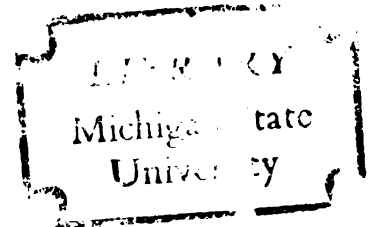


ASPECTS OF STRUCTURE IN FROMM'S
MARKETING ORIENTATION

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
EDWARD JOHN LESSIN
1968



This is to certify that the

thesis entitled


ASPECTS OF STRUCTURE IN FROMM'S
MARKETING ORIENTATION

presented by

Edward John Lessin

has been accepted towards fulfillment
of the requirements for

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ABSTRACT

ASPECTS OF STRUCTURE IN FROMM'S MARKETING ORIENTATION

by Edward John Lessin

The objectives of this study were to develop a paper and pencil scale whose items reflect Fromm's description of the marketing orientation, to ascertain the structure of the scale developed, and to develop subscales which reliably measure the dimensions of the scale. The three objectives were met.

A review of the literature indicated only one previous attempt at empirically measuring Fromm's marketing orientation. The reliability of the scale was not high and no attempt was made to describe the structural dimensions of the marketing orientation.

On the basis of Fromm's account of the marketing orientation, components of the marketing orientation were identified and related to each other.

Over 160 items were written to measure the different components of the marketing orientation. After being judged by two different panels of graduate students, 70 items remained which formed the preliminary version of the marketing

orientation scale. The items were scored on a six point agree-disagree continuum. Both agree and disagree items were included to compensate for positive response set.

The scale was administered to a sample of 53 male and 72 female undergraduate students and to a second sample of 56 male students. The factor analysis for men appeared different from the analysis for women on the data from the first sample. Hence, the development of the marketing orientation scale was based on the combined male data from the two samples (N=109).

Factor analysis failed to satisfactorily cluster the items. The criteria used were that the inter-item correlations for each cluster be positive and that the items of each cluster behave parallel across the other items of the scale. The clusters based on factor analysis failed to meet the second criterion.

Clusters were then searched for directly. The clusters were obtained by first finding pairs of parallel items, then combining them into subclusters, and finally into clusters. To aid in finding parallel items, subclusters, and clusters, the correlation matrix was reorded several times. Six clusters were found with positive inter-item correlations. Parallelism was met for four clusters but was weak in the two largest clusters.

Alpha reliability coefficients were computed for the total set of items of each cluster and for clusters

with weak items deleted. The subscales based on each cluster include all the items of the cluster except when deleting items did not reduce the reliability. The reliability coefficients for the subscales are all above the .60 criterion level.

This study suggests that Fromm's marketing orientation is composed of two correlated dimensions. The first dimension includes only the cluster which reflects manipulation as a life style. The second dimension is tridimensional and includes the three following correlated clusters: other-directedness, imposed conformity, and emptiness or inner loneliness. Two other clusters which reflect quickness and sociability were also found. They were not considered to be part of the marketing orientation since the two clusters were independent of each of the first four clusters and independent of each other. It was noted that the items of both clusters have positive connotations while the items of the other four clusters have negative connotations. Although Fromm describes the characteristics of the marketing orientation in strongly negative terms, he adds that its characteristics can be either positive or negative depending on the degree of productiveness in the character structure of the individual. It was concluded that it was contradictory to maintain that the negative characteristics of the marketing orientation are positive in productive people. They are different characteristics in productive

people. It was suggested that Fromm's theory needed to be clarified so that only nonproductive characteristics were included in nonproductive orientations.

Other implications for Fromm's character typology and suggestions for further research were discussed.

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MARKETING ORIENTATION

By

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INTRODUCTION

Fromm's Character Orientations

Erich Fromm (1947) in Man for Himself distinguishes between behavioral traits and character traits. The former are directly observable while the latter are inferred from observed behavior. Fromm assumes that character traits are underlying motivational forces determining behavior. For example, the observable behavior of a man proposing marriage may be motivated by truly caring for the girl or by expecting to acquire her father's fortune. The former would suggest a productive character while the latter an exploitative one. Of course, an accurate appraisal of character cannot be based only on one or a few behavioral observations but should be based on repeated observations in several different areas since character is an underlying trait being inferred from behavior.

Fromm states that a person's character is expressed by the way he relates himself to the world. The two main ways of relating, for Fromm, are by acquiring or assimilating things and by interacting with people or becoming socialized. Hence Fromm (1947, p. 67) defines character as the ". . . (relatively permanent) form in which human

energy is canalized in the process of assimilation and socialization." It is important to emphasize the relatively permanent quality of character. Fromm states character is the human equivalent of animal instincts. It seems that Adler's (1929) concept of "life style" and Murray's (1938) notion of "unity-thema" overlap with Fromm's idea of "character" in that all reflect the same underlying, and often unconscious, motivational network which accounts for much of the predictability of individual behavior in widely diverse circumstances.

Fromm conceptualizes an individual's character as a composite of five orientations. The four non-productive character orientations are receptive, exploitative, hoarding, and marketing. The first three non-productive orientations are respectively similar to the following Freudian pre-genital stages: oral incorporative, oral destructive, and anal retentive. There is only one "productive orientation," which is equivalent to the character possessed by Maslow's (1962) "self-actualizing person," Roger's (1961) "fully functioning person" and Freud's (1933) "genital character," that is, the person who has put ego where id was.

Description of the Marketing Orientation

What is unique about Fromm's character typology is the marketing orientation. The marketing orientation is a personality correlate of modern capitalism. The

characteristics or values of the larger socio-economic grouping become mirrored in the individual personalities of its members, but persons with a marketing orientation especially exemplify the characteristics of modern capitalism.

Application of the term "marketing orientation," does not mean that an individual fails to possess the other four orientations. On the contrary, each person possesses each orientation or trait to some extent. When applied to a specific person, the label "marketing orientation" (or any other orientation) means that the traits comprising it predominate over the traits of the other orientations.

The marketing orientation is composed of several interrelated characteristics. A brief overview may be useful here. The unifying concept of the marketing orientation is emptiness. Marketing emptiness is expressed in two main ways: "Self perceived as a commodity" and "Impersonal interpersonal relating." Each of these expressions, the second level of analysis, can be subdivided into components, the third level of analysis. The two components of "Self perceived as a commodity" are: sources of personal value are external to oneself and no persistent character trait except salability. The second expression of the marketing orientation, "Impersonal interpersonal relating," has two components: manipulation as a life style and superficial, but sociable, human relationships.

Each component of the marketing personality can be subdivided into one or more consequences, the fourth level of analysis. A summary of the analysis of the marketing personality is shown in Chart 1.

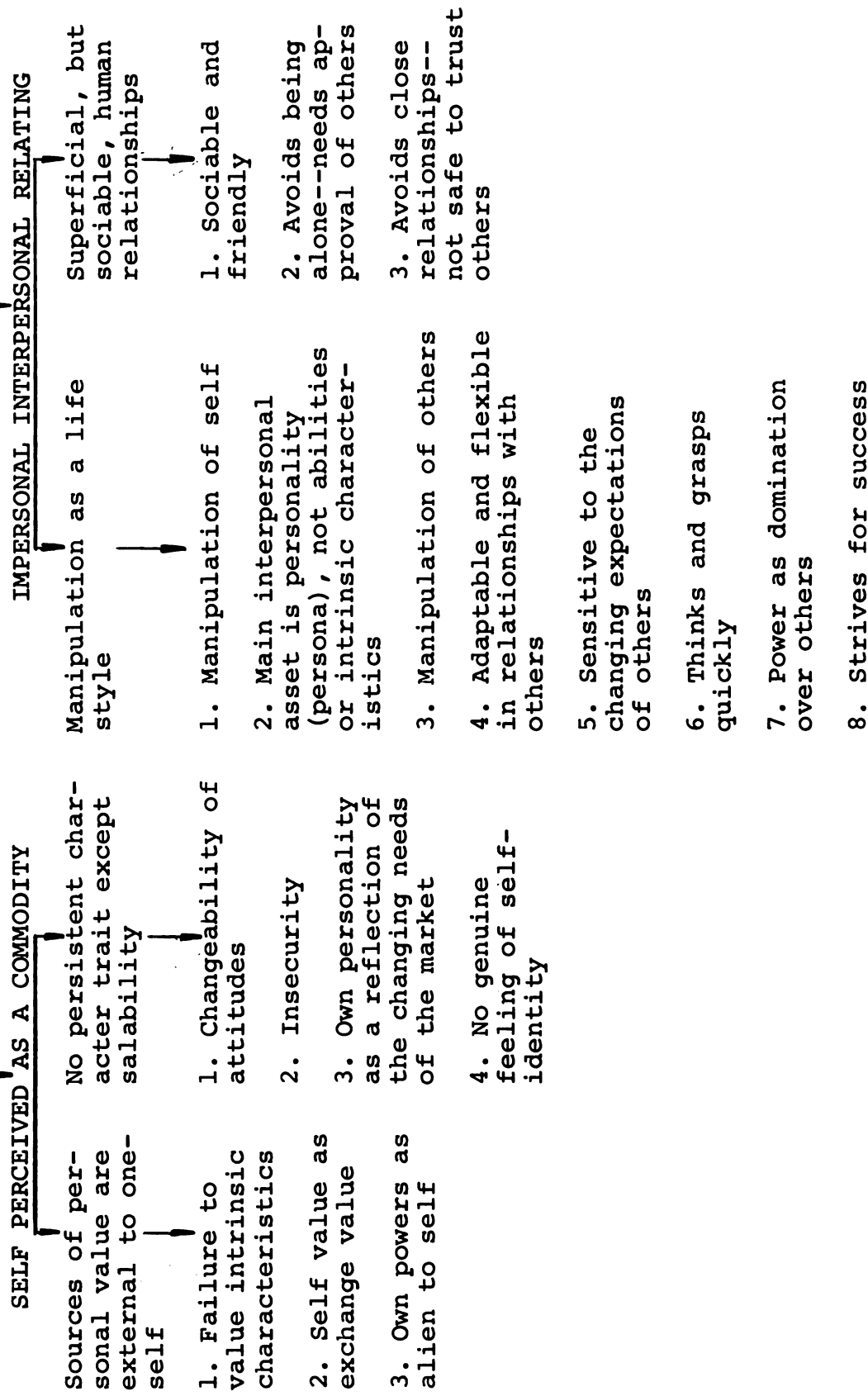
The analysis or portrait of the marketing personality presented below is a schema for tying the diverse but interrelated characteristics of the marketer together as seen by Fromm. It does not weigh the relative importance of the different characteristics. In general, the expression "Self perceived as a commodity" appears more important than the expression "Impersonal interpersonal relating." The components can be ranked in the following order of probable importance: Sources of personal value are external to oneself, manipulation as a life style, no persistent character trait except salability, and superficial, but sociable, human relationships.

