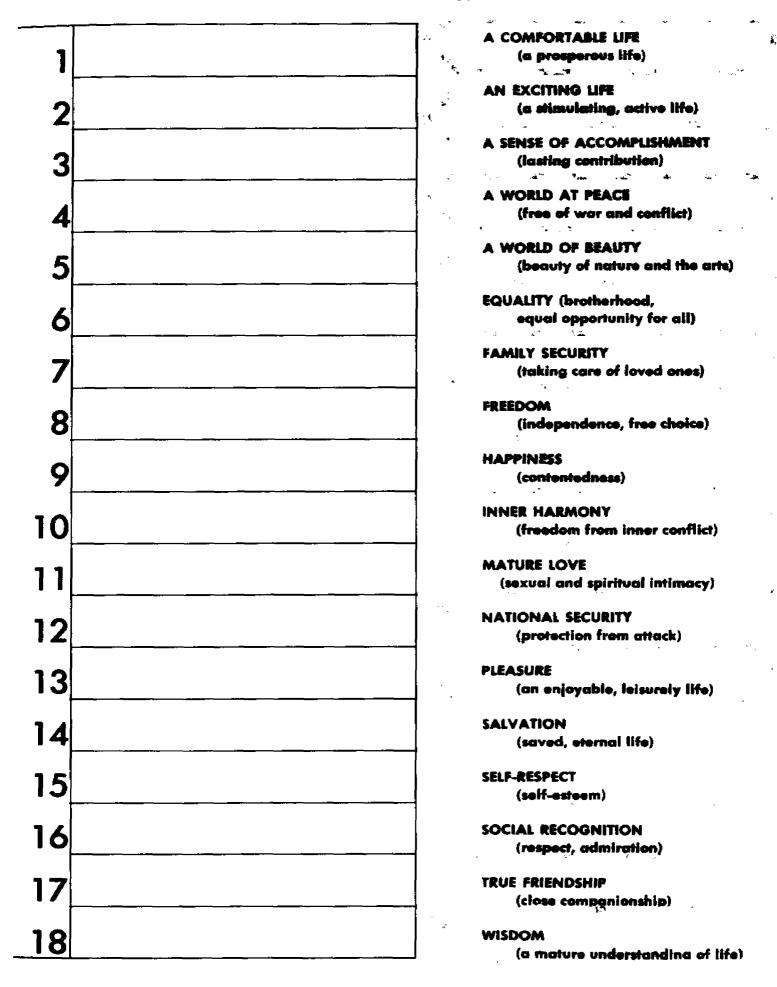**NAME** (FILL IN ONLY IF REQUESTED)_____

INSTRUCTIONS

On the next page are 18 values listed in alphabetical order. Your task is to arrange them in order of their importance to YOU, as guiding principles in YOUR life. Each value is printed on a gummed label which can be easily peeled off and pasted in the boxes on the left-hand side of the page.

Study the list carefully and pick out the one value which is the most important for you. Peel it off and paste it in Box 1 on the left.

Then pick out the value which is second most important for you. Peel it off and paste it in Box 2. Then do the same for each of the remaining values. The value which is least important goes in Box 18.

Work slowly and think carefully. If you change your mind, feel free to change your answers. The labels peel off easily and can be moved from place to place. The end result should truly show how you really feel.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

A COMFORTABLE LIFE
(a prosperous life)

AN EXCITING LIFE
(a stimulating, active life)

A SENSE OF ACCOMPLISHMENT
(lasting contribution)

A WORLD AT PEACE
(free of war and conflict)

A WORLD OF BEAUTY
(beauty of nature and the arts)

EQUALITY (brotherhood,
equal opportunity for all)

FAMILY SECURITY
(taking care of loved ones)

FREEDOM
(independence, free choice)

HAPPINESS
(contentedness)

INNER HARMONY
(freedom from inner conflict)

MATURE LOVE
(sexual and spiritual intimacy)

NATIONAL SECURITY
(protection from attack)

PLEASURE
(an enjoyable, leisurely life)

SALVATION
(saved, eternal life)

SELF-RESPECT
(self-esteem)

SOCIAL RECOGNITION
(respect, admiration)

TRUE FRIENDSHIP
(close companionship)

WISDOM
(a mature understanding of life)

WHEN YOU HAVE FINISHED, GO TO THE NEXT PAGE.

