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The Development of a Value Scale to Assess Familial and Social Values

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THE DEVELOPMENT OF A VALUE SCALE TO ASSESS

FAMILIAL AND SOCIAL VALUES

by

Donna Marie Cole

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Family and Child Development

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During the 10 months on campus while studying in the areas of family life, elementary statistics, philosophy, anthropology, and sociology, I completed my thesis requirements for the degree of Master of Science.

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Donna Marie Cole

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ABSTRACT

The Development of a Value Scale to Assess

Familial and Social Values

by

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The purpose of this research was to develop a self-evaluating
instrument to assess family and social values. It can be used in-
dividually or in small groups of students at the senior high school or
junior college level. The variables rated are: familial, religious,
sexual, and social values. The instrument is self-scoring and a schema
is provided at the end of the test booklet to indicate the pattern of
values as they are compared to the median or average scheme for the
instrument.

The 36 items in the scale are responded to by a forced choice
design of alternate answer boxes which appear under different combina-
tions of value variables. An intensity of response is measured in the
form of alternates ranging from zero to three. Each item must total to
three points. This method of responding to the items produces data that
are curvilinear; therefore, advanced factorial analysis of items is
necessary to determine the exact nature of data that might be collected
from such an instrument. Hence, the instrument is limited for research
purposes. However, it is not limited for use as an individual or

self-administering evaluative tool. The interdependent nature of the values can be studied by the individual and the instrument becomes a valuable teaching device.

A pretest situation involving 100 lower-division students at Utah State University reported the following results. The mean on the familial variable was highest, the intensity and frequency of response was greatest on the familial variable, and the intercorrelations on each variable ranged no lower than $r = .59$ to a high of $r = .78$. As a classroom tool, the Cole Scale of Values developed in this study should prove helpful for use in teaching concepts related to individual conceptions of familial and social values. Because of the interdependent nature of responses, and the indiscrete nature of any data collected from it, this instrument is only recommended for research when suitable methods of analysis are used.

(69 pages)

CHAPTER I

INTRODUCTION

The family as an institution within society has been religiously
reinforced since the beginning of pre-Christian times. The family has
served as the viable medium for instruction in ascetic values to guide
the young in their growth to adulthood. However, in today's society,
it is believed by many that the family is being attacked from all sides.
The framework of the family is a more variable pattern than the standard
patterns of past generations. The functions of the family are being
seriously questioned by members of the younger generation. Psychologist
Richard Farson (1970) reported to the White House Conference on Children
that the family is now often without function. It is no longer
necessarily the basic unit in our society. In considering such a
statement, one might conclude that Farson meant that the former functions
of the family no longer apply to present patterns. The individual is
more prominent as an unique entity in society. For this reason, value
systems, their origin, their patterns, and their function become tre-
mendously important.

The present study was undertaken to determine individual trends in
the reflective nature of the family and the community with regard to
familial and social values or attitudes. The premise of the study was
that the scientific study of values is best implemented by the use of
an instrument designed and validated in terms of a specific need in
curricular content. The unit of study reported herein has been explored
with the intent of developing a research instrument concerned with

evaluating values and advancing the understanding of students with regard to their beliefs and attitudes towards familial and social values.

Statement of the problem

There appear to be present in the youthful society of today many different groups, none clearly defined, and all inter-reacting, but nevertheless different groups with different sets of values and different manifestations of behavior. All groups are products of the post-modern era characterized by urbanization, automation, high mobility, competition, and confusion (Friesen, 1969).

The Church has begun to question the traditional understanding of her mission. For centuries, it was taken for granted that the Church's mission was to extend her boundaries overseas and to intensify religion at home. The present questioning of the Church's mission is part of the cultural transformation proper to our age (Baum, 1970).

Christensen and Gregg (1970) report significant change in the liberalizing of attitudes towards premarital coitus within the last 10 years, especially for females. Niebuhr (1966) indicates that when young couples engage in sexual relations without responsibility--not because they love each other, but because it's fun--they reduce the value of the whole human personality.

Researchers, educators, and parents are all expressing concern over the modern behavioral trends of the younger generations. Frankl (1963) suggests that 20 to 30 percent of youth feel a keen sense of social meaninglessness and lack of purpose. They have not discovered a meaning or purpose for living. The ascetic values of the traditional past hold only a distorted meaning to them.

Nye (1967) reports that an era is imminent in which more normative family behavior will come to be viewed by society as instrumentally valued only. He goes on to state that as the objectivity of science illuminates more family practices and as more rapid changes occur in other institutions, a faster rate of change of family norms is inevitable. This objectivity weighs the changes that from time to time need to be made if the family and other social institutions are to function more effectively.

There appears to be an apparent need for constant re-evaluative study of the value systems of the younger generations. The lack of research instruments capable of assessing familial and social values was the main basis of the problem in this study.

Purpose

It is assumed that the religious and sexual values held by senior high school students are primarily reflections of their familial and social experiences. It is also assumed that it is important to establish high positive values in these evaluative areas. With the development of an instrument to measure the relative strength of these values, it becomes possible through public instruction, in courses related to the area of family life, to involve students in analysis of values subsequent to social consequences about which society and families are deeply concerned. The purpose of this study was the development of an instrument that would measure the interdependent nature of familial, religious, social, and sexual values.

Objectives

The overall objective of the proposed study was *to develop an instrument* that would measure the relative strengths of the following value variables:

1. To measure familial values in terms of harmony, truth, chastity, freedom, and function.

2. To measure religious values in terms of salvation, unity, faith, and hope.

3. To measure social values in terms of personal interrelatedness, love of people, honesty, openness, and equality.

4. To measure sexual values in terms of self-awareness, self-expression, and the responsible consideration of others.

A second objective of this study was to assess the validity of the instrument developed, and to determine whether the scale of values does indeed produce higher scores in value variables closely associated with special attributes of a group of respondents.

Other objectives were related to the nature of the instrument. Today there are no clear-cut standard practices for establishing values that reflect all aspects of responsibility and commitment in all situations. Former patterns are changing and new patterns are evolving. Therefore, insofar as one is able to do so, the utilization of teaching devices to stimulate the indirect contemplation of human values as they relate to society and the family would be well advised for use.

Hypothesis

The hypothesis of this study focused on the development and refinement of a Scale for Assessing Familial and Social Values (shortened to the Cole Scale of Values). If such an instrument is valid, it should

distinguish between groups having different degrees of familially and socially oriented backgrounds.

The hypothesis was: The Scale of Values is capable of distinguishing between individuals, or members of a group, those persons possessing a higher degree of familial or social orientation.

CHAPTER II

REVIEW OF LITERATURE

The breadth of the subject field forming the background for this
investigation is particularly philosophical, religious, and ascetic in
nature. Some of these areas defy analysis and are better evaluated by
a descriptive method. This review of literature is by no means exhaustive,
although every effort was made to search for instruments that rate
values in the combined areas of the family and society.

The arbitrary nature of values

All values have an arbitrary nature, and many writers have sought
to clarify this nature. Philosophers, theologists, sociologists, psy-
chologists, and family life educators have written more on this subject
than other disciplines. It is interesting to compare the different
approaches and interpretations made by these writers. A thorough
investigation of this wide field of data would constitute a study in
itself. Only a sampling of the many statements to support an inter-
pretation of the meaning of "values" as they may exist in contemporary
issues has been presented.

Values reside within the contexts of moral codes. As Freidman
(1967, p. 366) puts it, "moral codes may be useful rules of thumb, but
they cannot claim universal objective validity in advance of the claim
of the present." Therefore,

> we cannot live without ethical norms, but the "true norm"
> is not the moral standard imposed from above which one
> must submit to or rebel against. It is that command which
> calls forth our most personal response, our response as

> the whole and unique person that we are. It is never a
> maxim which applied to everybody and nobody, but an
> attitude--a command that remains latent in your being until
> you hear the address of the unforeseen situation as a claim
> on *you* to which you must respond with all your force.
> (Freidman, 1967, p. 366).

Freidman is saying that moral philosophy is invariably grounded in a concept of human nature. This study has focused on the human behavior of young people and how it interrelates with their value systems.

Sociologist Nye (1967, p. 43) writes regarding family values and describes their arbitrary nature in terms of *"intrinsic"* and *"instrumental"* values. He describes intrinsic values as "objects, events, and experiences that are valued for their own sake without reference to still other consequences which flow from them"; and instrumental values as "those which change as new social inventions provide more efficient arrangements for achieving goals."

These definitions can be parallelled with those interpretations given by psychologist Bem, who describes values

> as primitive preferences for a positive attitude towards
> certain end states of existence (like equality, salvation,
> self fulfillment, or freedom), or certain broad modes of
> conduct (like courage, honesty, friendship, or chastity).
> (Bem, 1970, p. 16)

The instrumental nature of values as described by Nye are called attitudes by Bem, and are described in terms of zero-order, first-order, and high-order beliefs. Some beliefs are logical and some may be illogical, depending upon how they link in with primitive beliefs.