Emptiness

The primary characteristic of the marketing orientation is emptiness which Fromm (1947, p. 85) defines as ". . . the lack of any specific quality which could not be subject to change." Emptiness is expressed by the way a person with a marketing orientation perceives himself and by the way he relates to other people. Fromm states that the marketer perceives himself as a commodity. The marketing personality typically relates to others in an impersonal way. His interpersonal relations are not based on

CHART 1.--Marketing orientation

EMPTINESS--"lack of any specific quality which could not be subject to change."



respecting the human uniqueness of others or himself but on viewing himself and others as objects to be bought and sold. To use Martin Buber's (1937) terminology, the marketing personality relates to his fellow men on an I-It rather than an I-Thou basis. These two main expressions of the emptiness of the marketing orientation are not clearly distinct but involve some overlap since the way a person perceives himself influences the way he relates to others and vice versa.

Self Perceived as a Commodity

The marketing personality perceives himself as a commodity. This self-concept has two main components: he sees the sources of his personal value as external to himself and he lacks any persistent character trait except salability. If the sources of a person's value are primarily external to himself, then he values himself for what other people think of him rather than for who he is. He does not value his intrinsic characteristics. The failure to value his intrinsic characteristics is closely related to the marketing personality's perception of his value as a person as being equivalent to his exchange value--how other people perceive him as being able to satisfy their needs. Exchange value implies that what is important is not who you are but what you can do to satisfy what others want.

Fromm's conception of exchange value cannot be fully understood except as a perversion of his conception of man. Fromm assumes that man has a human nature which is essentially healthy. One of the main features of Fromm's view of human nature is that a human characteristic cannot be exchanged for another one or for something non-human. A human quality such as love cannot be bartered for something else, e.g., security. Of course, there still may be a very close relationship between love and security. Karl Marx (1966, p. 168) aptly expressed Fromm's conception of the non-exchangeable quality of human characteristics as follows:

Let us assume man to be man, and his relation to the world to be a human one. Then love can only be exchanged for love, trust for trust, etc. . . . If you love without evoking love in return, i.e., if you are not able, by the manifestation of yourself as a loving person, to make yourself a beloved person, then your love is impotent and a misfortune.

The marketer is empty because he applies the principles of the market to his own being and to his relationships with his fellow men. One of the principles of the market is that anything is exchangeable for anything else via the medium of money. Love can be exchanged for money, then trust or anything else. But on a human level, this principle is not valid. When the marketer does try to exchange love, it indeed becomes "impotent and a misfortune," or using Fromm's word, "empty."

The responsibility does not lie with the marketer alone. Modern bureaucracies make the assumption that the role in the organization is what is unique and any person with a minimum of qualifications can fulfill it as well as anyone else with similar qualifications. One of the effects of bureaucratization is that the persons who fill the roles tend to view themselves as commodities.

The third consequence of viewing the source of personal value as external to the self is becoming alienated from some of one's own powers. For example, if a marketing personality is a skilled blacksmith and the society does not value blacksmiths--if the exchange value of blacksmithing is low or nil--then the skill of blacksmithing becomes an alien part of the self since it is not rewarded by others. More than the average person, the marketer values those characteristics which the culture values. Those skills or powers which he has which the culture does not value become alien to him since they are unrewarded. Alienation is also related to the previous discussion of exchange value in that the human characteristics which the marketer tries to exchange become alienated from him.

The second component of perceiving oneself as a commodity is that the marketing personality does not have any persistent character trait except salability since he must change as the requirements of the market change. A consequence of lacking any persistent character traits is

that the marketing person's attitudes are readily changeable. If he is to meet the demands of the market he must change his attitudes as the demands of market change. One result of having to appear to change character is insecurity. Fromm states that one's self-esteem or security is bound to be shaky and in constant need of confirmation by others when the criteria of success varies with the demands of the market.

The third consequence of the marketer's relative lack of persistent character traits is that his own personality becomes a reflection of the perceived changing needs of the market. If the market values industriousness, the marketer acts industrious so as to be quickly bought at a high price. If industriousness is no longer highly valued, he no longer acts industrious. For the marketing personality, the sum of the roles one plays which the market values defines who one is. The validity of role theory is not being questioned here. The productive person may also be viewed as playing a series of roles, but the roles he plays reflect his attempt at realizing his potential rather than the demands of others.

The fourth consequence of the lack of persistent character traits is that the marketer does not have any genuine feeling of self-identity. Genuine self-identity implies intrinsic self-value, and a stable central core of potencies or valued traits. The marketer is dependent on how others perceive him rather than on his inner self.

Impersonal Interpersonal Relating

The second main expression of marketing emptiness is impersonal interpersonal relations. The impersonal interpersonal relating of the marketing personality has two main components: manipulation as a life style and superficial, but sociable, human relationships.

The marketing personality does not actively manipulate others like the sociopath does. Instead he tries to please them. Since he does not perceive his true self (if it is perceived at all) as rewardable, he adopts a marketing personality which is rewarded. Other persons reward him not for who he is but for the image he creates. The marketer manipulates both himself and others, although he typically is not conscious of this. The marketer manipulates himself in that he loses touch with his true self and becomes what the market wants. Fromm (1947, p. 80) stated that the motto of the marketing personality is: "I am as you desire me." Perhaps a necessary consequence of always trying to please others is that the marketing personality becomes unwittingly caught in the game of being pleasing and loses track of the "I" that wants to please. In Jungian terms the marketer's ego identifies with the persona or the mask worn in public. Jung (1946, p. 268) states that, "the persona expresses the personality as it appears to oneself and one's world; but not what one is. . . ." He adds that the man dominated by the persona (the marketing

personality) not only deceives others but also deceives himself in becoming dissociated from his inner life or his intrinsic abilities and characteristics.

The marketer also manipulates others by giving a misleading impression of himself in order to appear pleasing. He pleases others because he feels empty without their rewards. He sees value and worth as outside himself and tries to please others in the hope that they will give him something of value. The receptive and exploitative personalities also see value as external to their selves but the receptive personality expects others to give to him without having to do anything while the exploitative personality takes from others without giving in return. The marketer does not please by providing something of value but by seeming to be the type of person his companion likes. Many good salesmen first "sell their personality" and then the sale of the product becomes easy. They try to sell themselves because the customer often isn't highly motivated toward the product. But isn't the customer manipulated or tricked into valuing the personality above the product? Isn't the customer also tricked in that often the personality of the salesman isn't his genuine personality but a projection of the characteristics which he thinks will please the customer? Paradoxically, the marketer manipulates others by hiding his intrinsic characteristics and abilities.

Positive qualities of interpersonally relating are also part of the marketing personality's manipulative life style. For example, the successful marketer must be adaptable and flexible in his relationships with others. He must also be extremely sensitive to the changing expectations of others. This involves the ability to think and grasp things quickly rather than ponder over them while somebody quicker gets the rewards.

What makes these positive qualities not so positive in the marketing personality is the use to which they are aimed--manipulation rather than productively relating to oneself and to others. Fromm's (1941) discussion of power is appropriate here. He distinguishes between a productive meaning of power involving potency or the ability to realize one's potentialities on the basis of freedom and integrity of the self and of others. Power for the marketer or any non-productive person, however, means power over somebody or the ability to dominate them. Fromm (1941, p. 184) succinctly states that, "Power, in the sense of domination, is the perversion of potency, just as sexual sadism is the perversion of sexual love."

The last consequence of the marketer's manipulation as a life style is a constant striving for success. The rules of the market assume that there is a limited supply of rewards, so that what one's neighbor gets, the marketer loses. Since the rewards of the market do not satisfy

basic human needs, the marketing personality may be rich in material rewards and the acclaim of others but psychologically empty in not having a genuine feeling of achievement. By only valuing the rewards of the market, he strives harder to gain the limited rewards which it offers, even at the price of manipulating himself and others.

Superficial, but sociable, human relationships, the second component of the marketing personality's impersonal interpersonal ways of relating, indicate both positive and negative aspects of the marketing orientation. Again, the specific quality, sociability, is positive but cannot be humanly expressed because the personality or character of the marketer is empty. The marketer may be a friendly and sociable person but these qualities appear flat because they are oriented to the needs of the market rather than being an expression of his inner being or his human uniqueness. Since he is detached from his inner self, the marketer dreads being alone. He needs other people. Yet he is afraid of becoming close or intimate with others. To do so would not be safe since anxiety over being alienated from oneself would rise. It also isn't safe since closeness involves trust, and trust is a human quality which cannot be authentically exchanged by the rules of the market. The marketing personality is left in the position of needing other people, but at a distance. He says in effect: "let's dance but not touch." The marketer is especially comfortable at a cocktail party.

The above portrait of the marketer, on the whole, is not very flattering but is congruent with Fromm's description. It is worth emphasizing that the marketer is an ideal type, a caricature. No one person only possesses marketing traits as the above portrait suggests. Even those who appear to have an overabundance of marketing traits also have some productive traits.

Research Related to the Marketing Orientation

Fromm's (1947) study of character orientations has not given rise to much empirical research. The first step in empirically studying the character orientations is to reliably measure them. The only study found attempting to measure Fromm's orientations is by Domhoff (1964). He constructed a paper and pencil attitude scale by rewording Fromm's statements or by making his suggestions explicit. This procedure appears weak since Fromm's uncomplementary way of describing the marketing orientation leads to items of low social desirability. The intercorrelations among the five scales do not differ significantly from zero at the .05 level except for an intercorrelation of .25 between hoarding and marketing and of -.23 between marketing and productive. The reliabilities are: .52 (receptive), .63 (exploitative), .19 (hoarding), .58 (marketing), and .57 (productive). Domhoff states that these reliabilities are not adequate for group testing.

On a literary level, Riesman (1961, p. 22) states that his conception of the other-directed type ". . . has been stimulated by, and developed from Erich Fromm's discussion of the 'marketing orientation.'" Riesman views the other-directed type as a social character resulting from changes in population growth patterns. Fromm does not make this assumption. None of his orientations is a necessary outgrowth of any other while according to Riesman the inner-directed type is a change from the tradition-directed type, and the other-directed type is a change from the inner-directed type. Riesman's study of the other-directed type is more complete than Fromm's description of the marketing personality in that Riesman explores child rearing practices, peer group relationships, the effects of the mass media, sexual behavior, and politics. The central characteristic of the marketing personality is emptiness while the central characteristic of the other-directed type is perceiving contemporaries as the source of direction for the individual. In terms of the previous portrait of the marketing personality, Riesman would view "Sources of personal value are external to oneself" as the central characteristic.