Below is another list of 18 values. Arrange them in order of importance, the same as before:

302

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

AMBITIOUS
(hard-working, aspiring)

BROADMINDED
(open-minded)

CAPABLE
(competent, effective)

CHEERFUL
(lighthearted, joyful)

CLEAN
(neat, tidy)

COURAGEOUS
(standing up for your beliefs)

FORGIVING
(willing to pardon others)

HELPFUL (working
for the welfare of others)

HONEST
(sincere, truthful)

IMAGINATIVE
(daring, creative)

INDEPENDENT
(self-reliant, self-sufficient)

INTELLECTUAL
(intelligent, reflective)

LOGICAL
(consistent, rational)

LOVING
(affectionate, tender)

OBEDIENT
(dutiful, respectful)

POLITE
(courteous, well-mannered)

RESPONSIBLE
(dependable, reliable)

SELF-CONTROLLED
(restrained, self-disciplined)

VALUE SURVEY

BIRTH DATE_____SEX: MALE_____ FEMALE___

CITY AND STATE OF BIRTH_____

NAME_____
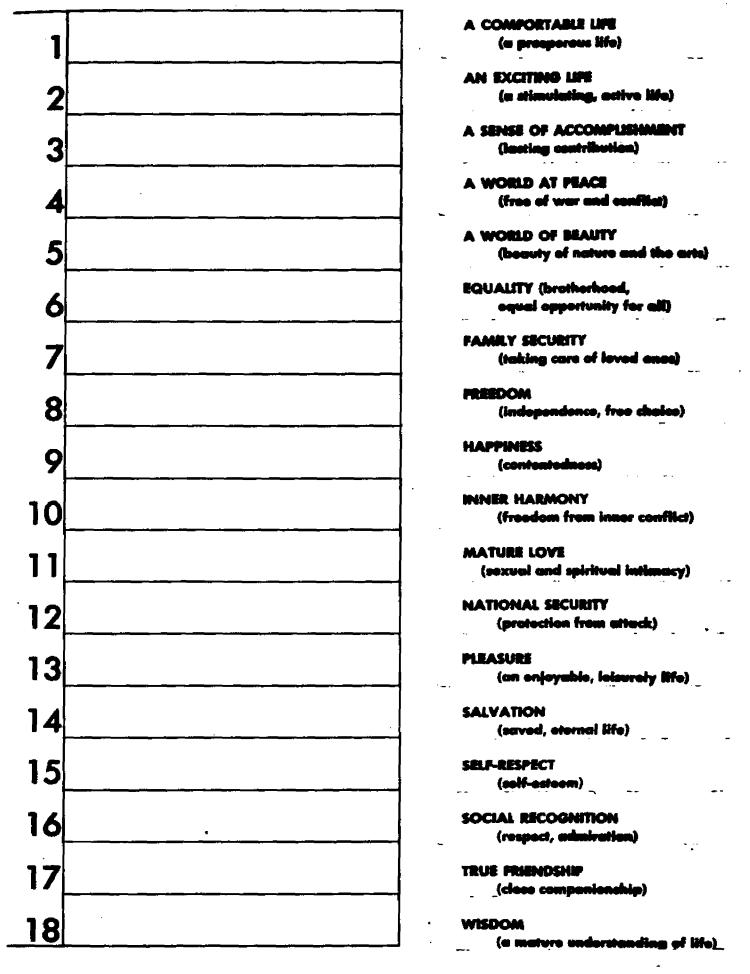
STUDENT NUMBER_____

MAJOR_____YEAR_____

INSTRUCTIONS

On the next page are 18 values in alphabetical order. Your task is to arrange them in order of their importance to YOU, as guiding principles in YOUR life.
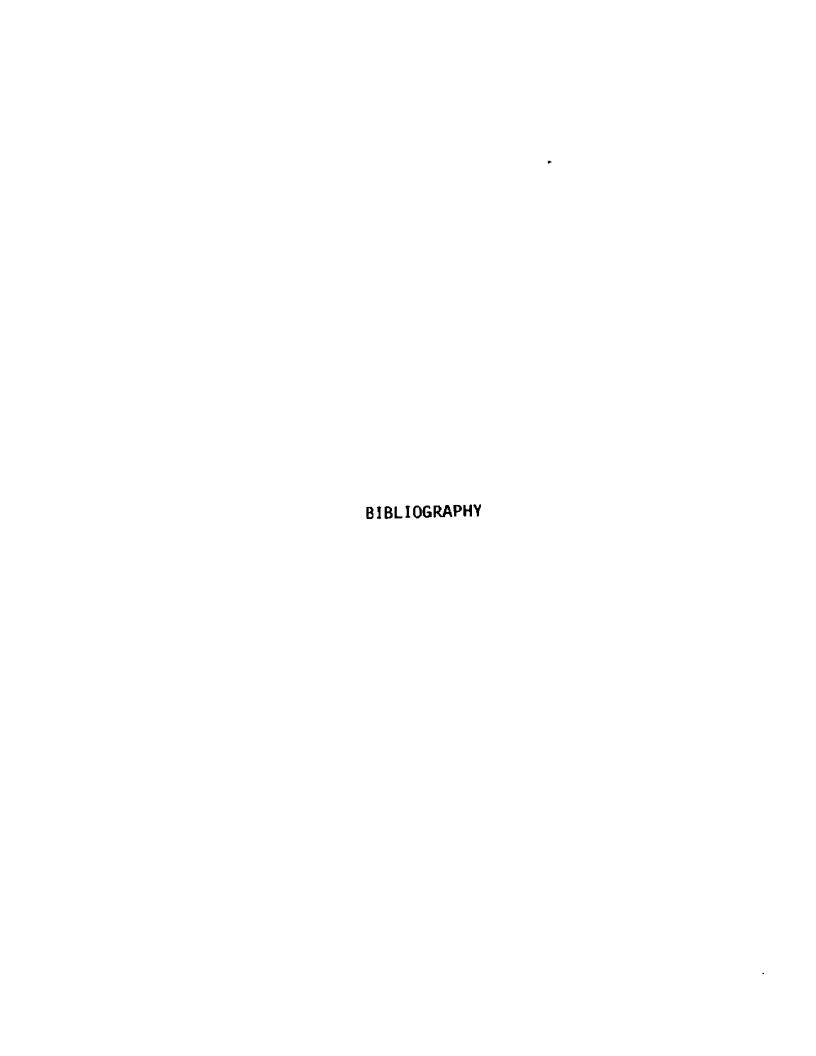
Study the list carefully and pick out the one value which is the most important for you. Print with pencil this selected value in Box 1 on the left.