> Some values are based on highly differentiated and broadly
> based beliefs and are not necessarily central; others
> are based on primitive beliefs and by definition are
> completely undifferentiated, yet possessing a central
> connotation. (Bem, 1970, p. 12)

To describe this phenomenon, Nye refers to positive and negative values. He uses as an example sexual intercourse between unmarried persons,

where society has assigned a negative value to this behavior, placing a high positive value on chastity.

To think in terms of the essence of values as held by an individual, it must be acknowledged that there exist two forms of attributes--an inflexible, slow-to-change attribute, which is based on very fundamental concepts (primitive beliefs); and also a fluid, more readily adapted attribute, which is reflected in the individual's analysis of his social contacts (broadly based beliefs). The primitive beliefs are those instilled into the individual by his early training and are generally beliefs resistant to change. In his process of growth to adulthood, he does not question the fact that some of these beliefs might in truthful reality be in conflict with his own free will. Likewise, it is the broadly based beliefs or instrumental values which are receptive to demands made by the peer group of the individual. It is the adaptations of these latent values which eventually create the impulse to restructure the centrality of these beliefs plus the more inflexible primitive beliefs.

Among the many researchers who are involved with the measurement of attitudes and values, there is a wide variation and interpretation of the precise nature of man's evaluating nature. Shaw and Wright (1967) describe a belief as becoming an attitude when it is accompanied by the affective component which reflects the evaluation of the preferability of the characteristic or existence of the object. The attitude would be the sum of such beliefs about an object. Attitudes are similar to motives in that both terms refer to the directionality of behavior, not to the behavior itself. An attitude is labeled by its object and may be considered object specific; whereas, motives are labeled by their

goals and are goal specific. In social psychology, opinion and value
are constructs which have been used in a manner similar to attitude.

The major source of stability in attitudes is the interrelatedness
of the attitudes (Shaw and Wright, 1967). This concept is supported
by Allport, Vernon, and Lindzey (1970) when they describe the inter-
dependence of the value categories used in the Study of Values, and by
Frankl (Leslie, 1962, p. 92) when he states that "all values are
relative." If all values are relative, and the nature of their inter-
dependence is the source of their stability, and as Friedman (1967)
says, values are grounded in concepts of human nature and man's response
to society--then to evaluate man's behavior in society is the best way
to determine his attitudes and values regarding moral behavior.

Instruments measuring attitudes and values

In contemplating the extent of research in the area of the family
and the individual, and with reference to measurement techniques
developed, Straus (1969) has surveyed the field from 1935 to 1965. Out
of the 319 measurement techniques reported in his book, only 20 out of
the total relate to studies designed to rate the adolescent, and only
20 additional studies rated premarital situations or attitudes. The
major area of the field searched has dealt with the parent, relation-
ships of spouses, the family, and the child. Such a review of litera-
ture indicates that the crisis situations drawing the attention of
researchers in the past decade did not relate to the adolescent. Six
of these studies are being cited in this review of literature because
their nature bears on the related area of this present study.

Nelson (1955), in his normative study of attitudes towards sex, marriage, and the family, categorized scores in terms of established definitions. A high score indicated that the present knowledge of accepted sexual behavior and understanding of the social roles of the family predisposed his conceptions of future enactment in these roles. Such students were rated secure in their present home situations. The low-scoring student indicated a poor understanding of the reasons for conventional sexual behavior, and was rated as being apt to have negative attitudes towards marriage and family responsibilities.

Bell's Adjustment Inventory student form (1934) measures variables entitled "personal and social," and includes a subscore for home adjustment. His test consists of a multiple-choice personality inventory. Evidence of validity and reliability is presented to a significant level. Norms are available from the test manual.

Dean (1961), in his measurement of romanticism and emotional maturity, developed a romanticism scale which utilized Winch's definition of "romanticism," and which included 32 items on a questionnaire, 27 of which were considered to be romantic dimensions. The hypothesis stated that there is a positive correlation between romanticism and emotional immaturity as measured by the Bell Adjustment Inventory. Only the correlation with the emotional adjustment was statistically significant. (The test is available from the National Auxiliary Publications Services.)[1]

The McCleery Scales of Adjustment (1955) measured adolescent attitudes towards preparation for marriage and family life. Items

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[1]ASIS National Auxiliary Publications Services, c/o CCM Information Sciences, Inc., 22 West 34th Street, New York, New York, 10001.

are based on a definition of adjustment as

> harmonious relationship between needs and the cultural re-
> strictions and requirements which impinge upon him. The
> attainment of the harmonious relationships is equivalent
> to the possession of a mature personality . . . (a) a
> normally developing person is one who is successful at
> solving his developmental tasks. (McCleery, 1955, p. 188)

Norms are available from the manual.

Christensen and Carpenter (1962) measured premarital sexual in-
timacy and degrees of permissiveness towards this behavioral phenomenon.
This is one of the classical studies in the literature, and the most
recent version of this research is referred to elsewhere in this study.
The original scale structure is available in Shaw and Wright (1967).

To investigators interested in measuring attitudes and values in
the general areas of those measured in the Scale of Values in this study,
the background reading would not be complete without an analysis of the
scales designed by Reiss (1963) and relevant to the measurement of
sexual values.

Summary

In the review of literature for this study, an attempt has been
made to clarify the nature of attitudes and values and how they inter-
relate with manifestations of behavior and the latent conceptualization
of behavior. Values may be creative, experiential, or attitudinal, and
in different patterns they can be linked with beliefs and opinions.
They are all correlates that reflect an individual's way of thinking
and feeling, in a nonconscious or unconscious way, about the social
norms and behavior of those who form his social milieu.

It has been pointed out that there is not a large number of measur-
ing instruments or techniques developed for evaluation of adolescents

and their value systems. It is assumed that the young adult needs to be studied more closely. That this need is approaching a crisis, as Friesen (1969, p. 6) indicates when he states that "one segment of society, the youthful activist, is serving as the cutting-edge of social and economic change," makes all the more imperative the need for more intensive evaluative studies, plus instruction in this area that is more relevant. The methodology developed in this study and the findings reported help to fill this need and clarify some of the issues raised in this review of literature.

CHAPTER III

PROCEDURE

The major purpose of this study was to develop an instrument that would discriminate between degrees of familial and social orientation. Straus (1969) indicates that more than one-half of the tests authored in family measuring techniques provide no evidence of reliability or validity. The pre-testing of an instrument should include administration to different groups with analysis after each administration. This form of procedure helps to insure accurate norms when the instrument is administered to larger selected or random samples.

The investigator has proceeded with this study following a set procedure which should produce an acceptable instrument. Criterion-related data have been utilized in the form of a model test. The methodology used has been established according to reliable and valid methods and the instrument has been administered to a sample and the analysis and results have been presented. A second and final pre-testing of the instrument should render it sufficiently refined that the final data collected by its use would be statistically significant.

Description of the model test

The model test that has been used in this study was the Study of Values (Allport, Vernon, Lindzey, 1960), which for many years has been accepted as one of the more satisfactory personality tests and has enjoyed widespread usage among psychologists and educators as an easily administered, reliable means of measuring this quality (Horgan, 1951).

The prominence of six basic interests or motives in personality--
theoretical, economics, aesthetic, social, political, and religious--
are rated. The classification is based directly upon Spranger's Types
of Men (1928), a work which defends the view that the personalities
of men are best known through a study of their values or evaluative
attitudes.

The scale is designed primarily for use with college students, or
with adults who have had some college (or equivalent) education. The
Study of Values is self-scoring, forced choice, and utilizes weighted
alternative responses. There is a total of 146 answers, distributed
between each of the six values. The subject records his preferences
numerically by the side of each alternative response. The scores on
each page are added and the totals transcribed onto the score sheet.
The page totals belonging to each of the six values are then summed.
After applying certain simple corrections, these six total scores are
plotted on a profile, so that the subject may see the significance of
his standing on all the values simultaneously. The corrections referred
to relate to the standardization of the test, and the fact that each
value averages out at 40. A flat profile would indicate that the
subject favors equally all six values. Only larger peaks or depressions
in the profiles are significant. The Study of Values is largely a
self-administering test--there is no time limit, there are no right or
wrong answers, and there exists little reason for an individual to
attempt to slant his scoring pattern (Horgan, 1951).

The Study of Values does not measure the absolute strength of each
of the six values, but only their relative strength. A high score on
the one value can be obtained only by reducing correspondingly the scores

on one or more of the other values. The profiles therefore reveal only the relative importance of each of the six values in a given personality, not the total amount of "value energy" or motivation possessed by an individual. "The measures of the six values are not independent of one another." (Allport, Vernon, and Lindzey, 1970, p. 16)

Originally published in the year 1931, the revised form appeared in 1951 and included the improvements present in the current issue, aside from the machine-scoring feature which was made available in 1968. The most significant improvement came in the redefinition of the social value. The old form followed closely upon Spranger's definition of this value, and proved to have low reliability. This unsatisfactory condition came from the over-broad conception that Spranger offered. To him, the social value stood for love in any form--conjugal, familial, philanthropic, or religious. But people, as it turns out, are not as a rule consistently "social" in all of these senses. An individual may, for example, "be loving at home without being philanthropic." (Allport, Vernon, and Lindzey, 1970, p. 9) Therefore, in the 1951 revision of the test, the social value was redefined to measure altruistic love or philanthropy.