Fromm has described the marketing personality as alienated since there is a lack of contact between the individual's conscious self and his productive potential. Fromm's is not the only way in which the term "alienation"

is used. Keniston (1965) studied intensively 12 young men alienated from American culture. Although they showed some signs of self-alienation, these men felt that they had to reject American culture in order to maintain their personal integrity. What is the relationship between the alienated marketing personality and the alienated or uncommitted young men? In his study of the families of the uncommitted, Keniston found that the fathers of the young men were all perceived as empty and the uncommitted were repulsed at the idea of modeling themselves after them. Keniston's descriptions of how the young men view their fathers fit the marketing personality while the grandfathers were largely perceived as inner-directed types. It is intriguing to speculate that cultural alienation among the young may be in part a response to seeing their fathers sacrifice their productiveness in order to achieve the "empty" rewards of a marketing culture.

STATEMENT OF OBJECTIVES

Since to the knowledge of the author, there has been only one empirical study of Fromm's marketing orientation, the purpose of this study is to continue the empirical investigation of Fromm's concepts. Briefly stated, the three main objectives are:

1. To develop a paper and pencil scale reflecting the characteristics of the marketing orientation.
2. To ascertain the structure of the marketing orientation scale.
3. To develop subscales which reliably measure the different dimensions of the scale.

The first objective involved writing items which reflected and different characteristics of the marketing orientation. Items were written for the set of marketing characteristics developed in the introductory chapter. The methods of item construction and of scaling the responses to the items are presented in the following chapter on the development of the marketing orientation scale.

The second objective was to determine the structure of the marketing orientation scale. It was not known whether the marketing orientation was unidimensional or multidimensional. If it was unidimensional, the items should group into a general cluster and unimportant specific

clusters. If multidimensional, the items should group into as many clusters as there are dimensions of the scale. The dimensions of a multidimensional scale can be either independent of each other or correlated. Ascertaining the structure of the marketing orientation scale included grouping the items into clusters or dimensions, describing the psychological content of the clusters, and showing how the clusters are related to each other.

The third objective was to develop reliable subscales to measure each dimension. The reliability coefficient of .60 was established as a minimum criterion. Nunnally (1967) states that reliabilities of .50 or .60 are satisfactory for the early stages of research on hypothesized measures of constructs such as the dimensions of the marketing orientation scale. Coefficient alpha was chosen as the estimate of reliability since it is based both on the average correlation among items (i.e., internal consistency) and on the number of items. Coefficient alpha also sets an upper limit to the reliability. According to Nunnally (1967, p. 211), it is the preferred measure of reliability since it accounts for measurement error due both to the sampling of content and to the "'sampling' of situational factors accompanying the items."

DEVELOPMENT AND ADMINISTRATION OF THE MARKETING ORIENTATION SCALE

Development of the Marketing Orientation Scale

On the basis of the description of Fromm's marketing orientation as presented in the Introduction, the investigator gathered a pool of 163 statements with which a person with a marketing orientation would be expected to strongly agree or strongly disagree. The statements in the pool were written by the investigator or taken from other scales. The preliminary version of the marketing orientation scale contained six items from Fricke's (1962) "Opinion, Attitude, and Interest Survey" and five items from Gough's (1956) "California Psychological Inventory."

The statements in the item pool included references to feelings, behavior and beliefs. Some statements ask how the subject perceives the world, perceives himself, perceives others, how he interpersonally relates, and how others interpersonally relate. Twenty three statements were eliminated by the author because they were poorly worded or ambiguous.

The remaining 140 statements were rated by a panel of three graduate student judges who were familiar with Fromm's orientations in order to help determine whether the items discriminate between the marketing orientation and Fromm's four other orientations. The judges were instructed to read each item and then rank to what extent they believed a person with each orientation would agree with the statement. If the marketing orientation is ranked first, it indicates that the judge believed that a person with a marketing orientation agrees with the item more than a person with any other orientation. If the marketing orientation is ranked second, it indicates that the judge believed that a person with another orientation agrees with the item more than a marketing person but a marketing person agrees with the item more than a person with any of the three remaining orientations. For an item with which a marketing person is supposed to disagree, a fifth place ranking means that a person with a marketing orientation disagrees more with the item than persons with other orientations. For agree items, the criterion for discrimination between the marketing orientation and the other orientations was that the item be given a first place ranking by at least two judges and a second place ranking by the third. For disagree items, the criterion was that the item be given a fifth place ranking by at least two judges and a fourth place ranking by the third. One hundred five items met

the criterion. Eighty five items were given either a first or fifth place ranking by all three judges, depending on whether they were agree or disagree items. The 35 items which did not meet the criterion were discarded.

Eighteen additional items were next eliminated since the judges considered them to be ambiguous or poorly worded.

The remaining 87 items were read out loud by the investigator to a second panel of three graduate students who were also familiar with the marketing orientation. The following questions were asked for each item: does it really "get at" the marketing orientation; is it likely that a marketing person would answer honestly (social desirability); is the item clearly worded; can the wording be improved? Seventeen items were dropped because at least one judge had doubts about the item's suitability. Twentynine other items were revised so that they satisfied the judges and the investigator. A pool of 70 items remained for the preliminary version of the marketing orientation scale. The items are listed in Appendix I.

Judges on both panels were asked whether the items cover the major aspects of the marketing orientation as judged by their understanding of Fromm's marketing orientation. All judges thought that the items adequately reflected Fromm's conception of the marketing orientation.

In order to control for yes-no response set, items were written so that the marketing person would agree with some and disagree with others. Forty four or 63 percent of the 70 items were in the "agree" direction while 26 or 37 percent were in the "disagree" direction.

Subjects sometimes develop a set for what the investigator is measuring, and respond on the basis of the set instead of the particular item. In order to reduce this possibility 20 unscored filler items were added. The filler items were taken from Domhoff's (1964) scale of Fromm's character orientations. Five items were taken from the receptive, exploitative, hoarding, and productive scales. To help avoid the beginning of a marketing set, more filler items were interspersed in the first quarter of the marketing orientation scale than in the remainder of the scale where filler items were interspersed on a random basis.

Subjects were instructed to respond to each item on a 7 point Likert type scale (Edwards, 1957), except that no middle or neutral category was allowed. The rationale for forcing a choice is that the meaning of the middle category is ambiguous and that the forced choice format allows for easy dichotimization of the data. It is not clear whether the middle category means that the subject's belief is clearly in the middle of the continuum, whether he partially agrees with both ends of the continuum, or whether he is unwilling to commit himself.

The directions to the subjects are as follows:

On the following pages you will find a series of statements that reflect a person's attitudes and beliefs. As will be obvious, there are no "right" or "wrong" answers. Your reaction to each statement should be your personal opinion. Since the statements reflect many different and opposing points of view, you may find yourself agreeing strongly with some statements, disagreeing just as strongly with others, and perhaps uncertain about others. Whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Carefully read each statement and indicate how much you agree or disagree with it on the separate IBM answer sheet. The numbers on the answer sheet correspond with the numbers in this booklet. For each item, blacken -3, -2, -1, or +1, +2, +3, depending on how you feel in each case.

- | | |
|---------------------------|------------------------|
| -3: DISAGREE VERY MUCH | +1: AGREE A LITTLE |
| -2: DISAGREE ON THE WHOLE | +2: AGREE ON THE WHOLE |
| -1: DISAGREE A LITTLE | +3: AGREE VERY MUCH |

Check to be sure you are marking for the same item number as the item you are reading in the booklet.

Make a choice for each item. Do not skip any.

Since this study is being done for research purposes only, do not indicate your name, student number, or other identifying information.

Please do not open the booklet until the examiner asks you to start.

Subjects and Administration of the Scale

Two groups of subjects were used for the study. The first group consisted of 125 introductory psychology students of which 72 were females and 53 were males. The subjects were administered the scale as part of their class

work. They were told that they would receive research credit for participating but were free to leave if they wished. Most students stayed. The directions were read silently by the subjects and out loud by the investigator. Any questions that subjects' had were answered by the investigator. The subjects were told that there was no time limit, but to work as quickly as possible. Most subjects finished within fifteen to twenty minutes.

The second group consisted of 56 male subjects. They were summer session students, while the first group were regular session students. The second group included more older students than the first group. It was not possible to administer the scale to introductory psychology classes as in the first administration. The investigator tried to obtain male introductory psychology subjects by having a sign up sheet for a personality experiment worth research credit passed around the introductory psychology class. Six subjects signed and were individually administered the scale. Any questions that the subjects' had were answered by the investigator. The subjects were told that there was no time limit, to work as quickly as possible, and that most subjects finished within fifteen to twenty minutes. All of the second administration subjects were asked to list their class, major, and intended occupation.

Since it was not possible to obtain a larger group of introductory psychology subjects for the second sample, the investigator obtained the remaining 50 male subjects by knocking on doors in a residence hall and asking the resident to volunteer to take a 15 to 20 minute personality scale in his room. Over three fourths of those who answered volunteered to take the scale. Research credit was given to a few who were enrolled in a psychology class. The administration of the scale to these men was more informal. The subjects did not take the scale in a standardized setting but in their own rooms. The investigator was not able to be present but did notice that many radios were on and the atmosphere of the residence hall was party like. About half the men took the scale alone in their room. The largest group taking the scale was five while most groups had only two men. The instructions were the same as for the first six subjects of the second group.

THE STRUCTURE OF THE MARKETING ORIENTATION SCALE

Factor Analysis

Male and Female Sample

The data from the sample of 125 men and women was factor analyzed by the principal axis method followed by orthogonal rotations. There were moderate loadings on sex and the pattern of responses to the items of the marketing orientation scale differed for men and women. It was therefore decided to use only male data in developing the marketing orientation scale. Nunnally (1967, p. 370) succinctly states, "One of the truisms in psychology is that males and females tend to differ with respect to almost everything."

The difference between the male and female data is not surprising since the investigator wrote the items from a male's perspective. Male pronouns were used in the wording of the statements. Fromm's discussion of the marketing orientation also seems to assume a masculine orientation. All of Fromm's (1947) illustrations of the marketing orientation, except one, refer to males. In The Art of Loving, Fromm (1956) emphasizes the personality correlates of the

sexual difference between males and females when he distinguishes between motherly and fatherly love. Due to the masculine orientation of Fromm and the investigator, the development of the marketing orientation scale was based on the male data.