Then pick out the value which is second most important for you. Print the selected value in Box 2. Then do the same for each of the remaining values. The value which is the least important to YOU goes in Box 18.

Work slowly and think carefully. If you change your mind, feel free to change your answers. The end result should truly show how you really feel.

#	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

A COMFORTABLE LIFE
(a prosperous life)

AN EXCITING LIFE
(a stimulating, active life)

A SENSE OF ACCOMPLISHMENT
(lasting contribution)

A WORLD AT PEACE
(free of war and conflict)

A WORLD OF BEAUTY
(beauty of nature and the arts)

EQUALITY (brotherhood,
equal opportunity for all)

FAMILY SECURITY
(taking care of loved ones)

FREEDOM
(independence, free choice)

HAPPINESS
(contentedness)

INNER HARMONY
(freedom from inner conflict)

MATURE LOVE
(sexual and spiritual intimacy)

NATIONAL SECURITY
(protection from attack)

PLEASURE
(an enjoyable, leisurely life)

SALVATION
(saved, eternal life)

SELF-RESPECT
(self-esteem)

SOCIAL RECOGNITION
(respect, admiration)

TRUE FRIENDSHIP
(close companionship)

WISDOM
(a mature understanding of life)

WHEN YOU HAVE FINISHED, GO TO THE NEXT PAGE.