The reasons for selecting the Allport Study of Values as the model test for the development of the present scale of values are cited in the following points:

1. The format of the test is appealing to the students, who can see immediately that they are going to be able to determine their own scores and profiles in the different values.

2. As Cronbach (1960) indicates with regard to curricular validity, a test which helps in making one decision may have no value at all in another. Hence, the essence of validity for an instrument rests directly

on the sensitizing of individual students regarding their self-awareness
of the values being assessed.

3. The Study of Values has been selected because the values are
measured in such a manner as to allow for an interdependence.

Description of the experimental instrument[2]

The Cole Scale to Assess Familial and Social Values (Scale of
Values) developed by the investigator explores the interdependence of
four basic values: familial, social, religious, and sexual. To justify
this categorization, the investigator indicates the existence of gen-
eralized attitudes in individuals as being dominant, pervasive, and
enduring. If the premise can be granted that such dominant and enduring
attitudes do exist, then it must follow that behavior in general and the
decisions involving value judgments relate directly or indirectly to
central beliefs acquired early in life. And the socializing pattern of
individuals in their homes and social environment reflects beliefs which
exist in dominant and less dominant degrees of intensity.

The Cole Scale of Values is so designed as to place the subject in
the position in which such a choice must be made. In fact, he must
make his choice between two of the four value variables. There are up
to 18 opportunities for a dominant value judgment to be given preference
over each non-dominant interest, and a total of 72 instances in which
preferences may be indicated over non-dominant attitudes as a whole.

The four basic variables (familial, social, religious, and sexual)
identify the values assessed in this scale. The classification is based
on definitions established by the investigator and cited in Appendix A.

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[2]See Appendix B.

The scale is designed primarily for use with junior college or senior high school students, or with adults who have some advanced education. The Cole Scale of Values is self-scoring, forced choice, and utilizes weight alternative responses. The subject scores his preferences numerically to the right of each alternative response. The score on each page is subtotaled and carried forward to the totals on each variable.

The ordering and grouping of the scale variables require some further explanation. The variables are grouped in such a manner that the non-specific variables (religious and sexual) reflect the more specific variables (familial and sexual). (See Appendix A.) This particular method of vertical classification was used to offset the ipsative or curvilinear nature of a scale utilizing a forced choice, weighted, technique for responses. Attitude scales measure only one dimension of the affective reaction: positivity-negativity (Shaw and Wright, 1967). Therefore, by grouping the variables, a regression line can be determined to measure the slope of the intensity of response to the two specific familial and social variables. (See Appendix C.) The ordering sequence for the scale items requires the respondent to indicate preference between *each* value variable and *every other* variable.

The general assumption underlying this scale is that the subject consistently makes choices dictated by his personal sense of values. Repeated preference for one particular variable is reflected by a high score in this area. Possible scores range from 0 to 54, with a median score being 27 on each variable. However, it should be noted that a high score on one variable will be at a sacrifice of lower scores on alternate combinations of the other three variables.

Methodology used in the scale
construction

In the initial stages of theoretical formulation of test items to be used in the Cole Scale of Values, an array of 60 items was constructed. There were six possible category groups for the four variables (see Appendix D); each was allotted 10 test items. The objectivity and explicit nature of each item received close consideration; however, no attempt was made to create a nonmonotone sequence within each category of items. They were not designed to become increasingly more difficult. The items were then evaluated and ranked by five specialists representing the disciplines of Education, Marriage Counseling, Psychology, Sociology, and Theology. Each specialist was asked to give his judgment in the following capacities:

1. They were asked to delete *four* and to rank in order of preference each set of the six remaining items relating to the following categories of variables: familial and sexual, familial and social, familial and religious, religious and sexual, social and religious, and social and sexual.

2. They were also asked to indicate any items which by modification might justify a higher ranking position according to their judgment.

Upon the completion of this evaluation, a study of the items was conducted by the investigator to ascertain which items would be included in the 36 limit to constitute the Cole Scale of Values. On the set of items inquiring into familial and social values, all five specialists agreed on the six items to be retained. Totaling together the other five variables categories, there was less than 3 percent modification of items required (10 disagree out of 290 agree). Modification of items

designated by specialists was of a minor nature, involving changes in wording structure rather than change in content.

The 36 items remained grouped in the respective categories and were next identified according to their individual subject content. A comprehensive range or bandwidth resulted (see Appendix E).

In the actual structuring of the Cole Scale of Values, the items were established in a sequence which involved a full rotation of every seventh item evaluating the same category of variables:

1. Items 1, 7, 13, 19, 25, and 31 rated variables 1 and 3.

2. Items 2, 8, 14, 20, 26, and 32 rated variables 1 and 4.

3. Items 3, 9, 15, 21, 27, and 33 rated variables 1 and 2.

4. Items 4, 10, 16, 22, 28, and 34 rated variables 2 and 3.

5. Items 5, 11, 17, 23, 29, and 35 rated variables 2 and 4.

6. Items 6, 12, 18, 24, 30, and 36 rated variables 3 and 4.

The items were arranged on the pages of the test booklet so that the respondents answering the items would not easily discern the repeating nature of the answer boxes.

Reliability

"Today we look upon reliability as a relative thing, . . . rating scales are an example of this." (Downie and Heath, 1970, p. 247) Reliability coefficients, or coefficients of internal consistency, were calculated for the Scale of Values; however, it was not expected that they would be high. And as Downie and Heath indicate, there are certain areas and certain techniques where reliability coefficients fall well below the statistically refined value and the techniques are still used and found to be very useful.

Reliability is the self-correlation of a test (Guilford, 1954). By deriving two sets of scores from the same test, administered to the same sample for the purpose of correlating the two half tests, an indication of internal consistency is arrived at. The sub-scales of the Cole Scale of Values included the first 18 items and the second 18 items. In testing for reliability using the split-half method of analysis, it is not usual to divide the items in this manner. However, in this instance, because the instrument is made up of items having the same level of difficulty, because there was no time limit for responding, and because the items rotate in the manner described elsewhere in this paper (see page 19), it was possible to utilize this method. Structurally, the first half of this instrument is exactly the same as the second half.

The Kuder-Richardson formula 21 was used to calculate the correlation coefficients of the split halves. It produced reliability coefficients of: variable 1, r_{tt} - .36; variable 2, r_{tt} - .13; variable 3, r_{tt} - .41; and variable 4, r_{tt} - .31. This formula is suggested for use where data are not highly refined and "when item difficulties are very nearly equal." (Guilford, 1954, p. 381) The data from this sample could not be linear in structure because of the forced choice pattern in which the alternate responses appear under the different variables. In reality, there is no such thing as a correct answer. Because of the lack of discreteness, it was necessary to select this particular formula. Unfortunately, any coefficients of internal consistency calculated from it are always an underestimation of the true relationship between the variables.

Validity

In *Standards for Educational and Psychological Tests and Manuals*, published by the American Psychological Association (1966), there are three general forms of validity mentioned--content, construct, and criterion-related. Reference will be made to each of these; however, because the instrument developed in this study was primarily designed for individual students, the content and construct validity are more important than the criterion-related.

Content validity

Content validity is a nonstatistical type of validity that relies upon levels of logic. The concepts for the value objectives for the Cole Scale of Values were determined by the investigator and the group of specialists who deleted the items from the larger pool of 60 items. These concepts are listed in Appendix E.

Construct validity

Construct validation is determined by an analysis of the meaning of scores in terms of psychological qualities or personal attributes. This analysis can take a logical or statistical form. Since a statistical analysis for the Scale of Values would take the form of factorial validity, it is beyond the scope of this paper.

New designers of tests frequently start with a concept for which they wish a measuring instrument. This in turn is structured into a construct which assigns statistical elements to the concept (Cronbach, 1960). In the case of the Cole Scale of Values, there are four constructs. These are the four variables, each identified with a different

value. The concept for this instrument is values in general, both humanistic values and eternal or absolute values.

The logical methods used to determine degrees of construct validity for the Cole Scale of Values are listed as follows:

1. Scales are assumed to be valid when the attributes being measured are objective in their meaning and uniformly understood by the individuals rating the scale. At the time of rating by the five specialists, all items were evaluated for the following criteria: (a) is the item clear?, (b) is the item sufficiently specific?, and (c) is the item significantly related to the concept underlying consideration? (Schvaneveldt, 1968). Only those items that could withstand judgment by these criteria were used in the Cole Scale of Values.

2. Construct validity is best established through a long-continued interplay between observations, reasoning, and imagination (Cronbach, 1960). Repeated use of the Cole Scale of Values within the same group would produce data that would attest to construct validity. However, the modification or change in value judgments would also have to be considered.

3. The internal consistency of items was measured in terms of the reliability coefficients (Table 5).

4. A study was made of group differences such as sex differences, age and level differences, number of siblings, and whether or not the mother was working; and in four instances, a significant relationship was produced from the data.

Criterion-related validity

Downie and Heath (1970) state that this form of validity is very common and that it is primarily statistical. It is defined as the

correlation between sets of scores and an external measure designated as criterion. No such validity coefficients could be ascertained for the Cole Scale of Values, because the nature of the rating technique used on the scale produced interdependent scores, and the criterion or model instrument selected for use in this study did not measure totally similar variables. However, some logical comparisons can be drawn to indicate a relationship between the newly designed instrument and the criterion instrument.