First Male Sample

The data from the 53 men was factor analyzed in order to determine clusters of items. The four factor quartimax rotation resulted in four clusters of items which appeared to measure the marketing orientation. However, upon closer examination, the clusters were not satisfactory. If a cluster is to have parallel items, not only should the correlations of items be positive within a cluster but the items should also have a similar pattern of correlations with items outside the cluster. The first condition was satisfied but not the second. Items within a cluster which had positive correlations with each other often were correlated very differently with items outside the cluster. For example, items 10 and 15 are positively correlated with each other and with the other items of their cluster, but item 10 is negatively correlated with many of the items outside their cluster while item 15 is generally positively correlated with these same items.

Second Male Sample

It seemed that the results from the first sample data might be attributable to the particular sample drawn and/or to artifacts of the factor analytic method when applied to small samples. The marketing orientation scale was administered to a new sample of 56 men. The data was factor analyzed and compared with the analysis of the first sample. The clusters of items based on the factors for the second sample were different from the clusters for the first sample, and were similarly unsatisfactory.

Complete Male Sample

The data from the entire sample of men (N=109) was factor analyzed. The resulting rotated factors (quartimax and varimax criteria gave essentially the same results) were similar to those from the first sample but not the second. Although the items of the clusters were moderately positively correlated with each other, items which behaved parallel within a cluster behaved differently on items outside the cluster. The lack of equivalence between items outside their cluster was true on all rotations. Nine rotations were attempted.

It was concluded that orthogonal factor analysis was inadequate to explain the structure of the marketing orientation scale. Oblique rotations were attempted but the computer did not complete the job. The oblique programs

were in error. Programmers tried to amend the programs so that the job would be completed properly, but were not successful.

Reordered Correlation Matrix

Since the orthogonal factor analysis failed to provide adequate clusters, it was decided to search for the clusters directly. First, the 70 item correlation matrix was reordered to reflect the clustering of items based on the factor analysis. Items were paired which behaved similarly both inside and outside their cluster. For example, when item 43 correlates high or low with another item, regardless of cluster, item 54 usually correlates with that item to roughly the same extent as item 43 does. Items 43 and 54 come close to being parallel items.

The correlation matrix was next successively reordered so that items which appeared to form pairs were adjacent to each other.

Items and pairs of items which did not behave Parallel outside their cluster were removed and grouped into new clusters.

After several reorderings, the following structure emerged:

1. Thirty one pairs were found. Eight items remained which did not form any reasonable pair.
2. Thirteen groups of one to three pairs were formed and three of these groups naturally formed

distinct clusters (CON, QIK, SOC). Two groups (OD1 and OD2) were so similar to each other as to be regarded as subclusters of one cluster (OD). The remaining eight groups (EMP1,2,3,4 and MAN1,2,3,4) form an approximately rank II set and were arbitrarily broken into two clusters (EMP and MAN).

3. To complete the subcluster structure, Cluster CON was arbitrarily broken into three subclusters (CON1,2,3) which are in fact its three pairs. Cluster QIK was broken into two subclusters (QIK1 and QIK2) which are also its pairs. The same was done for Cluster SOC. Two pairs did not reasonably fit into any group and with the eight non-paired items from a miscellaneous pool of 12 items.
4. Thus 58 items were grouped into 29 pairs, 17 subclusters, and six clusters as shown in the bottom half of Table 1. The cluster names and their abbreviations are as follows: Other-directedness = OD, imposed conformity = CON, emptiness or inner loneliness = EMP, manipulation as a life style = MAN, quickness = QIK, and sociability = SOC. The first subcluster of other-directedness (OD) is abbreviated OD1, the second OD2, etc.

Subcluster sums and cluster sums are described below. The item and item-cluster sum correlations for each cluster are described in the following section.

There is not space to present the complete reordered item pair, subcluster, and cluster matrix in the main text. However, it is presented in Appendix II. A condensed version, based on subclusters and clusters, of the reordered correlation matrix is shown in Table 2.

The correlations between subcluster sums are listed in the upper left part of Table 2 and the correlations between subcluster sums and cluster sums are listed in the lower left part of Table 2. If all items in a subcluster

Table 1.--Components of the pairs, subclusters, and clusters.

Numbers one through 70 are the items.

Numbers 71 through 101 are the pairs. The pairs are composed of the following items:

| | | | |
|------------|------------|------------|-------------|
| 71 - 36,53 | 79 - 57,10 | 87 - 65,58 | 95 - 48,56 |
| 72 - 47,7 | 80 - 4,22 | 88 - 54,43 | 96 - 24,32 |
| 73 - 44,61 | 81 - 9,34 | 89 - 52,40 | 97 - 16,8 |
| 74 - 33,6 | 82 - 15,66 | 90 - 12,31 | 98 - 62,70 |
| 75 - 63,50 | 83 - 51,59 | 91 - 5,14 | 99 - 19,13 |
| 76 - 25,11 | 84 - 42,45 | 92 - 38,35 | 100 - 46,39 |
| 77 - 55,29 | 85 - 27,49 | 93 - 23,69 | 101 - 20,26 |
| 78 - 3,30 | 86 - 64,37 | 94 - 18,60 | |

The subcluster name is composed of its cluster abbreviation plus an arabic number. The clusters are composed of the following subclusters, pairs, and items:

| Cluster Name | Cluster Abbr. | Sub-cluster Abbr. | Pairs | Items |
|------------------------------|---------------|-------------------|----------|-------------------|
| Other-direction | OD | OD1 | 73,74 | 44,61,33,6 |
| | | OD2 | 75,76 | 63,50,25,11 |
| Imposed Conformity | CON | CON1 | 77 | 55,29 |
| | | CON2 | 78 | 3,30 |
| | | CON3 | 79 | 57,10 |
| Emptiness | EMP | EMP1 | 80,81 | 4,22,9,34 |
| | | EMP2 | 82,83 | 15,66,51,59 |
| | | EMP3 | 84,85 | 42,45,27,49 |
| | | EMP4 | 86,87,88 | 64,37,65,58,54,43 |
| Manipulation as a Life Style | MAN | MAN1 | 89,90 | 52,40,12,31 |
| | | MAN2 | 91 | 5,14 |
| | | MAN3 | 92,93,94 | 38,35,23,69,18,60 |
| | | MAN4 | 95,96 | 48,56,24,32 |
| Quickness | QIK | QIK1 | 98 | 62,70 |
| | | QIK2 | 99 | 19,13 |
| Sociability | SOC | SOC1 | 100 | 46,39 |
| | | SOC2 | 101 | 20,26 |

Table 2.--Subcluster and Cluster correlation matrix for combined sample of 109 men.

| | Subclusters | | | | | | | | | | | | | | Clusters | | | | | | | | |
|------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|------|------|------|------|------|
| | OD1 | OD2 | CON1 | CON2 | CON3 | EMP1 | EMP2 | EMP3 | EMP4 | MAN1 | MAN2 | MAN3 | MAN4 | QIK1 | QIK2 | SOC1 | SOC2 | OD | CON | EMP | MAN | QIK | SOC |
| OD1 | | .34 | .46 | .27 | .32 | -.01 | .19 | .27 | .47 | .36 | .28 | .34 | .23 | .07 | -.10 | .05 | .16 | .85 | .43 | .36 | .40 | -.02 | .12 |
| OD2 | .34 | | .26 | .21 | .15 | .08 | .44 | .29 | .39 | .32 | .34 | .20 | .27 | -.14 | -.11 | -.09 | .04 | .79 | .26 | .43 | .36 | -.16 | -.03 |
| CON1 | .46 | .26 | | .53 | .38 | .02 | .08 | .31 | .31 | .07 | .23 | .24 | -.02 | -.03 | -.20 | .01 | .04 | .45 | .78 | .28 | .17 | -.14 | .03 |
| CON2 | .27 | .21 | .53 | | .51 | .04 | .18 | .25 | .31 | .07 | .14 | .17 | -.01 | -.05 | -.18 | .01 | -.04 | .30 | .84 | .29 | .12 | -.14 | -.01 |
| CON3 | .32 | .15 | .38 | .51 | | .07 | .23 | .22 | .31 | -.03 | -.03 | .00 | -.07 | -.16 | -.14 | .03 | .09 | .29 | .79 | .30 | -.04 | -.18 | .07 |
| EMP1 | -.01 | .08 | .02 | .04 | .07 | | .30 | .22 | .19 | .00 | -.10 | -.09 | -.22 | -.03 | .08 | -.01 | .25 | .04 | .05 | .60 | -.13 | .03 | .13 |
| EMP2 | .19 | .44 | .08 | .18 | .23 | .30 | | .41 | .43 | .22 | -.03 | -.06 | -.11 | -.32 | -.25 | -.09 | .09 | .38 | .20 | .73 | .01 | -.35 | .00 |
| EMP3 | .27 | .29 | .31 | .25 | .22 | .22 | .41 | | .36 | .22 | -.02 | .08 | -.06 | .00 | -.07 | -.02 | .07 | .34 | .32 | .70 | .09 | -.04 | .03 |
| EMP4 | .47 | .39 | .31 | .31 | .31 | .19 | .43 | .36 | | .37 | .14 | -.11 | -.03 | -.08 | -.16 | .01 | .09 | .53 | .38 | .76 | .11 | -.15 | .05 |
| MAN1 | .36 | .32 | .07 | .07 | -.03 | .00 | .22 | .22 | .37 | | .53 | .33 | .41 | .16 | -.04 | -.03 | -.16 | .42 | .04 | .31 | .75 | .07 | -.11 |
| MAN2 | .28 | .34 | .23 | .14 | -.03 | -.10 | -.03 | -.02 | .14 | .53 | | .53 | .48 | .06 | -.16 | -.13 | -.09 | .37 | .13 | .02 | .78 | -.06 | -.12 |
| MAN3 | .34 | .20 | .24 | .17 | .00 | -.09 | -.06 | .08 | -.11 | .33 | .53 | | .43 | .14 | -.12 | .03 | .08 | .33 | .16 | -.07 | .78 | .02 | .06 |
| MAN4 | .23 | .27 | -.02 | -.01 | -.07 | -.22 | -.11 | -.06 | -.03 | .41 | .48 | .43 | | .04 | -.03 | -.08 | -.24 | .30 | -.04 | -.14 | .75 | .00 | -.18 |
| QIK1 | .07 | -.14 | -.03 | -.05 | -.16 | -.03 | -.32 | .00 | -.08 | .16 | .06 | .14 | .04 | | .37 | .07 | .11 | -.03 | -.10 | -.14 | .14 | .83 | .10 |
| QIK2 | -.10 | -.11 | -.20 | -.18 | -.14 | .08 | -.25 | -.07 | -.16 | -.04 | -.16 | -.12 | -.03 | .37 | | .27 | .11 | -.13 | -.22 | -.14 | -.10 | .83 | .22 |
| SOC1 | .05 | -.09 | .01 | .01 | .03 | -.01 | -.09 | -.02 | .01 | -.03 | -.13 | .03 | -.08 | .07 | .27 | | .56 | -.02 | .02 | -.04 | -.06 | .21 | .89 |
| SOC2 | .16 | .04 | .04 | -.04 | .09 | .25 | .09 | .07 | .09 | -.16 | -.09 | .08 | -.24 | .11 | .11 | .56 | | .12 | .04 | .18 | -.13 | .13 | .88 |
| OD | .85 | .79 | .45 | .30 | .29 | .04 | .38 | .34 | .53 | .42 | .37 | .33 | .30 | -.03 | -.13 | -.02 | .12 | .43 | .47 | .47 | -.10 | .06 | |
| CON | .43 | .26 | .78 | .84 | .79 | .05 | .20 | .32 | .38 | .04 | .13 | .16 | -.04 | -.10 | -.22 | .02 | .04 | .43 | | .36 | .10 | -.19 | .03 |
| EMP | .36 | .43 | .28 | .29 | .30 | .60 | .73 | .70 | .76 | .31 | .02 | -.07 | -.14 | -.14 | -.14 | -.04 | .18 | .47 | .36 | | .04 | -.17 | .08 |
| MAN | .40 | .36 | .17 | .12 | -.04 | -.13 | .01 | .09 | .11 | .75 | .78 | .78 | .75 | .14 | -.10 | -.06 | -.13 | .47 | .10 | .04 | | .02 | -.10 |
| QIK | -.02 | -.16 | -.14 | -.14 | -.18 | .03 | -.35 | -.04 | -.15 | .07 | -.06 | .02 | .00 | .83 | .83 | .21 | .13 | -.10 | -.19 | -.17 | .02 | | .19 |
| SOC | .12 | -.03 | .03 | -.01 | .07 | .13 | .00 | .03 | .05 | -.11 | -.12 | .06 | -.18 | .10 | .22 | .89 | .88 | .06 | .02 | .08 | -.10 | .19 | |