Below is another list of 18 values. Arrange them in order of importance, the same as before.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

AMBITIOUS
(hard-working, aspiring)

BROADMINDED
(open-minded)

CAPABLE
(competent, effective)

CHEERFUL
(lighthearted, joyful)

CLEAN
(neat, tidy)

COURAGEOUS
(standing up for your beliefs)

FORGIVING
(willing to pardon others)

HELPFUL (working
for the welfare of others)

HONEST
(sincere, truthful)

IMAGINATIVE
(daring, creative)

INDEPENDENT
(self-reliant, self-sufficient)

INTELLECTUAL
(intelligent, reflective)

LOGICAL
(consistent, rational)

LOVING
(affectionate, tender)

OBEDIENT
(dutiful, respectful)

POLITE
(courteous, well-mannered)

RESPONSIBLE
(dependable, reliable)

SELF-CONTROLLED
(restrained, self-disciplined)

BIBLIOGRAPHY

BIBLIOGRAPHY

Arsenian, S. Change in evaluative attitudes during four years of college. Journal of Applied Psychology, 1943, 27, 338-349.

Astle, M. H. Personality characteristics of students enrolled in a family life course and a general (or liberal) education course at Michigan State University. Unpublished master's thesis, Michigan State University, 1967.

Bane, L. Values that count in home economics. Journal of Home Economics, 1950, 42, 13-15.

Bengtson, V. L., and Lovejoy, M. C. Values, personality and social structure. American Behavioral Scientist, 16, 880-912.

Brodbelt, S. Values in conflict: Youth analyzes theory and practice. High School Journal, 1971, 55, 63-77.

Brown, M. M. Values in home economics. Journal of Home Economics, 1967, 59, 769-775.

Budewig, C. Origin and development of the home economics idea. Unpublished doctoral dissertation, George Peabody College for Teachers, 1957.

Byrd, F. M. A definition of home economics for the 1970's. Journal of Home Economics, 1970, 62, 411-415.

Cochrane, R., & Rokeach, M. Rokeach's value survey: A methodological note. Journal of Experimental Research in Personality, 1970, 4, 159-161.

College of Human Ecology Report 4401. East Lansing: Michigan State University, 1975.

Compton, N. H., & Hall, O. A. Foundations of home economics research. Minneapolis, Minn.: Burgess Publishing Company, 1972.

Corey, S. M. Attitude differences between college classes: A summary and criticism. Journal of Educational Psychology, 1936, 27 321-330.

Creekmore, A. M. The concept basic to home economics. Journal of Home Economics, 1968, 60, 93-99.

Cross, K. P. College women: A research description. Journal of National Association of Women Deans and Counselors, 1968, 32, 12-21.

Dressel, P. L. Organization in higher education, with special relevance to home economics. Paper presented at a meeting of Home Economics administrators, Chicago, May 1968.

Dressel, P. L., & Lehmann, I. J. The impact of higher education on student attitudes, values, and critical thinking abilities. The Educational Record, 1965, 46, 248-258.

Dukes, W. F. Psychological studies of values. Psychological Bulletin, 1955, 52, 24-50.

East, M. Family life by the year 2000. Journal of Home Economics, 1970, 62, 13-18.

The ecological approach as a unifying frame-work for undergraduate programs in the College of Home Economics at Michigan State University: Part B. Unpublished paper.

The Eleventh Lake Placid Conference. Journal of Home Economics, 1974, 66, 8-11.

Epstein, G. F., & Bronzaft, A. L. Female freshmen view their roles as women. Journal of Marriage and Family, 1972, 34, 671-672.

The family faces change. Journal of Home Economics, 1970, 62, 314.

Feather, N. T. Educational choice and student attitudes in relation to terminal and instrumental values. Australian Journal of Psychology, 1970, 22, 127-144.

Feather, N. T. Value similarity and school adjustment. Australian Journal of Psychology, 1972, 24, 193-207.

Flack, R. The acquisition and development of values. Report of Conference, National Institute of Child Health and Human Development. Bethesda, Md., May 15-17, 1968, 7.

Flacks, R. Youth and social change. Chicago: Markham Publishing Company, 1971.

Freedman, M. B. Influence of college experience on personality development. Psychological Reports, 1961, 8, 21-22.

Freshman values undergo changes. College Management, 1971, 6, 41.

Friesen, D. Value orientations of modern youth, a comparative study. Adolescence, 1972, 7, 265-271.

Fukushima, Y. Description of interpersonal values and ratings of students at home management residence. Unpublished master's thesis, Michigan State University, 1966.

Grundstrom, V. Energy! energy! where-fore art thou? Unpublished manuscript, 1975.