Cronbach (1960) states that designers of tests frequently establish validity for their instrument by comparing them to established tests. He goes on to indicate that this procedure is helpful only if the test used is "meaningful and important." The Cole Scale of Values was modeled upon the Study of Values (Allport, Vernon, and Lindzey, 1960), with the answering format being similar to that test. Comparison was made between means, standard deviations, and the reliability coefficients for these two instruments, and a similarity in pattern was noticed. Both utilized self-scoring features as well as plotting diagrams to indicate each subject's individual pattern of value effect. It was assumed that the instrument of experimental design would be more valid if it was similar to an established instrument.

Description of the sample

The selection of the sample for the administration of the Cole Scale of Values was in terms of criteria necessary for the validation of the scale. All groups utilized were in attendance during the 1971 spring quarter at Utah State University, Logan, Utah. Sampling was completed within an interval of two weeks and utilized mainly two groups registered in the College of Family Life and one group registered in Sociology.

A third group comprised a total of 15 booklets which were mailed or
distributed individually to students meeting the established criteria,
but representing a religious denomination other than the Church of
Jesus Christ of Latter-Day Saints (Mormon).

The sample was dominated by freshmen and sophomores, and by females
over males. The average ages were 18, 19, or 20 years, and the most
common religious denomination was Mormon.

The Cole Scale of Values test booklets were administered to 125
subjects. Eleven booklets were disqualified because of errors in com-
pleting the booklet. Nine were never completed or returned to the
investigator, and five were withdrawn from the sample because they did
not meet the age criterion. The remaining sample used in the analysis
constituted 100 booklets.

Procedure for administering

The Cole Scale of Values was administered in a classroom situation,
with the exception of 15 booklets which were administered in individual
situations. The general introductory remarks about the testing situation
included statements which informed the students that the scale was not
an intelligence test, that there was no moral judgment inherent in any
particular pattern of scores, and that the scoring would be explained
when the group had completed the answering of all items. In this pre-
testing situation, timing was recorded, as it was relatively important
to ascertain the reading time for evaluating the scale. However, the
subjects were not under pressure regarding time. All students were
directed on the self-scoring method and all booklets were collected by
the investigator.

Booklets were checked by the investigator, and any errors in mathematics were corrected so that totals and subtotals were consistent. Any irregular treatment of the test booklet rendered it invalid, and it was not included in the group that was analyzed.

Analysis

The major portion of the analysis of results was handled by computer programs. However, a considerable amount of logical analysis took place with regard to test items and the frequency patterns that were indicated by the Quest R run of the computer.

1. The computer program entitled COR produced means and standard deviations on each of the four variables. It also printed out correlation coefficients for the total test means on the four variables.

2. The computer program entitled QUEST R produced a total count on all background variables plus percentage counts for each weighted response (0, 1, 2, or 3) on each item.

3. The computer program entitled BASIC produced means for each designated background variable (12 were requested) and calculated an F test for significance regarding the relationship with total test means.

The analysis of the data collected from the sample was done to indicate means, standard deviations, and correlation coefficients in order to determine whether the Cole Scale of Values had internal consistency and whether or not it had the ability to discriminate between familially and socially oriented groups.

CHAPTER IV

RESULTS

The major problem under investigation included the methodology and procedure to follow in designing an instrument capable of discriminating between familially and socially oriented groups or individuals. Part of the procedure included the administration of the instrument in a pre-test situation. The results appear to verify the hypothesis and to compare favorably with the criterion-related test, the Allport Study of Values, used as a model for the design instrument (compare Tables 1, 2, and 3).

The manual for the Allport Study of Values indicates that "it is essential for the purpose of the test that the final average scores for all values in a large population be as identical as possible." (Allport, Vernon, and Lindzey, 1970, p. 8) The reader should realize that the normative means shown for the Allport Study of Values have been manipulated in order to make them total to the same approximate average or median scores.

The data derived from the Cole Scale of Values were analyzed and means and standard deviations were computed. The median or average score automatically became 27 because the possible score on each variable ranged from 0 to 54. The means for variable 1 (familial) and variable 2 (religious) fluctuate two points, or a total of four points above the average score of 27. The means for variable 3 (sexual) and variable 4 (social) fluctuate one and three points, or a total of four points below the average score of 27. This pattern verified the

Table 1. The Allport Study of Values

Study of values	Var. 1 Theoretical	Var. 2 Economic	Var. 3 Aesthetic	Var. 4 Social	Var. 5 Political	Var. 6 Religious
Means	39.75	40.33	38.88	39.65	40.39	41.01
Standard deviation	7.27	7.61	8.42	7.03	6.44	9.31

Source: Allport, Vernon, and Lindzey, 1970, p. 12.
Note: Sample size--3,778 college students.

Table 2. The Cole Scale of Values

Scale of values	Var. 1 Familial	Var. 2 Religious	Var. 3 Sexual	Var. 4 Social
Means	29.02	28.68	26.31	23.55
Standard deviation	4.54	3.93	4.76	4.38

Source: Present study.
Note: Sample size--100 college students.

Table 3. Structural comparisons of the Allport Study of Values and the Cole Scale of Values

Comparisons for	No. of variables	No. of items	No. of answer boxes	Total possible points	Average score
Allport Study of Values	6	44	146	240	40
Cole Scale of Values	4	36	72	108	27

curvilinear or ipsative nature of responses derived from an instrument
that utilizes a forced choice weighted technique for responses. This
characteristic of the data is a disadvantage in attempting to work with
correlation coefficients; however, it also is somewhat of an advantage
in controlling responses and in holding means within an estimated range
from the median. *It is readily observed that the total variability for
the means above the median is the same, but differently proportioned, for
the variability below the median.*

The lower standard deviations for the Cole Scale of Values would
appear to indicate greater internal consistency. The lowest standard
deviation on variable 3 (religious) is possibly indicative of the
homogeneous nature of the sample, which contained 73 percent subjects
who were designated as Mormons.

The structural comparison of the two instruments showed that the
Cole Scale of Values utilized fewer variables, fewer items, and totaled
to fewer possible points than the Allport Study of Values.

Table 4 presents the means and standard deviations on the subscales
compared with the means and standard deviations of the total scales.
The subscales represent the first and second halves of the instrument.
Each subscale included 18 items. It has been indicated elsewhere in
this study that structurally the first subscale is identical to the
second subscale (see page 20). It becomes evident by the submeans and
standard deviations that the nature of response to subscale 1 and
subscale 2 were not the same. Variable 2 (religious) and variable 3
(sexual) produced submeans that were relatively stable in relation to
each other. Variable 1 (familial) and variable 4 (social) have produced
submeans that fluctuate in a diametrically opposite way. The range in

submeans for the first half of the instrument extends from 12.77 to 15.10; whereas, the range in submeans for the second half of the instrument extends from 8.33 to 17.35. The same variability in means is expressed in the standard deviations. There was every indication that the first half of the instrument produced means that were more stable regarding their interrelationship; whereas, more variance was evident in the second half of the instrument.

Table 4. Means and standard deviations for the Cole Scale of Values[a]

Variable	Subscale 1		Subscale 2		Total scale	
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD
Var. 1, familial	11.88	3.03	17.35	2.74	29.02	4.54
Var. 2, religious	13.98	2.65	14.89	2.49	28.68	3.93
Var. 3, sexual	12.77	3.11	13.53	2.57	26.31	4.76
Var. 4, social	15.41	3.10	8.33	2.80	23.55	4.38

[a]$N = 100$.

Table 5 indicates the reliability coefficients, or what may be called internal consistency coefficients measured on the split halves of the instrument. The Kuder-Richardson formula 21 was used because the nature of the data from the Cole Study of Values was not linear. This formula produces lower bound reliability coefficients. Variables 1, 3, and 4 appeared to have a closely associated value, while variable 2 appeared to be inconsistent in that it was lower than the other three. Because this formula uses total means and standard deviations in the calculation of the reliability coefficients, it was possible that the

lower standard deviation (table 2) on variable 2 (religious) was the causal factor for this one coefficient being lower.

Table 5. Kuder-Richardson, formula 21, internal consistency coefficients

Reliability coefficient	Var. 1 Familial	Var. 2 Religious	Var. 3 Sexual	Var. 4 Social
r_{tt}	.36	.13	.41	.31

The correlation of means on the Cole Scale of Values is indicated by Table 6. Each mean for the total scale, subscale 1, and subscale 2 was correlated with the four variable means. Each variable total scale mean correlated positively with itself, and the two subscale means on each variable. These correlation coefficients are quite acceptable and similar to those reported by Allport on the Study of Values (1970). There was one other possible correlation to be noticed from Table 6; this was the correlation between variable 1 (familial) and variable 2 (religious), which was .03. This indicated a relationship between the familial and religious variables assigned to the left side of the instrument. The negative correlations on the rest of Table 6 indicated a different kind of interrelationship between the variables on the subscales and the total scale. The farther distant the negative correlations were from the positive correlations, the greater was the variation in the size of the coefficients. This diverging pattern reversed itself when variable 1 (familial) and variable 4 (social) were compared. Such a pattern verifies again what happens to data when a forced choice, weighted technique is used for responses on an instrument.