Note: .05 significance level = .19
.01 significance level = .25

are parallel, then the subcluster sum pools their common information. Further, if all subclusters in a cluster are parallel, then subclusters should behave like parallel tests. Hence in Table 2, the correlations in the columns for the subclusters of each cluster should be similar. In addition, the correlations between subclusters within a cluster are uncorrected reliability coefficients for the cluster. The subcluster sums for Cluster OD are generally parallel across subclusters. The same is true for Clusters CON, QIK, and SOC, with the latter two clusters being the weakest. Clusters EMP and MAN differ in that adjacent subclusters appear parallel but the subclusters at the extremes of each cluster do not appear parallel with each other. The lack of parallelism is due in part to clusters EMP and MAN forming one set which, on strictly statistical grounds, could have been broken in several different ways. It was broken into these two clusters since the combinations of items were psychologically meaningful.

The correlations of the cluster sums are shown in the lower right portion of Table 2. Clusters OD, CON, and EMP are moderately correlated with each other, negatively correlated with Cluster QIK, and very weakly correlated with Cluster SOC. Cluster MAN is moderately correlated with Cluster OD but is weakly or negatively correlated with the other clusters. Clusters QIK and SOC are slightly correlated with each other and weakly or negatively correlated

with the other clusters. Clusters OD, CON, and EMP seem to form a set of correlated clusters with Cluster MAN associated only with EMP. Clusters QIK and SOC appear to be independent of the other clusters and largely independent of each other.

Not let us examine each cluster.

Cluster OD = Other-directedness

In the following lists of items grouped by clusters, disagree items are followed by a minus (-) sign. Cluster OD is composed of the following:

| Sub-matrix Abbr. | Pair Number | Item Number |
|---------------------|----------------|---|
| OD1 | 73 | 44. It is important to me to someday wear fine clothes. |
| | | 61. A person's appearance is not very important. (-) |
| | 74 | 33. A person should adapt his ideas and his behavior to the group that happens to be with him at the time. |
| | | 6. As a general rule, as long as things look all right it's o.k. |
| OD2 | 75 | 63. In choosing a job, the opportunity to develop one's own abilities is more important than the opportunity for advancement. (-) |
| | | 50. Success seems to depend more on luck than on ability. |
| | 76 | 25. I easily change my mind after I hear what others have to say. |
| | | 11. I'm likely to discontinue doing something others think not worthwhile. |

Subcluster OD1 seems to tap the extent to which appearances are valued with the group setting the standards

for "correct" appearances. In terms of the discussion in the Introduction, pair 75 signifies a 'failure to value intrinsic characteristics' or seeing one's 'own powers as alien to self.' (Concepts presented in the Introduction will be in single quotation marks throughout the chapter.) Pair 76 seems to be a clear measure of other-direction. The total cluster seems to measure other-directedness or perceiving the 'source of personal value as external to oneself.'

The item correlation matrix is shown in the top part of Table 3 and the item-cluster sums correlation matrix is shown in the bottom part of Table 3. For each item correlation matrix, the items are arranged by pairs, with every two items forming a pair.

Table 3.--Cluster OD correlation matrix for combined sample of 109 men.

| Item Number | 44 | 61 | 33 | 6 | 63 | 50 | 25 | 11 |
|-------------|------|------|------|-----|------|------|------|------|
| 44 | | .31 | .22 | .25 | .18 | .26 | .26 | .27 |
| 61 | .31 | | .20 | .08 | .22 | .08 | .08 | -.05 |
| 33 | .22 | .20 | | .28 | .07 | .03 | .02 | .05 |
| 6 | .25 | .08 | .28 | | .09 | .23 | .13 | .28 |
| 63 | .18 | .22 | .07 | .09 | | .20 | .01 | .32 |
| 50 | .26 | .08 | .03 | .23 | .20 | | .12 | .11 |
| 25 | .26 | .08 | .02 | .13 | .01 | .12 | | .27 |
| 11 | .27 | -.05 | .05 | .28 | .32 | .11 | .27 | |
| OD | .68 | .46 | .48 | .57 | .49 | .49 | .43 | .54 |
| CON | .34 | .27 | .27 | .22 | .20 | .10 | .08 | .25 |
| EMP | .33 | .30 | .17 | .12 | .38 | .18 | .22 | .28 |
| MAN | .31 | .28 | .22 | .24 | .30 | .16 | .14 | .28 |
| QIK | -.06 | .05 | -.10 | .09 | -.06 | -.08 | -.11 | -.13 |
| SOC | .08 | .12 | .10 | .01 | .01 | .03 | -.20 | .06 |

Note: .05 significance level = .19.
 .01 significance level = .25.

The items of Cluster OD are positively correlated with each other as shown in the top part of Table 3. Inspection of the bottom part shows that the items behave in a parallel manner in terms of their correlations with the sums of the other clusters. For example, item 44 is generally moderately positively correlated with Clusters CON, EMP, and MAN, weakly negatively correlated with Cluster QIK, and weakly positively correlated with Cluster SOC. The other seven items follow a similar pattern.

A complete check for parallelism of items for a cluster can be made by examining Appendix II where the complete item correlation matrix is shown. Within a cluster, the behavior of items going down the columns should be parallel. For example, inspection of Appendix II indicates that item 44 of Cluster OD is moderately positively correlated with the items of Clusters CON, EMP, and MAN, weakly negatively correlated with the items of Cluster QIK, and weakly positively correlated with the items of Cluster SOC. The other seven items of the cluster generally behave parallel to item 44 across the items of the other clusters.

Comparisons of items of a cluster with cluster sums (Tables 3 through 8) gave essentially the same results as comparisons of items of a cluster across the items of the remaining clusters (Appendix II).

On the basis of the correlations with items outside the cluster, Cluster OD appears to be a rank I set.

Cluster CON = Imposed Conformity

Cluster CON is composed of the following:

| Sub-matrix Abbr. | Pair Number | Item Number |
|---------------------|----------------|---|
| CON1 | 77 | 55. I try to do what is fitting and appropriate. |
| | | 29. I usually avoid doing something that might provoke criticism. |
| CON2 | 78 | 3. It is generally best to do things in the approved way. |
| | | 30. I feel comfortable being different from those around me. (-) |
| CON3 | 79 | 57. I feel comfortable acting unconventionally if an important issue is involved. (-) |
| | | 10. I don't really care all that much whether people like me or dislike me. (-) |

Cluster CON seems to measure imposed conformity.

"Imposed" means that one conforms not to get anything positive but because of the fear of the consequences of not conforming. Cluster CON measures 'own personality as a reflection of the changing needs of the market' and 'insecurity.'

The item correlation matrix for Cluster CON is shown in the top part of Table 4 and the item-cluster sums correlation matrix is shown in the bottom part of the table.

The items of Cluster CON are moderately positively correlated with each other. The items also generally show parallel correlations with the cluster sums. Both internally and externally, Cluster CON appears to be a rank I set.

Table 4.--Cluster CON correlation matrix for combined sample of 109 men.

| Item Number | 55 | 29 | 3 | 30 | 57 | 10 |
|----------------|-----|------|------|------|------|------|
| 55 | | .46 | .41 | .37 | .21 | .20 |
| 29 | .46 | | .41 | .27 | .34 | .27 |
| 3 | .41 | .41 | | .27 | .38 | .29 |
| 30 | .37 | .27 | .27 | | .39 | .24 |
| 57 | .21 | .34 | .38 | .39 | | .25 |
| 10 | .20 | .27 | .29 | .24 | .25 | |
| CON | .64 | .69 | .69 | .65 | .66 | .59 |
| OD | .32 | .44 | .28 | .19 | .30 | .17 |
| EMP | .23 | .24 | .17 | .29 | .23 | .25 |
| MAN | .17 | .12 | .12 | .07 | .00 | -.07 |
| QIK | .00 | -.23 | -.09 | -.13 | -.10 | -.18 |
| SOC | .03 | .02 | .01 | -.03 | .08 | .03 |

Note: .05 significance level = .19.
.01 significance level = .25.