Harper, L. J. The status of home economics in higher education. Journal of Home Economics, 1975, 67, 7-10.

Hechinger, F. M. Cult of the self attracts youth. The Montreal Star, June 20, 1974, A-9.

Hill, E. H. Human values in home economics. Journal of Home Economics, 1955, 47, 592-594.

Hoge, D. R. College students' value patterns in the 1950's and 1960's. Sociology of Education, 1970, 44, 170-197.

Holland, J. L. Some explorations of theory of vocational choice. Psychological Monographs, 1962, 76, No. 26.

Homant, R. Values, attitudes, and perceived instrumentality. Unpublished doctoral dissertation, Michigan State University, 1970.

Home economics new directions. Prepared by the Committee on Philosophy and Objectives of Home Economics. Washington, D.C.: American Home Economics Association, June 1959.

Hook, N. C., & Paolucci, B. The family as an ecosystem. Journal of Home Economics, 1970, 62, 315-318.

How your life will change. U.S. News & World Report, March 3, 1975, 78, 32-35.

Jacob, P. E. Changing values in college. New York: Harper and Row, 1957.

Juola, A. E. College perceptions and expectations of entering MSU students (OES Research Report No. 3). East Lansing, Mich.: Office of Evaluation Services, Michigan State University, 1973.

Kelly, K., Silverman, B. I., & Cochrane, R. Social desirability and the Rokeach value survey. Journal of Experimental Research in Personality, 1972, 6, 84-87.

Keniston, K. Young radicals. New York: Harcourt, Brace and World, 1968.

Kerlinger, F. N. Foundations of behavioral research (2nd ed.). New York: Holt, Rinehart and Winston, Inc., 1973.

Klemmack, D. L., & Edwards, J. N. Women's acquisition of stereotyped occupational aspirations. Sociology and Social Research, 1973, 57, 510-525.

Kluckhohn, C. Values and value orientations in the theory of action. In T. Parsons & E. Shils (Eds.), Toward a general theory in action. Cambridge, Mass.: Harvard University Press, 1952.

Kvaraceus, W. C. Working with youth: some operational principles and youth values. Bulletin of National Association Secondary School Principals, 1964, 53, 67-71.

Lake Placid Year Report. Journal of Home Economics, 1974a, 66, 50.

Lake Placid Year Report. Journal of Home Economics, 1974b, 66, 50.

Lee, J. A., & Dressel, P. L. Liberal education and home economics. New York: Teachers College, Columbia University, 1963.

Lehmann, I. J., & Payne, I. K. An exploration of attitude and value changes of college freshmen. Personnel and Guidance Journal, 1963, 41, 403-408.

Lehmann, I. J., Sinha, B. K., & Hartnett, R. T. Changes in attitudes and values associated with college attendance. Journal of Educational Psychology, 1966, 57, 89-98.

Lorenz, M. K. A descriptive study of the backgrounds, attitudes, and values of home economics students at Michigan State University. Unpublished doctoral dissertation, Michigan State University, 1970.

Lystad, M. As they see it. Cambridge, Mass.: Schenkman Publishing Company, Inc., 1973.

Marcus, P. M., Bates, J. L., & Dammers, L. S. College and careers: Seniors' perceptions (Report #1). East Lansing, Mich.: College of Social Science, Michigan State University, 1974.

Marcus, P. M., Bates, J. L., & Dammers, L. S. College and careers: Alumni perceptions and experiences (Report #2). East Lansing, College of Social Science, Michigan State University, 1975.

Marty, M. E., Rosenberg, S. E., & Greeley, A. M. What do we believe in? The stance of religion in America. New York: Meredith Press, 1968.

McConnell, H. L. A critical analysis of the implications of selected philosophies of education for home economics education. Unpublished doctoral dissertation, Michigan State University, 1965.

McLellan, D. D. Values, values systems, and the developmental structure of moral judgment. Unpublished master's thesis, Michigan State University, 1970.

Mead, M. Culture and commitment. Garden City, N.Y.: Natural History Press/Doubleday & Company, Inc., 1970.

Morris, C., & Small, L. Changes in conceptions of the good life by American college students from 1950 to 1970. Journal of Personality and Social Psychology, 1971, 20, 254-260.