Table 6. Correlation of means

Correlation of means for variable 1 (familial)			
Var. 1 Familial	Var. 2 Religious	Var. 3 Sexual	Var. 4 Social
Total scale (familial) 1.00	.03	-.26	-.31
Subscale 1 (familial) .70	-.09	-.30	-.29
Subscale 2 (familial) .59	-.07	-.24	-.30

Correlation of means for variable 2 (religious)			
Var. 1 Familial	Var. 2 Religious	Var. 3 Sexual	Var. 4 Social
Total scale (religious) .03	1.00	-.33	-.25
Subscale 1 (religious) -.03	.67	-.32	-.20
Subscale 2 (religious) -.11	.71	-.32	-.20

Correlation of means for variable 3 (sexual)			
Var. 1 Familial	Var. 2 Religious	Var. 3 Sexual	Var. 4 Social
Total scale (sexual) -.26	-.33	1.00	-.09
Subscale 1 (sexual) -.31	-.40	.78	-.15
Subscale 2 (sexual) -.34	-.32	.74	-.06

Correlation of means for variable 4 (social)			
Var. 1 Familial	Var. 2 Religious	Var. 3 Sexual	Var. 4 Social
Total scale (social) -.31	-.25	-.09	1.00
Subscale 1 (social) -.35	-.29	-.20	.78
Subscale 2 (social) -.33	-.27	-.05	.62

Tables 7 and 8 are similar in structure. Both tables present the frequency distribution for the response pattern for variable 1 (familial) and variable 4 (social). They show the ranked order of the number of times each weighted alternative was selected in response to an item. Each variable could only be selected a total of 18 times. Each time the subject chose between a weighting of 0, 1, 2, or 3. Table 7 indicates that the larger number of subjects selected the alternative (2) when responding to variable 1 (familial). Table 8 indicates that the largest number of subjects selected alternative (1) when responding to variable 4 (social). Additional calculations indicated that the 100 subjects selected variable 1 (familial) with an intensity of (2) one-third as often as they selected variable 4 (social) with an intensity of (1). Considering the forced choice pattern of response for this instrument, it became evident that when those subjects responded to variable 1 (familial) with an intensity of (2), the other portions of their response pattern for that item was not all distributed onto variable 4 (social). Some of this response was distributed to variable 2 (religious) or variable 3 (sexual).

The background variables for the subjects in the sample are shown in Tables 9-14. Some of the dichotomies for these variables were so low in number that they were not categorized for the BASIC computer run. Those that were dichotomized were: sex, age, enrollment level, religion, mother's status, and number of siblings. The 12 variations in dichotomies can be read from the top of each table. Means were computed for each of these dichotomies. The expected means appearing on each table represent the means calculated on the total response to each of the four variables measured by the Cole Scale of Values. They are the same means

Table 7. Frequency distribution for the answering pattern for variable 1 (familial)

| | Number of times selected | | |
| | Intensity of response | | |
(0)	(1)	(2)	(3)
70	48	49	61
53	45	48	57
42	43	47	53
38	41	45	52
33	38	45	48
29	38	41	44
20	33	37	38
14	24	32	33
13	22	31	15
10	21	23	13
10	17	21	11
9	16	21	10
5	16	19	9
4	12	18	8
3	10	16	7
3	6	16	7
1	6	16	6
0	4	4	2
	Total number of times selected		
357	440	499	474

Table 8. Frequency distribution for the answering pattern for variable 4 (social)

Number of times selected			
Intensity of response			
(0)	(1)	(2)	(3)
61	61	48	64
57	51	43	44
51	48	43	34
48	47	41	33
44	41	38	25
32	38	34	19
31	37	32	14
28	37	25	14
25	32	22	13
24	31	22	13
18	31	18	10
14	30	16	7
13	27	16	7
11	22	14	6
9	22	7	3
7	20	6	3
7	17	6	1
5	6	4	0
Total number of times selected			
485	598	435	307

Table 9. Means for sex as a background variable

	Males	Females	Expected	"F" value
Variable 1 (familial)	28.68	29.23	29.02	.33
Variable 2 (religious)	28.79	28.61	28.68	.05
Variable 3 (sexual)	26.45	26.23	26.31	.05
Variable 4 (social)	24.08	23.23	23.55	.89

Table 10. Means for age as a background variable

	Under 21	Over 21	Expected	"F" value
Variable 1 (familial)	28.59	29.94	29.02	1.94
Variable 2 (religious)	29.22	29.66	28.68	2.96
Variable 3 (sexual)	26.76	25.53	26.31	1.26
Variable 4 (social)	23.72	23.19	23.55	.32

Table 11. Means for enrollment level as a background variable

	Freshman	Sophomore	Expected	"F" value
Variable 1 (familial)	27.74	30.06	28.82	4.60*
Variable 2 (religious)	28.72	28.44	28.59	.10
Variable 3 (sexual)	26.82	26.74	26.78	.006
Variable 4 (social)	23.33	22.76	23.07	.31

*Significant at the .05 level.

Table 12. Means for religion as a background variable

	L.D.S.	Non-L.D.S.	Expected	"F" value
Variable 1 (familial)	29.45	27.85	29.02	2.49
Variable 2 (religious)	28.60	28.88	28.68	.10
Variable 3 (sexual)	26.08	26.93	26.31	.62
Variable 4 (social)	23.12	24.70	23.55	2.60

Table 13. Means for mother's status as a background variable

	Housewife	Employed	Expected	"F" value
Variable 1 (familial)	30.03	27.69	29.16	6.40*
Variable 2 (religious)	28.90	28.05	28.58	1.05
Variable 3 (sexual)	26.32	26.42	26.35	.009
Variable 4 (social)	22.92	24.33	23.45	2.37

*Significant at the .05 level.

Table 14. Means for number of siblings as a background variable

	Less than 2	More than 2	Expected	"F" value
Variable 1 (familial)	27.52	29.75	28.99	5.57*
Variable 2 (religious)	28.24	28.94	28.70	.65
Variable 3 (sexual)	27.36	25.80	26.33	2.34
Variable 4 (social)	25.18	22.67	23.53	7.65*

*Significant at the .05 level.

that appear in Table 2. An inquiry into the significance of the relation-
ship between the background variables and the variables on the instrument
was computed by utilizing the "F" test for the analysis of variance
between these variables.

Table 9 shows that males and females responded in a similar manner
to the instrument under analysis. Table 10 indicates that age as a
factor had a very slight influence on the familial, religious, and
sexual variables; but that there was no influence on the social variable.

Table 11 indicates that enrollment level did have an influence on
the response pattern to variable 1 (familial). The mean reported for
sophomores is the highest fluctuation in means for the entire analysis.
The "F" value of 4.60 is significant above the expected value of 3.94
calculated from the "F" table with 71 degrees of freedom. Since Table 2
has already reported that difference in means for variable 1 (familial)
and variable 2 (religious) is negligible, the difference between the
means for freshmen and sophomores must be a reflection of the difference
in intensity of response.

Table 12 presents information which indicates that there was no
significant difference between the variance of response for the two
religious dichotomies categorized from the data of background factors.
The BASIC computer program took into consideration the differences in
size of the Mormon group of 73 and the non-Mormon group of 27 subjects.
The only variation noted was the fact that the mean for the Mormon group
was higher than the mean for the non-Mormon group.

Tables 13 and 14 depict means for the background variables which
provide verification of the hypothesis for this study. Table 13
indicated on variable 1 (familial) a high mean for those subjects having

a mother who was not employed; and Table 14 reported on the same variable a higher mean for those subjects coming from a family with more than two siblings. Both of these observations were significant at the .05 level of significance.

Table 14 also shows a significant "F" value on variable 4 (social). This result reflected variance analysis on practically the total sample, as there were only three instances of subjects who were only children. Therefore, the variance in the two dichotomies reflecting differences in size of family was significantly similar to the variance for the total sample response on the social variable. This was the only instance where the background factors produced a significant correlation of variance on a variable other than variable 1 (familial).

The last of the results to be reported in this chapter relates to the condition that a factorial analysis of items was beyond the scope of this study; however, a logical analysis was made on the results of the QUEST R program which clustered the response patterns for each item according to the number of times each intensity selector was used (see the discussion of Tables 7 and 8 on page 32). Out of the 36 items there were six items (numbers 12, 20, 24, 26, 27, and 32) which appeared to be nondiscriminating because of the higher percentage of subjects who had selected a value of (2) or (3). These particular items came under close scrutiny by the investigator, and a further discussion is found in Chapter V.

Summary of findings

The results and findings from the pre-testing of the Cole Scale of Values have been indicated and a verification of the hypothesis and an

establishment for a claim for a degree of validity and reliability have been made. The following points will summarize these. The first four points relate to the findings concerning the nature of the sample, and the second four points relate to the experimental instrument and its performance and structure.

1. Subjects selected variable 1 (familial) more often than any other variable. Table 2 indicates this by reporting the highest mean of 29.02 on the familial variable. This meant that either the intensity of response or the total number of responses was greatest on this variable.