Cluster EMP = Emptiness or Inner Loneliness

Cluster EMP is composed of the following:

| Sub-matrix | Pair | Item |
|------------|--------|--|
| Abbr. | Number | Number |
| EMP 4 | 88 | 54. More often than most people are willing to admit, an individual has to stand alone to maintain his principles. (-) |
| | | 43. Before I do something I try to consider how my friends will react to it. |
| | 87 | 58. The mark of a happy man is that he is well thought of by his peers. |
| | | 65. Probably the most important way to be happy is to please others. |
| | 86 | 64. I would like to belong to several clubs or lodges. |
| | | 37. I don't mind working alone. (-) |

| Sub-matrix Abbr. | Pair Number | Item Number |
|---------------------|----------------|---|
| EMP3 | 85 | 27. I often think about the meaning of life. (-) |
| | | 49. Most of the arguments or quarrels I get into are over matters of principle. (-) |
| | 84 | 42. I'd rather be thought of as intelligent than sociable. (-) |
| | | 45. I like dramas better than musical comedies. (-) |
| EMP2 | 83 | 59. Since things change so fast in this modern age of ours, it is important that a man doesn't believe in any one thing too deeply. |
| | | 51. Most people act the same way regardless of whom they are with. |
| | 82 | 15. I usually maintain my original position even when my superiors disagree. (-) |
| | | 66. I don't make as many compromises as most people. (-) |
| EMP1 | 81 | 34. I would be happy if I could be with lots of people most of the time. |
| | | 9. I'd rather be at home alone than go to a dull party. (-) |
| | 80 | 4. Most people insist on their own beliefs even when others disagree. (-) |
| | | 22. I'd rather not go to a party than go with someone I don't like. (-) |

Subcluster EMP4 seems to tap a need for the approval of others, of wanting to be with others rather than alone, and a feeling of self-esteem based on pleasing others. Since these characteristics are similar to other-directedness, it is not surprising that subcluster EMP4 correlates higher with Cluster OD than any other cluster or subcluster. Subcluster EMP3 seems to measure superficiality or lack of concern for "deeper" issues. The negative tone of this set may be because

all items are scored disagree. Viewed more positively, subcluster EMP3 can be viewed as measuring tranquility. Pair 82 suggests giving in to pressure or a lack of a 'genuine feeling of self-identity' while pair 83 indicates a shallow view of life. Subcluster EMP2 connotes feelings of emptiness or a deadness to life. Subcluster EMP1 appears to measure a compulsive need to be with people. Cluster EMP is not as clearcut as some of the clusters. A person who would score high on this cluster seems to lack meaning to his life. He is without depth or is empty of the richness of human existence. His positive attributes are a need for other people and his desire to please. However, he seems to lack the inner resources to please except in superficial ways. Lennon and McCartney's song, "Elenor Rigby" describes the mood of Cluster EMP when they sing about "All the lonely people." In terms of Fromm's analysis, the emptiness or inner loneliness is a result of 'perceiving oneself as a commodity.'

Item 51 of Cluster EMP was rated by the judges as a disagree item. Since subjects who scored in the predicted direction on the other 17 items of the cluster scored in the reverse direction on item 51, it was changed from a disagree to an agree item. Its sign was accordingly reversed in the text, tables, and appendices except Appendix I.

Since Clusters EMP and MAN were so closely related, the correlations for both clusters are shown and described in the following section on Cluster MAN.

Cluster MAN = Manipulation as a Life Style

Cluster MAN is composed of the following:

| Sub-matrix | Pair | Item |
|------------|--------|--|
| Abbr. | Number | Number |
| MAN1 | 89 | 52. One of the most important things a father can do for his son is to be successful. |
| | | 40. Lack of money is the greatest single cause of unhappiness. |
| | 90 | 12. It is a good idea to be able to make several different impressions in order to get along with all kinds of people. |
| | | 31. You can learn a lot about a man from knowing the kind of car he drives. |
| MAN2 | 91 | 5. The main reason a person does a job well is that he expects to be rewarded. |
| | | 14. It is extremely important to get to know the right people in order to get ahead. |
| | 92 | 38. In order to succeed, a person has to be willing to change. |
| MAN3 | 93 | 35. The pressures of the modern world often require us to change our beliefs. |
| | | 23. Who we are is mainly determined by our attributes, e.g., age, style, intelligence. |
| | 94 | 69. Although not perfect, the American way of life comes closer to the ideal than any other system. |
| MAN4 | 95 | 18. I know some people whom I just really dislike. |
| | | 60. There are few people with who I feel comfortable enough to be really honest. |
| | 96 | 48. Promises are really hard to keep. |
| | | 56. More often than most people think, it is necessary to tell a lie. |
| | | 24. A person should usually be more concerned with himself than with others. |
| | | 32. It is hard to be nice to people I don't like. |

The core of Cluster MAN is subcluster MAN2. It seems to measure manipulativeness, both of self and of others. A person who scores high on this subcluster appears to be motivated to do well in order to be rewarded, but doesn't seem to feel that doing the job well is sufficient to obtain the rewards. It may also be necessary to know the right people. By manipulating the right people into helping, one has manipulated oneself so that it is not clear whether success is a result of one's own achievement or of somebody else's influence. Pair 89 measures success orientation, with success defined as financial achievement. Pair 90 appears to measure a tendency to judge things on appearances, including oneself. The subcluster seems to tap a tendency to view people as commodities or interpersonal relationships as similar to exchanges of commodities. Subcluster MAN3 appears to measure external evaluation, shallowness, 'fear of trusting others,' and 'changeability of attitudes.' Perhaps 'insecurity' is the central idea of this subcluster. Subcluster MAN4 measures the negative aspects of "rugged individualism" or a tendency toward domination and selfishness. Cluster MAN connotes a hardness or cynicism that is lacking in the other clusters. Overall, Cluster MAN seems to be measuring 'manipulation as a life style.'

Since subjects who scored high on the other 13 items of Cluster MAN scored low on items 18, 24, and 32, these

three items were changed from disagree to agree items in the text, tables, and appendices except Appendix I.

The item and item-cluster sum correlations for Cluster EMP are shown in Table 5 and the item and item-cluster sum correlations for Cluster MAN are shown in Table 6. The two clusters approach being a rank II set. The items in Table 5 (Cluster EMP) are arranged so that the items most similar to Cluster MAN are on the right. The items in Table 6 (Cluster MAN) are arranged so that the items most similar to Cluster EMP are on the left. In other words, if the two matrices were adjacent to each other (as in Appendix II), their common items would be in the center and the items distinct to each cluster at the extremes. The items on the left end of Table 5 correlate negatively with Cluster MAN while the items at the right end of Table 6 correlate negatively with Cluster EMP. The items of both Clusters EMP and MAN are not generally parallel across cluster sums. However, except for the items in subcluster EMP1, the items within each subcluster behave similarly across the cluster sums. That is, the subclusters meet the criterion of item equivalence but Clusters EMP and MAN do not. The subclusters of EMP and MAN are typically composed of as many items as are in the other clusters.

Pair 97

Items 16 and 8 form a pair which bridges Cluster MAN with Clusters QIK and SOC. Item 16 is moderately correlated

Table 5.--Cluster EMP correlation matrix for combined sample of 109 men.

| Item Num- ber | 4 | 22 | 9 | 34 | 15 | 66 | 51 | 59 | 42 | 45 | 27 | 49 | 64 | 37 | 65 | 58 | 54 | 43 |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 4 | | | | | | | | | | | | | | | | | | |
| 22 | .10 | | .30 | .12 | .22 | .13 | -.03 | .03 | .11 | .02 | .00 | .12 | .12 | .07 | .13 | .02 | .28 | .05 |
| 9 | .34 | .34 | | .28 | .20 | .11 | .14 | .07 | .07 | .08 | .09 | .06 | .05 | -.11 | .03 | -.05 | -.02 | .05 |
| 34 | .28 | .28 | .28 | | .09 | .19 | .06 | .06 | .19 | .15 | .11 | -.01 | .21 | .19 | -.01 | -.05 | .00 | .02 |
| 15 | .08 | .08 | .28 | .08 | | .19 | .26 | .13 | .21 | .16 | .07 | .04 | .32 | .27 | .08 | .13 | .07 | .04 |
| 66 | .37 | .37 | .09 | .08 | .37 | | .18 | .17 | .25 | .21 | .15 | .28 | .07 | -.01 | .31 | .07 | .27 | .27 |
| 51 | .04 | .37 | .11 | .19 | .37 | .04 | | .11 | .20 | .25 | .12 | .16 | .29 | .12 | .09 | .04 | .20 | .20 |
| 59 | .27 | .04 | .27 | .26 | .18 | .04 | .27 | | .25 | .22 | .11 | .18 | .14 | .15 | .18 | .22 | .11 | .09 |
| 42 | .08 | .11 | .08 | .13 | .17 | .11 | .27 | .08 | .08 | .14 | .01 | .09 | .22 | .16 | .24 | .21 | .18 | .05 |
| 45 | .25 | .20 | .25 | .21 | .25 | .20 | .25 | .25 | .28 | .28 | .28 | .31 | .13 | .31 | .09 | .17 | .28 | .29 |
| 27 | .12 | .15 | .15 | .16 | .21 | .12 | .11 | .14 | .28 | .19 | .19 | .15 | .15 | .08 | .05 | .28 | .17 | .13 |
| 49 | .07 | .07 | .11 | .07 | .15 | .12 | .11 | .01 | .28 | .19 | .30 | .30 | .06 | .07 | .06 | .12 | .29 | .12 |
| 64 | .04 | .04 | .09 | .04 | .28 | .16 | .18 | .09 | .31 | .15 | .30 | .01 | .01 | .04 | .14 | .12 | .12 | .13 |
| 37 | .21 | .21 | .21 | .32 | .07 | .29 | .14 | .22 | .13 | .15 | .06 | .01 | .22 | .22 | .15 | .12 | .20 | .17 |
| 65 | .19 | .19 | .19 | .27 | -.01 | .12 | .15 | .16 | .31 | .08 | .07 | .04 | .22 | .23 | .23 | .24 | .20 | .18 |
| 58 | .08 | .08 | .08 | .08 | .31 | .09 | .18 | .24 | .09 | .05 | .06 | .14 | .15 | .23 | .27 | .27 | .26 | .24 |
| 54 | .13 | .13 | .13 | .13 | .07 | .04 | .22 | .21 | .17 | .28 | .12 | .12 | .12 | .24 | .27 | .42 | .42 | .27 |
| 43 | .07 | .07 | .07 | .07 | .27 | .20 | .11 | .18 | .28 | .17 | .29 | .12 | .20 | .20 | .26 | .42 | .37 | .37 |
| EMP | .05 | .05 | .02 | .04 | .27 | .20 | .09 | .05 | .29 | .13 | .12 | .13 | .17 | .18 | .24 | .27 | .37 | |
| OD | .34 | .33 | .41 | .48 | .51 | .47 | .44 | .39 | .56 | .48 | .40 | .39 | .46 | .41 | .44 | .45 | .53 | .45 |
| CON | -.12 | -.04 | .07 | .17 | .32 | .25 | .13 | .24 | .30 | .28 | .15 | .15 | .37 | .32 | .28 | .29 | .26 | .39 |
| MAN | .12 | -.10 | .05 | .09 | .30 | .09 | .09 | .04 | .25 | .28 | .11 | .20 | .22 | .22 | .13 | .30 | .27 | .27 |
| QIK | -.18 | -.07 | -.05 | -.06 | .00 | -.03 | -.03 | .09 | -.06 | .08 | .16 | .05 | .03 | .09 | -.02 | .13 | .05 | .15 |
| SOC | -.01 | .09 | .05 | -.06 | -.26 | -.25 | -.14 | -.22 | -.06 | -.03 | -.06 | .05 | -.02 | -.03 | -.19 | -.11 | -.07 | -.09 |
| | .06 | .07 | -.03 | .24 | .05 | .01 | -.02 | -.04 | .11 | .07 | -.21 | .11 | -.02 | .03 | .12 | .07 | -.03 | .01 |

Note: .05 significance level = .19.
.01 significance level = .25.