Orwig, J. P. An examination of problems relating to standards of value judgment as expressed by a selected group of basic college students. Unpublished doctoral dissertation, Michigan State University, 1953.

Parrish, S. E. Reliability of Rokeach value survey form F. Unpublished paper, 1975.

Parsons, T., & Shils, E. (Eds.), Toward a general theory of action. Cambridge, Mass.: Harvard University Press, 1962.

Quilling, J. I. The nature of the family projected by the home economics profession as evidenced through examination of the American Home Economics Association literature. Unpublished doctoral dissertation, Michigan State University, 1970.

Ray, E. M. Professional involvement in education. Journal of Home Economics, 1970, 62, 715-719.

Robinson, L. B. Youth values. Change, 1975, 7, 4.

Rokeach, M. Beliefs, attitudes, and values. San Francisco: Jossey-Bass, 1968.

Rokeach, M. The nature of human values. New York: Free Press, 1973.

Schlesinger, A. M. Our ten contributions to civilizations. In A. Karson and P. E. Gianakes (Eds.), American civilization since World War II. Belmont, Calif.: Wadsworth Publishing Company, Inc., 1968.

Seligman, D. Special kind of rebellion. Fortune, 1969, 79, 66-69+.

Siegel, S. Nonparametric statistics for the behavioral sciences.
    New York: McGraw-Hill, 1956.

Smith, H. P. Do intercultural experiences affect attitudes? Journal
    of Abnormal and Social Psychology, 1955, 51, 469-477.

Smith, H. P. Personal values in the study of lives. In R. W. White
    (Ed.), The study of lives. New York: Atherton Press, 1963.

Snyder, E. E. A longitudinal analysis of the relationship between
    high school student values, social participation, and educational-
    occupational achievement. Sociology of Education, 1969, 42, 261-270.

St. Erlich, V. The American way of life--value orientation (73G4991).
    Sociological Abstracts, 1973, 21, 1098.

St. Marie, S. The family faces change. Journal of Home Economics,
    1970, 62, 10-11.

Stout, J. H. Changing student values: A challenge to higher education.
    Journal of Thought, 1972, 7, 247-249.

Thomas, W. L. Values and American youth. Journal of Home Economics,
    1969, 61, 748-754.

Thomas, W. L. Value change and American youth. College Student
    Journal, 1971, 5, 135-137.

Todd, J. E. Social norms and the behavior of college students.
    New York: Teachers College Bureau, 1941.

Toffler, A. Future shock. New York: Bantam Book; Random House, 1970.

Turk, J. College of human ecology challenges quality of living.
    Extension Bulletin of Michigan State University, 1971.

United Press International & State News. Congress increases pay of
    self, court, cabinet. State News, August 1, 1975, 169, 1+.

Vaines, E. L. An ecological systems framework for home economics/human
    ecology: the linkage of environment, energy and organism as family.
    Unpublished doctoral dissertation, Michigan State University, 1974.

Walstedt, J. J. Women as marginals. Psychological Reports, 1974, 34,
    639-646.

Whitely, P. L. The constancy of personal values. Journal of Abnormal
    Social Psychology, 1938, 33, 405-408.

Williams, R. M.   Individual and group values.   Annals of American
    Academy of Political and Social Science, 1967, 371, 20-37.

Williams, R. M.   Values.   In E. Shils (Ed.), International encyclopedia
    of the social sciences.   New York: Macmillan, 1968.

Willower, D. J.   Values and educational administration.   Peabody
    Journal of Education, 1961, 39, 157-161.

Wood, T. D.   Some controlling ideals of the family life of the future.
    Lake Placid Conference on Home Economics: Proceedings of the sixth
    annual conference.   Lake Placid, N.Y., 1904.

Woodruff, A. D.   Personal values and the direction of behavior.
    School Review, 1942, 50, 32-42.

Yankelovitch, D.   The changing values on campus.   New York: Washington
    Square Press, 1972.

Yankelovitch, D.   Image of home economics polarized.   AHEA Action,
    August 1974, 3-7.   (a)

Yankelovitch, D.   The new morality: A profile of American youth in
    the seventies.   New York: McGraw-Hill, 1974.   (b)

Yankelovitch, D., & Clark, R.   College and noncollege youth values.
    Change, 1974, 6, 45-46+.