2. Tables 7 and 8 support this same finding. Variable 1 (familial) was selected more often with a greater intensity by a higher number of subjects.

3. Tables 13 and 14 indicate that having the mother at home, and having families of more than two children, was conducive to high familially-oriented values.

4. The forced choice structure of this instrument made the data curvilinear and the nature of the variables interdependent. Advantages associated with this structure were shown in the way in which extreme scores were eliminated, and how means were held close to the median score (27) assigned by the instrument. The disadvantages associated with this structure were indicated by the curvilinear data which defies the use of highly refined statistical formulae, plus the fact that the range of scores was so reduced that this probably influenced the size of the coefficients for reliability. The diverging pattern on the correlation of means (Table 6) indicated the curvilinear nature of the data produced from an instrument having this type of structure.

5. The stability of means in the center portion of the scale is related to the information cited in point four. Table 4 indicates the means and standard deviations for each subscale and for the total scale on each variable. The means of variable 2 (religious) and variable 3 (sexual) are relatively stable, while variable 1 (familial) and variable 4 (social) indicated considerable fluctuation. It would appear that this phenomenon is related to the structure of the instrument. It is also assumed that it is related to six items which appeared to be non-discriminating (items 12, 20, 24, 26, 27, and 32). Also, the means on the first subscale (items 1-18) were more stable than the means on the second subscale (items 19-36).

6. A claim for the reliability of the Cole Scale of Values is made, even though the reliability coefficients were not as high as anticipated. It has already been mentioned that high coefficients of internal con-sistency can only be obtained from linear data. It is quite possible that the range of possible scores for the Cole Scale of Values has been too severely reduced by the fact that the instrument only has 36 items.

7. The instrument designed in this study also lays claim to a degree of validity. The sensitivity to background variables is a cor-relate of discriminatory features. Tables 11, 13, and 14 indicate that the variance of the responses for more mature students, for students who had their mothers at home, and for students who came from a family with more than two siblings produced means that were higher on variable 1 (familial) and the F test for significance in each of these cases was at the .05 level.

CHAPTER V

SUMMARY AND CONCLUSIONS

The main purpose of this research was the development of an instrument that would measure the relative strength of values in the area of family life and the social community. The overall objectives defining this goal included the identification of the four value variables, the establishment of external criteria in the form of a model instrument, and the planning of a procedure that would be statistically sound. The four value variables identified were: the familial, religious, sexual, and social variables. The model instrument selected was the Allport Study of Values (Allport, Vernon, and Lindzey, 1960) and the procedure to follow was planned by the investigator.

The hypothesis stated that the instrument created would have the capacity to distinguish between individuals or members of a group those persons possessing a higher degree of familial or social orientation.

The review of literature assessed the arbitrary nature of values and the complex personality structures of attitudes that support values. A search was made for instruments that measure attitudes and values, and these have been referred to in Chapter II.

A thorough description of the model test indicates that the experimental instrument or the Cole Scale of Values is similar in structure to the Allport Study of Values, but that there was a definite difference in scope and content. The methodology used in the construction of the experimental instrument is described on pages 18 and 19. Generally speaking, every effort was made to create an instrument that was precise

enough to be discriminating between familially and socially oriented subjects, and one that would indicate a profile or schema that would plot the individual pattern of values for each subject responding to the scale.

The experimental instrument was pre-tested in a selected setting. Three lower-class divisions on campus at Utah State University were used; two were registered in the College of Family Life and one was registered in Sociology. All subjects reflected the traditional culture identified with Utah; specifically, a high emphasis on religious and family training. A standardized procedure was followed in the administration of the instrument and in the checking and subtotaling of the subscales.

The analysis of data collected from the pre-testing of the experimental instrument was a combination of statistical and logical analysis. Indications have been made that the Cole Scale of Values has the capacity to distinguish between the values held by individuals regarding familial and social variables. The schema at the end of the classroom form for the experimental instrument indicates to each subject his pattern for the four value variables. These are plotted in relation to the median or average scheme. (Appendix F shows an example of the plotted results of three different individuals.)

Statistical findings indicated that variable 1 (familial) was selected more frequently and with a greater intensity than any of the other variables. This is verified by Tables 2, 7, and 8. The major test for reliability was the split-half method which utilized the Kuder-Richardson formula 21; it was selected because of the interdependent nature of the data. This formula utilizes total means and standard deviations and it does produce lower bound coefficients. The lowest

standard deviation on variable 2 (religious) produced the lowest co-
efficient; however, it is also possible that the reduced range of scores
contributed to the lower coefficients of internal consistency. From the
nature of these findings, it is not correct to assume that the experi-
mental instrument does not have any measure of internal consistency.
The correlation of means on the different variables ranges from .59 to
.78, a good indication that each total variable mean correlates with each
of the subscales for that variable.

Detailed reference has been made to the structure of the Cole Scale
of Values, and a description has made it quite clear how it compares
with the model instrument, the Allport Study of Values. The unique
feature in both of these instruments is the method of response used in
answering the test items. The question which follows these contempla-
tions poses the query of whether the Cole Scale of Values is more useful
as a research instrument or as a teaching device. It was designed
especially to become a tool of instruction. For these reasons, the
charts for group regression lines and for individual schemas were pro-
duced (see Appendixes C and F).

The only questionable result associated with the first collection
of data on the Cole Scale of Values included the relatively low mean on
the subscale for the social variable (see Table 4) and the six items
which stood out in the clustering pattern of the QUEST R computer run.
Continued study of these two phenomena indicated that there could possibly
be a relationship between them. Items 12, 20, 24, 26, and 32 all
measured the social variable, and they all clustered either on the (2)
or (3) intensity selector, beyond the 85 percent level. The discriminat-
ing nature of these items could be questioned. A solution to this dual

problem would be to reverse the order of the (a) and (b) alternates on two or three of these items; the weighting of the answering totals would then be distributed onto the social variable, thereby raising the mean, and at the same time the intensity of clustering would be reduced. The degree to which this would affect the other variables, in particular variable 1 (familial), is difficult to ascertain without a second testing of the instrument in the modified form.

Conclusions and recommendations

1. The Cole Scale of Values as an instrument for measurement has proved itself to be statistically adequate.

2. This instrument is limited for research purposes because of the interdependent nature of the variables.

3. This instrument could be administered to large groups of students and norms calculated for the test variables and background factors such as group differences.

4. The degree to which the Cole Scale of Values has been developed makes it most suitable for use in a school counseling situation or as a teaching device.

LITERATURE CITED

Allport, G. W., P. E. Vernon, and G. Lindzey. 1960. *Test booklet to the study of values.* Third edition. Houghton Mifflin, Boston, Mawsachusetts.

Allport, G. W., P. E. Vernon, and G. Lindzey. 1970. *Manual to the study of values, a scale for measuring dominant interests in personality.* Houghton Mifflin, Boston, Massachusetts.

American Psychological Association. 1966. *Standards for educational and psychological tests and manuals.* American Psychological Association, Washington, D.C.

Baum, G. 1970. Mission strategy to serve all mankind. *Canadian Churchman* 97(9):10. October.

Bell, H. M. 1934. *The adjustment inventory.* Student forum manual. Consulting Psychologists Press, Palo Alto, California.

Bell, R. R. 1966. *Premarital sex in a changing society.* Prentice-Hall, New York.

Bem, J. D. 1970. *Beliefs, attitudes, and human affairs.* Brooks/Cole, Belmont, California.

Brecher, R. E. 1966. *Analysis of human sexual response.* Signet Books, New York.

Cavan, R. S. 1960. *Marriage and family in the modern world.* Thomas Y. Corwell, New York.

Christensen, H. T., and R. Carpenter. 1962. Value-behavior discrepancies regarding premarital coitus in three Western cultures. *American Sociological Review* 27:66-74.

Christensen, H. T., and C. F. Gregg. 1970. Changing sex norms in America and Scandinavia. *Journal of Marriage and the Family* 32: 616-627.

Cole, W. G. 1966. *Sex in Christianity and psychoanalysis.* Galaxy Books, New York.

Cox, H. 1969. *The secular city, secularization and urbanization in theological perspective.* The MacMillan Company, New York.

Cronbach, L. J. 1960. *Essentials of psychological testing.* Second edition. Harper, New York.

Dean, D. G. 1961. Romanticism and emotional maturity: A preliminary study. *Marriage and Family Living* 23:44-45.

Downie, N. M., and R. W. Heath. 1970. *Basic statistical methods.* Third edition. Harper and Row, New York.

Ehlers, H. 1969. *Crucial issues in education.* Fourth edition. Holt, Rinehart and Winston, New York.

Farson, R. 1970. The American family: Future uncertain. *Time,* December 28, p. 40.

Frankl, V. E. 1963. *Man's search for meaning.* Washington Square Press, New York.

Friedman, M. 1967. *To deny our nothingness.* Dell Publishing, New York.

Friesen, J. D. 1969. The activist--an analysis and commentary. Unpublished paper. Department of Counseling, University of British Columbia, Vancouver, Canada.

Fromm, E. 1968. *The revolution of hope, towards a humanized technology.* Bantam Books, New York.