Table 6.--Cluster MAN correlation matrix for combined sample of 109 men.

| Item Num- ber | 52 | 40 | 12 | 31 | 5 | 14 | 38 | 35 | 23 | 69 | 18 | 60 | 48 | 56 | 24 | 32 |
|---------------------|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|
| 52 | | | | | | | | | | | | | | | | |
| 40 | .46 | | | | | | | | | | | | | | | |
| 12 | .24 | .24 | | | | | | | | | | | | | | |
| 31 | .20 | .20 | .20 | | | | | | | | | | | | | |
| 5 | .38 | .20 | .20 | .38 | | | | | | | | | | | | |
| 14 | .30 | .27 | .27 | .38 | .30 | | | | | | | | | | | |
| 38 | .19 | .30 | .30 | .24 | .30 | .19 | | | | | | | | | | |
| 35 | .05 | .06 | .12 | -.02 | .21 | .19 | .05 | | | | | | | | | |
| 23 | .02 | .08 | .32 | .12 | .22 | .15 | .19 | .02 | | | | | | | | |
| 69 | .10 | .10 | .08 | .15 | .22 | .09 | .10 | .12 | .12 | | | | | | | |
| 18 | .03 | .06 | .19 | .26 | .19 | .31 | .09 | .09 | .09 | .01 | | | | | | |
| 60 | -.05 | .02 | -.05 | .23 | .18 | .19 | .03 | .06 | -.07 | .29 | .29 | | | | | |
| 48 | .14 | .23 | .07 | .14 | .25 | .30 | .13 | .25 | .02 | .04 | .11 | .06 | | | | |
| 56 | .28 | .31 | .16 | .25 | .29 | .29 | .20 | .16 | .10 | .12 | .19 | .26 | .42 | | | |
| 24 | .28 | .21 | .03 | .24 | .19 | .33 | .02 | -.02 | .19 | .07 | .22 | .15 | .08 | .29 | | |
| 32 | .09 | .18 | .06 | .10 | .18 | .16 | .00 | .16 | .34 | .22 | .15 | .13 | -.01 | .20 | .33 | |
| MAN | .49 | .49 | .47 | .49 | .63 | .62 | .30 | .40 | .46 | .35 | .46 | .35 | .41 | .60 | .49 | .44 |
| OD | .29 | .25 | .37 | .18 | .24 | .36 | .31 | .21 | .12 | .07 | .18 | .14 | .19 | .36 | .20 | .04 |
| CON | .03 | -.10 | .19 | -.01 | .15 | .07 | .13 | .06 | -.06 | .12 | .20 | .07 | -.09 | .01 | -.03 | -.01 |
| EMP | .29 | .30 | .15 | .06 | .02 | .01 | -.04 | -.02 | -.05 | .08 | .00 | -.14 | -.03 | -.05 | -.07 | -.20 |
| QIK | .08 | .00 | .09 | .01 | -.04 | -.05 | .02 | -.06 | .16 | -.15 | .11 | -.07 | .02 | -.02 | .03 | -.02 |
| SOC | -.04 | -.02 | .02 | -.23 | -.15 | -.04 | .17 | .09 | .09 | .06 | .04 | -.21 | -.14 | -.13 | -.12 | -.09 |

Note: .05 significance level = .19.
.01 significance level = .25.

with subcluster MAN4 across the other items of the scale except for Cluster QIK. Item 8 is moderately correlated with the items of Clusters QIK and SOC, but is not parallel to the items of either cluster on items outside these two clusters. Items 16 and 8 are loosely parallel to each other across the remaining items of the scale.

Pair 97 is composed of the following:

- 16. I'm pretty good at "bluffing."
- 8. I feel that I can dominate a social situation.

Pair 97 appears to measure 'power as domination over others' and psychologically seems a part of Cluster MAN.

Cluster QIK = Quickness

Cluster QIK is composed of the following:

| Sub-matrix Abbr. | Pair Number | Item Number |
|---------------------|----------------|---|
| QIK1 | 98 | 62. I like doing things in which I have to act quickly. |
| | | 70. I am slow in making up my mind. (-) |
| QIK2 | 99 | 19. I hate having to make hurried decision. (-) |
| | | 13. It's pretty hard to adjust to change. (-) |

Cluster QIK measures quickness, especially in regard to 'acting and thinking quickly.' Cluster QIK approaches being a rank I set both on the basis of the pattern of internal correlations and on the basis of correlations with items outside the cluster.

The item and item-cluster sum correlations for Cluster QIK are shown in Table 7.

Table 7.--Cluster QIK correlation matrix for combined sample of 109 men.

| Item Number | 62 | 70 | 19 | 13 |
|----------------|------|------|------|------|
| 62 | | .43 | .30 | .10 |
| 70 | .43 | | .47 | .12 |
| 19 | .30 | .47 | | .31 |
| 13 | .10 | .12 | .31 | |
| QIK | .67 | .73 | .77 | .56 |
| OD | -.03 | -.02 | -.05 | -.16 |
| CON | -.11 | -.06 | -.10 | -.26 |
| EMP | -.14 | -.10 | -.04 | -.19 |
| MAN | .15 | .08 | -.10 | -.06 |
| SOC | .04 | .14 | .15 | .20 |

Note: .05 significance level = .19.
 .01 significance level = .25.

Cluster SOC = Sociability

Cluster SOC is composed of the following:

| Sub-matrix Abbr. | Pair Number | Item Number |
|---------------------|----------------|---|
| SOC1 | 100 | 46. I make friends quicker than most people. |
| | | 39. I am quite flexible when dealing with other people. |
| SOC2 | 101 | 26. I don't particularly enjoy meeting a lot of people. (-) |
| | | 20. One of my strong points is my ability to present a favorable image. |

A person who scores high on Cluster SOC would probably make a good salesman. He is 'sociable and friendly,' 'adaptable and flexible,' likes people, and can present the image to fit the occasion. Cluster SOC can be characterized as

representing sociability. The item and item-cluster sum correlations for Cluster SOC are shown in Table 8.

Table 8.--Cluster SOC correlation matrix for combined sample of 109 men.

| Item Number | 46 | 39 | 20 | 26 |
|----------------|-----|------|-----|------|
| 46 | | .49 | .41 | .49 |
| 39 | .49 | | .40 | .20 |
| 20 | .41 | .40 | | .22 |
| 26 | .49 | .20 | .22 | |
| SOC | .83 | .69 | .68 | .70 |
| OD | .08 | -.12 | .07 | .12 |
| CON | .03 | .01 | .06 | .01 |
| EMP | .09 | -.17 | .02 | .24 |
| MAN | .03 | -.13 | .03 | -.20 |
| QIK | .16 | .20 | .09 | .11 |

Note: .05 significance level = .19.
.01 significance level = .25.

The items of Cluster SOC have strong internal correlations. The items are also generally parallel on Clusters OD, CON, and QIK but not parallel on Clusters EMP and MAN.

The Reliability of the Cluster Scales

One measure of reliability is the correlations between items and scales or cluster sums. The internal correlations for the items of each cluster (item-total) and their relations to other scales are listed in Tables 3, 4, 5, 6, 7 and 8 in the previous section. The item-total correlations are an index of specific item reliability.

Another measure of reliability is the correlations between subclusters of a cluster (see Table 2) since the subclusters can be viewed as alternate forms of a test.

The alpha reliability coefficients for the clusters are given in Table 9. The alpha coefficient is the preferred measure of internal consistency since it is sensitive to both the content of the items and to sources of measurement error that are part of the testing situation (Nunnally, 1967). The reliability of a cluster of items varies with the number of items in the cluster scale. If the items are homogeneous, the reliability generally increases when new homogeneous items are added, but decreases when items are deleted. If some items are not homogeneous with the other items of the scale, the reliability may increase when the non-homogeneous items are deleted. To explore this possibility, reliabilities were computed for each scale with every item deleted, one at a time. The items which when deleted either increased the reliability or only minimally lowered it were removed from the scales as shown in Table 9. In order to compare the reliabilities of the different clusters, Table 9 also lists the predicted reliabilities, based on the Spearman-Brown formula, for each cluster scale enlarged to 20 items. The reliabilities for the cluster scales with deleted items are inflated since another sample of subjects from the same population may respond differently to the items of each cluster.

Table 9.--Alpha reliability coefficients for the clusters.

| Cluster | Cluster Description | Reliability Coefficient | Reliability Corrected to 20 Items by the Spearman-Brown Formula |
|---------|----------------------------------|--------------------------------|---|
| OD | Other-directedness | .611 8 items .603 7 items | item 33 deleted .81 |
| CON | Imposed Conformity | .730 6 items | .90 |
| EMP | Emptiness or Inner Loneliness | .757 18 items .752 14 items | items 4,9,22,27 deleted .81 |
| MAN | Manipulation as a Life Style | .758 16 items .760 13 items | items 38,60,69 deleted .83 |
| QIK | Quickness | .621 4 items .664 3 items | item 13 deleted .93 |
| SOC | Sociability | .695 4 items | .92 |

The subscales of the preliminary version of the marketing orientation scale are listed in Appendix III. They include the seven best items of Cluster OD, all six items of Cluster CON, the 14 best items of Cluster EMP, the 13 best items of Cluster MAN, the three best items of Cluster QIK, and all four items of Cluster SOC.

The means and standard deviations for both men (N = 109) and women (N = 72) on all items of the preliminary version of the marketing orientation scale are listed in Appendix IV. The items are arranged by clusters.

DISCUSSION

The objectives of this study were to develop a paper and pencil scale whose items reflect Fromm's description of the marketing orientation, to ascertain the structure of the scale developed, and to develop subscales which reliably measure the dimensions of the scale.

Adequacy of Items

Fromm's description of the marketing orientation was condensed in schematic form in the Introduction. Items were written to cover each category of the schema. The items were rated by six judges as adequately reflecting Fromm's conception of the marketing orientation. Each judge was familiar with Fromm's orientations and used his own understanding of the marketing orientation as a criterion to judge the adequacy of items.