Green, M. 1967. *Existential encounters for teachers.* Random House, New York.

Guilford, J. P. 1954. *Psychometric methods.* Second edition. McGraw-Hill Book Company, Inc., New York.

Harper, R. A. 1969. *Moral issues in marital counseling.* As reprinted with permission in *Handbook of marriage counseling,* by B. Ard and C. Ard. Science and Behavior Books, Inc., Palo Alto, California.

Hartsock, D. E. 1969. *Contemporary religious issues.* Wadsworth Publishing Company, Belmont, California.

Horgan, J. F. 1951. A validation study of the Allport-Vernon Study of Values. Unpublished MS thesis. University of Pittsburgh, Pittsburgh, Pennsylvania.

Josephson, E. M. 1962. *Man alone, alienation in modern society.* Dell Publishing Company, New York.

Kuder, G. F., and M. W. Richardson. 1937. The theory of estimation of test reliability. *Psychometrika* 2:151-160.

Leslie, R. 1962. Frankl's new concept of man, p. 91. *In* D. E. Hartsock (Ed.). *Contemporary religious issues.* Wadsworth Publishing Company, Los Angeles, California.

McCleery, R. L. 1955. *McCleery scale of adolescent development.* University of Nebraska Press, Lincoln, Nebraska.

Nelson, L. W. 1955. *Survey of attitudes and beliefs.* Grade 9-12. Form AH. Science Research Associates, Chicago, Illinois.

Niebuhr, R. 1966. An interview conducted by John Cogley. *McCalls Magazine,* February, p. 90.

Nye, I. F. 1967. Values, family and a changing society. *Journal of Marriage and the Family* 29:241-248. May.

Reiss, I. 1963. Sociological studies of sexual standards, p. 101-141. *In* G. Winokur (Ed.). *Determinants of human sexual behavior.* Charles C. Thomas, Springfield, Illinois.

Schvaneveldt, J. D. 1968. Development of a film test for the measurement of perceptions toward maternal overprotection. *Journal of Genetic Psychology* 112:258.

Selltiz, C., M. Jahoda, M. Deutsch, and S. W. Cook. 1961. *Research methods in social relations.* Revised edition. Holt, Rinehart and Winston, New York.

Shaw, M. E., and J. M. Wright. 1967. *Scales for the measurement of attitudes.* McGraw-Hill Book Company, Inc., New York.

Spranger, E. 1928. *Types of men.* Max Niemeyer Verlag, Halle, East Germany.

Straus, Murray. 1969. *Family measurement techniques--abstracts of published instruments 1935-65.* University of Minnesota Press, Minneapolis, Minnesota.

Stroup, A. L. 1966. *Marriage and family, a developmental approach.* Appleton-Century-Crofts, New York.

Winokur, G. 1963. *Determinants of human sexual behavior.* Charles C. Thomas, Springfield, Illinois.

Wright, Derek. 1971. *The psychology of moral behavior.* Holt, Rinehart and Winston, New York.

APPENDIXES

Appendix A

Definitions for the Value Variables

1. *The familial variable--a specific variable.* The manner in which an individual relates to his family of origin is of tremendous importance. It is here that he forms his basic concepts of truth and harmony. It is here that he learns how to relate to others and how to give and receive love. The highest value of the familial variable will measure how an individual evaluates his family.

2. *The religious variable--a non-specific variable.* The highest value of the religious individual could be called unity. These individuals believe in the mystical and seek to comprehend their position in relation to the universe. They believe in salvation measured in terms of hope and faith; for these reasons, they are willing to adhere to religious dogma.

3. *The social variable--a specific variable.* The highest value for this type of person is love of all people in an altruistic or philanthropic manner. Such individuals believe in open honesty and equality of mankind. They are kind, sympathetic, and unselfish, judging others in terms of brotherly love.

4. *The sexual variable--a non-specific variable.* The individual who values sexual maturity is honest and responsible with regard to other people. Such people are realistic about intimate interpersonal relationships. They desensitize their sexual impulses and remain in control of such desires.

Appendix B

Classroom Form of the Scale of Values

The instrument you are about to answer is entitled *A Scale of Values.* Your name does not appear on this paper. However, in order to identify your paper to yourself, you must record any preferred set of random numbers in "Code."

Code _____ Sex _____ Age _____ Date _____

List your favorite subjects _____

Indicate anticipated vocational goals _____

Religious
affiliation_____   Mother's occupation_____

Father's   Number of brothers_____
occupation_____
                                          Number of sisters_____

Self Scoring Instructions: When you have completed all of the questions, subtotal the columns and carry forward each subtotal to the chart below.

Page 1				
Page 2				
Page 3				
Page 4				
Total each column				

Directions for rating items

A number of statements or questions with two alternate answers are being presented. You are to indicate your preference by utilizing the rating method described below. Some of the alternatives may appear equally suitable or unsuitable to you. Nevertheless, please attempt to choose the alternative that is relatively more acceptable to you.

1. If you agree with alternative (a) and disagree with (b), write 3 in the first box and 0 in the second box, thus . . . .

2. If you agree with (b) and disagree with (a), write your answer thus . . . .

3. If you have a slight preference for (a) over (b), write your answer thus . . . .

4. If you have a slight preference for (b) over (a), write your answer thus . . . . . .

Do not write any combination of numbers except one of these four. There is no time limit, but do not linger over any one question or statement, and do not leave out any of the questions unless you find it really impossible to make a decision.

1. Society should rear its children so that men would have the motivation, the ability, and the opportunity to stay home and help raise children without bearing the stigma of being atypical. (a) agree, or (b) disagree

    a ☐   b ☐

2. Do you feel that the responsibility for organizing youth activity programs rests with (a) the parents, or (b) the school?

    a ☐   b ☐

3. Does church attendance depend upon (a) the faithfulness of a family, or (b) the interesting nature of the church services?

    a ☐ b ☐

4. The search for the ultimate meaning for the significance of life is an unsolvable part of human existence. Do you believe this statement to be (a) true, or (b) untrue?

       a ☐ b ☐

5. Do you (a) agree, or (b) disagree, that the churches should stick to tending to the private religious needs of its members and should stay out of such questions as peace, justice, and human rights?

       a ☐   b ☐

6. In our society a woman's unique identity most often determines only the fringe aspects of her life, rather than its central core. (a) agree, or (b) disagree

         a ☐ b ☐

7. In family interpersonal relationships, which of the following values is most important: (a) freedom, or (b) equality?

   a ☐   b ☐

8. Do you believe that (a) parents stereotype the roles to be expected in their children's behavior, or (b) the community standards and peer group influence the child's concept of his roles?

   a ☐   b ☐

9. Do you believe that personal values are more influenced by (a) religious traditions, or (b) family traditions?

   a ☐ b ☐

10. Religious belief has long placed a high value on sexual chastity. Do you feel that the majority of young people (a) honor, or (b) do not honor this value?

       a ☐ b ☐

Subtotal   ☐   ☐   ☐   ☐
             1   2   3   4

53

11. In order for every individual to lead a self-rewarding life, he must base his behavior on (a) religious values, or (b) humanistic values?

12. Does adult status mean to you (a) a legal age, or (b) a level of mature behavior?

13. Do you feel that sexual intercourse should be tied to (a) commitment in marriage, or (b) individual responsibility in a particular situation?

14. As a human being, do you value (a) your own personal freedom over (b) the democratic rights of your family?

15. In your opinion, is parental love contingent upon (a) behavior of the child in terms of strict moral values, or (b) behavior of the child in terms of mutual respect between parent and child?

16. Do you believe that a study of various religions, if taught in the senior high schools, would be beneficial in helping young people formulate their value systems? (a) yes, or (b) no

17. Some religious denominations take a definite stand on the subject of birth control. Do you feel that it is (a) correct or (b) incorrect for religions to exercise this kind of social control?

18. Do most adults select for viewing in the theater (a) movies that are sexually suggestive, or (b) movies that deal with human interest?

19. In your beliefs do you think of sex education as being a personal matter that should only be taught within the confines of the family? (a) agree, or (b) disagree

20. In your opinion should the decision-making controls within a family be (a) a joint understanding between parents and children, or (b) an arrangement between adults of the family?

21. Do you believe that family prayer is an important aspect of individual spiritual development? (a) agree, or (b) disagree

Subtotal

1 2 3 4

22. Which has the greater influence on children's sexual values, (a) those values taught in the home or church, or (b) the attitudes picked up from the peer group or seen on T.V.?

a ☐ b ☐

23. Some religious denominations take a definite stand on the subject of divorce. Do you feel that it is (a) proper, or (b) improper, for such social controls to be exercised?

a ☐ b ☐

24. Do you believe that family life and sex education should be taught to the majority of students within the school systems? (a) agree, or (b) disagree

a ☐ b ☐

25. Regarding sexual development in the early years, age one to six, which parent, (a) the mother, or (b) the father, denies or hinders development?

a ☐ b ☐

26. Should parents of youth needing sponsorship for community programs (a) volunteer leadership, or (b) expect the community to provide leadership?

a ☐ b ☐

27. Which do you feel should be the aim of churches, (a) to promote harmonious relationships in families, or (b) to impart the holy scriptures to families?

a ☐ b ☐

28. The free will conception of man sees him as a free actor, free to choose, and thus free to effect his own salvation. Do you (a) agree or (b) disagree with this conception?

a ☐ b ☐

29. Under the ecuminical movement of churches, some religious congregations are uniting. Do you feel that this is increasing (a) the degree and quality of friendships, or (b) the degree and quality of worship?

a ☐ b ☐

30. In your opinion, do the schools function to (a) fulfill humanitarian goals, or (b) implement equalitarian forms of decision-making?

a ☐ b ☐

31. Do you agree with the belief that men and women should hold complementary but equal positions within the home? (a) yes, or (b) no

a ☐ b ☐

Subtotal ☐ ☐ ☐ ☐
1   2   3   4

32. Do you feel that the status of a family in the community may be (a) partially sacrificed, or (b) never sacrificed, for an individual member of that family?

33. Considering joint family activities, do you remember those which were (a) organized by a religious social group, or (b) those which were organized particularly for family recreation?

34. Do you believe that religious denominations indirectly support racial separatism and thus reduce individual rights? (a) agree, or (b) disagree

35. Do you feel that religious representatives play a very important function in visiting the sick and elderly in the community? (a) agree, or (b) disagree
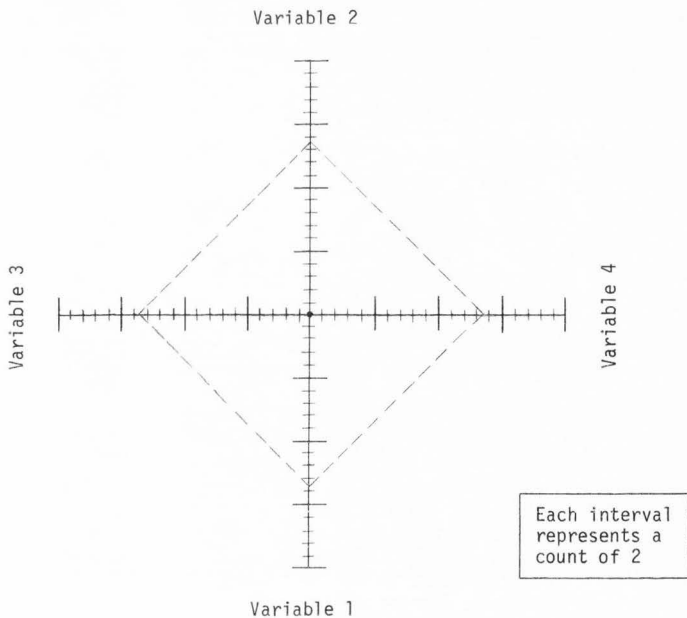
36. In your value system, do you support for your growth and development in the fulfillment of your own unique potential and identity (a) values free of societal presumptions, or (b) values determined by the established norms demanded by society?

Subtotal

1 2 3 4

Scaling of values

Variable 2

Variable 3

Variable 4

Each interval
represents a
count of 2

Variable 1

Instructions for use: After you have completed the self-scoring in-
structions at the front of your booklet, you are ready to plot the totals
for each variable on the Scale of Values. Join these points to form a
schema to be in contrast to the median schema already plotted on the
scale. When the instructor has identified the variables, record each
name along the appropriate axis.

Appendix C

Group Regression Lines
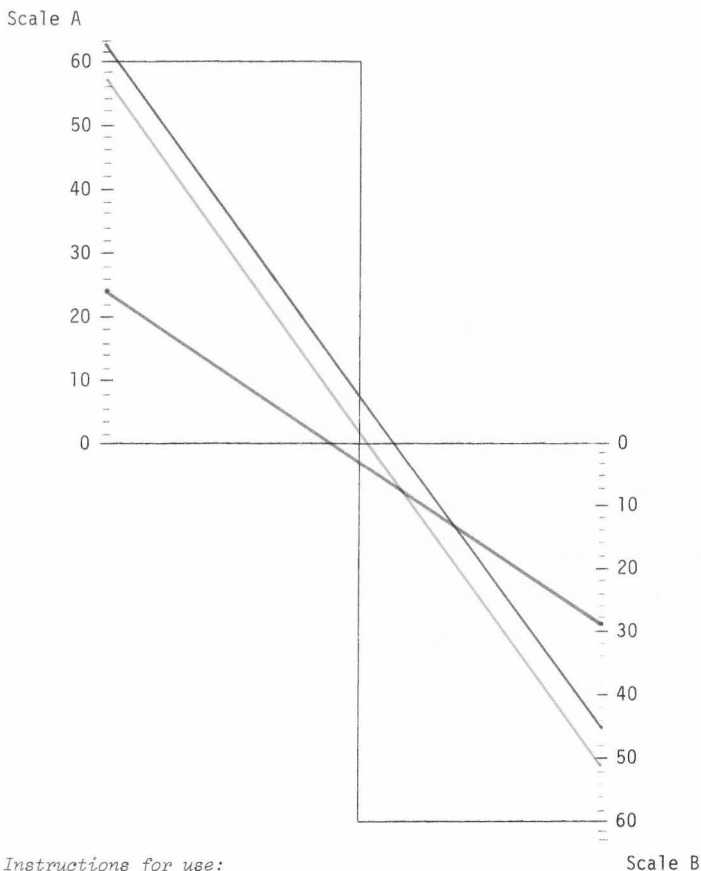
Scale A

Instructions for use: Scale B

1. Plot the sum of totals one and two for each member of the group on the A scale.

2. Plot the sum of totals three and four for each member of the group on the B scale.

3. Join points to arrive at regression lines.

Appendix D

Categories of Variables

The grouped categories for the four variables measured in the
Scale of Values were established before the original items were con-
structed. All possible combinations of the four variables produce six
categories. Ten items were constructed for each of the six categories.
The items took the form of a question or statement with an (a) or (b)
distractor to be selected by the respondent, and expressing his relative
feeling or attitude regarding the content of the items.

The categories of variables appear on the chart below (Table 15).
The sequence is exactly the same as that used on the Scale of Values.

Table 15. Categories of variables

| Category group	Var. 1 Familial	Var. 2 Religious	Var. 3 Sexual	Var. 4 Social
1	X X			
2	X X			
3	X X			
4		X X		
5		X X		
6			X X	

Appendix E

Concepts for Scale Items

1. Male responsibility for child care.

2. Parent/school responsibilities.

3. Church attendance.

4. Ultimate values.

5. Religious autonomy.

6. Women's rights.

7. Family interrelationships.

8. Role identification.

9. Ultimate values.

10. Absolute values.

11. Ultimate values.

12. Mature status.

13. Sexual responsibility.

14. Democratic freedom.

15. Parental love.

16. Ultimate values.

17. Birth control.

18. Sexual taboos.

19. Sexual modesty.

20. Family decision-making.

21. Family prayer.

22. Sexual values.

23. Divorce.

24. Sex education in schools.

25. Cross-sexual identification.

26. Community/youth organization.

27. Function of religion.

28. Freedom.

29. Ecumenical movement.

30. Human rights.

31. Equalitarian relationships of spouses.

32. Family social status.

33. Family recreation.

34. Racial separatism.

35. The elderly.

36. Independent rights.

Appendix F

Schemas for Variable Totals

Below are schematic diagrams plotting the test results for three respondents taken from the sample (see page 56).

Variable 2

Variable 3

Variable 4

Each interval represents a count of 2

Variable 1
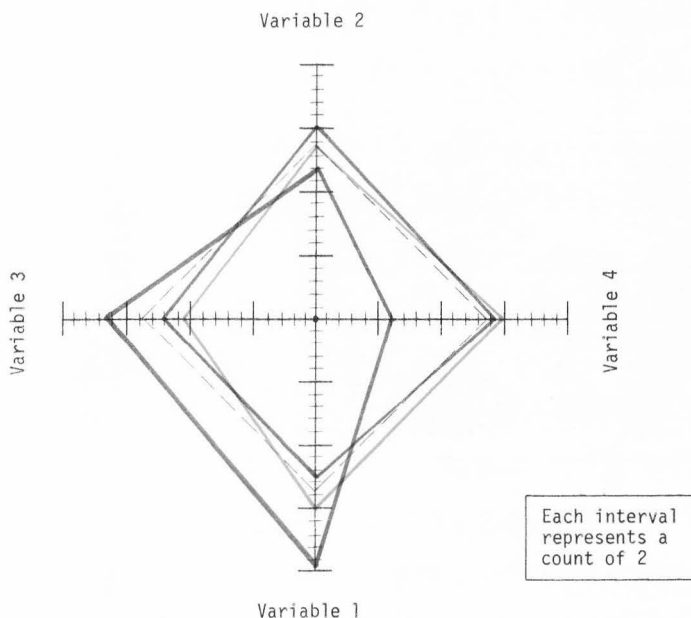
Totals for respondent 1	Totals for respondent 2	Totals for respondent 3
Var. 1 = 39	Var. 1 = 30	Var. 1 = 25
Var. 2 = 24	Var. 2 = 27	Var. 2 = 30
Var. 3 = 33	Var. 3 = 21	Var. 3 = 24
Var. 4 = 12	Var. 4 = 30	Var. 4 = 29

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