There are some weaknesses in the items. Fromm's discussion of quickness or speed of thought stressed speed as a substitute for depth of thought. The items did not reflect Fromm's association of quickness with shallowness.

A second weakness is that some of the items were unnecessarily ambiguous due to being phrased in a projective manner. For example, item 4: "Most people insist on their

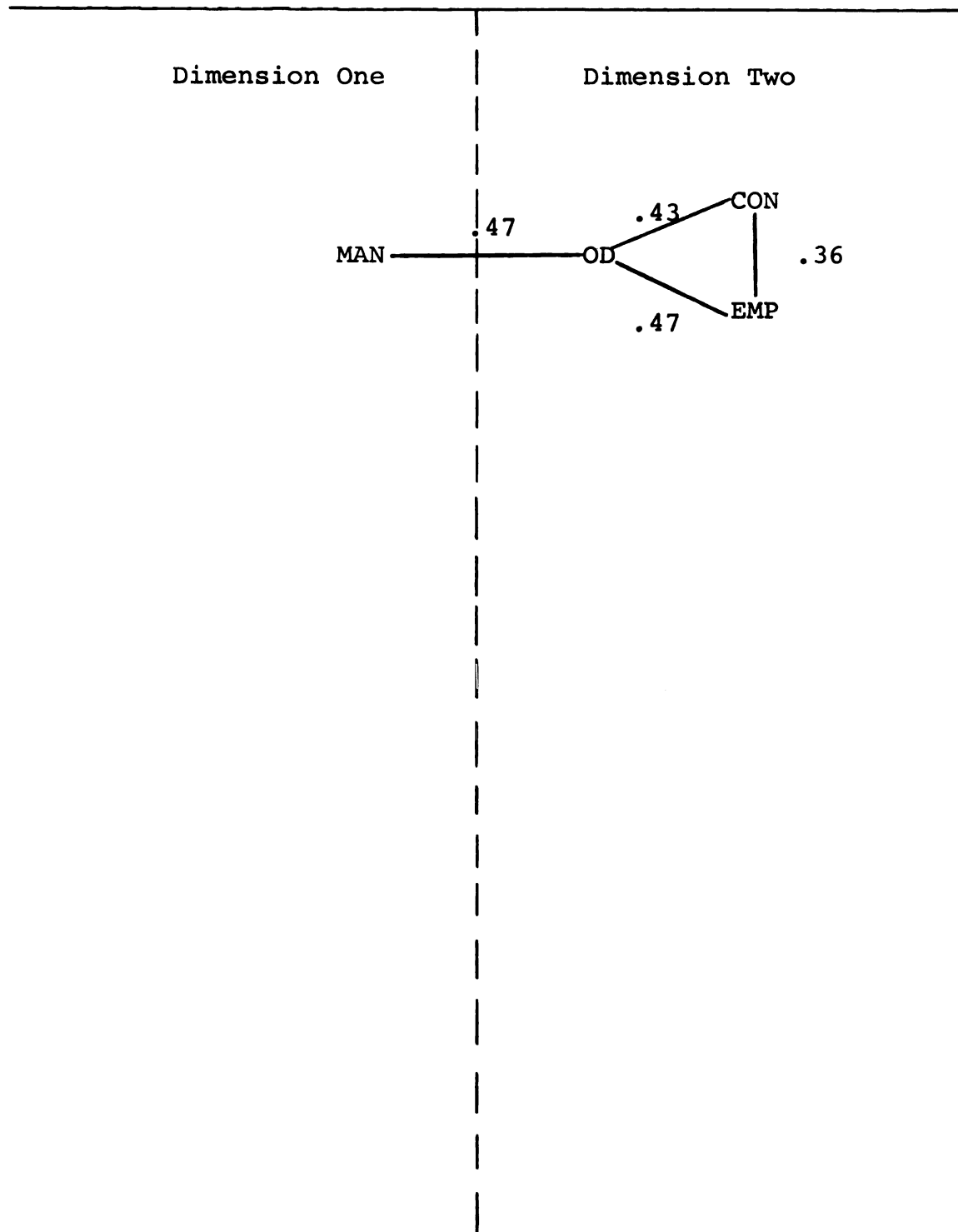
own beliefs even when others disagree" should be rewritten somewhat as follows: "I typically express my beliefs even when others disagree." The intention in using a projective format was that subjects were more likely to reveal themselves if they didn't have to directly refer to themselves on socially undesirable topics. However, many college subjects are aware that investigators are interested in what they think and not in their view of people in general. Also, for the nonconforming individual, what most people do and what he does is often not the same. The investigator now believes that the content of items should be worded unambiguously.

Overall, it appears that the content of the items refers to relatively specific marketing behaviors while the emotional connotations of the items convey the marketing feeling of emptiness.

Implications for Fromm's Conception of the Marketing Orientation

The second objective of this study was to ascertain the structure of the marketing orientation scale. Four clusters, totaling 48 items, were found which reflect the central psychological characteristics of the marketing orientation. Three of the clusters (OD, CON, EMP) are correlated with each other while the fourth (MAN) is correlated only with Cluster OD. The relationship between the clusters is schematically shown in Chart 2. Each of the

CHART 2.--The correlations between clusters of the marketing orientation scale.



four clusters taps emptiness in that the sources of value are external to the individual. This is the central link between Clusters OD and CON. Both Clusters OD and EMP refer to other-directed behavior but EMP also refers to strong feelings of emptiness and loneliness. A major link between Clusters CON and EMP is the mutual emphasis on the need for approval by others.

The specific link between Clusters OD and MAN is the emphasis on success orientation. However, a high scorer on Cluster MAN would probably be more successful than a high scorer on Cluster OD who strongly desires to be so. Emptiness is more characteristic of Clusters OD, CON, and EMP while the emphasis in Cluster MAN is on exchange value. The exchange value of the manipulator may be far from Fromm's productive person but it does seem greater than nothing or emptiness.

Fromm states that the different orientations are related and implies that each orientation is homogeneous. This study suggests that the marketing orientation is not homogeneous but composed of two correlated dimensions. One of them, Cluster MAN, appears to be unitary while the other, Clusters OD, CON, and EMP, is tridimensional. The marketing orientation appears to be considerably more complex than the impression one gains from Fromm's description.

Since Clusters QIK and SOC are statistically independent of the other clusters and are independent of each other, they are not psychologically part of the marketing orientation. However, the content of their items reflects aspects of Fromm's description of the marketing orientation. According to Fromm, the marketing person is quick but in a shallow way and sociable but in a superficial way. Clusters QIK and SOC refer to quickness and sociability with positive rather than negative connotations. Are the items of the two clusters then true to Fromm's description of the marketing orientation? They do not reflect Fromm's negative description of the marketing orientation but they do reflect his positive description of it. Fromm states (1947, p. 119), "Any of the nonproductive orientations [e.g. marketing] has, therefore, a positive and negative aspect, according to the degree of productiveness in the total character structure [of the individual]." It appears contradictory, or at least confusing, to define the characteristics of the marketing orientation as negative and then maintain that these negative characteristics are positive in productive people. They are not the same characteristics in productive people. The positive aspects of nonproductive orientations are not nonproductive. The implication for Fromm's theory is that nonproductive orientations, such as the marketing orientation, have to be redefined to include only nonproductive aspects.

How does one determine whether a person has a marketing orientation? It is clear that a person who scores high on scales for each of the clusters (OD, CON, EMP, and MAN) probably has a marketing orientation and a person who scores low on each of these same four clusters probably does not. What about a person who scores moderate on all four clusters or high on only two of them? It is not possible to adequately answer this question without knowing how a person also scores on Fromm's other orientations. Since the orientations are not independent of each other, the statement that a person has a marketing orientation means that he has more marketing characteristics than characteristics of any of Fromm's four other orientations. That is, he is dominant on the marketing orientation.

To adequately define the marketing orientation, it is necessary to first cover the psychological space of Fromm's other orientations. Further research should be concerned with writing items which span each of the other orientations and ascertaining the structure of each set of items. Hopefully, Fromm's five orientations will be translated into a set of clusters of which other-directedness, imposed conformity, emptiness, and manipulation are just a beginning. The manner in which the complete set of clusters group will define new orientations (or redefine the old ones) which can be statistically and psychologically related to each other. The result would be an empirical transformation of Fromm's literary character orientations.

The addition of empirically defined clusters reflecting Fromm's other orientations may change some of the clusters of the marketing orientation. Some of the items of the marketing orientation scale may be more highly correlated with items reflecting another orientation than with items reflecting the marketing orientation.

In sum, the present study suggests that Fromm's marketing orientation is not a homogeneous dimension. Two correlated dimensions were found. The first dimension reflects manipulation and appears to be unidimensional. The second dimension reflects the three following correlated clusters: other-directedness, conformity, and emptiness. The second dimension is tridimensional. Two minor clusters were also found which were independent of each of the four major clusters and independent of each other. They reflected positive characteristics of the marketing orientation. It was concluded that negative or nonproductive orientations, e.g., marketing, needed to be redefined to exclude positive characteristics, and therefore to include only nonproductive characteristics.

Relationship between Other-directedness and Emptiness

Fromm takes emptiness as his basic concept while Riesman takes other-directedness as his beginning. Since Cluster OD, which reflects other-directedness rather than emptiness, is the most general cluster, it would appear

that the marketing orientation scale does not measure marketing orientation, but other-directedness. The investigator believes that the two concepts refer to similar behavior but the marketing orientation refers to internal feeling states to a much greater degree than other-directedness does. Perhaps this is due to Fromm being both a psychoanalyst and a sociologist and Riesman being primarily a sociologist. It is appropriate to say that a person with the feelings and motivation of the marketing orientation will behave in an other-directed way. Since behavioral components predominate on a paper and pencil scale, it is understandable that the most general cluster appears to measure other-directedness rather than emptiness. The marketing orientation scale better measures marketing behavior than marketing feelings.

Reliability of Subscales

The reliabilities for all the subscales are above the .60 criterion level. Although above the criterion level, the reliability of Cluster OD is below that of the other subscales. The lower reliability of Cluster OD may be due to the additional criterion used for the selection of its items, i.e., that the items correlate strongly with Clusters CON, EMP, and MAN. The reliability would probably have been higher if more emphasis had been placed on choosing items with strong inter-correlations.

Further Research Needed

This study has just begun the task of empirically exploring Fromm's character orientations. As already stated, the marketing orientation cannot be completely defined until scales purporting to measure Fromm's other orientations are developed, and their structures and relationships to the clusters of the marketing orientation are explained.

Looking specifically at the marketing orientation scale, it is necessary to cross validate the structure on a new sample of subjects. It would be useful to do an oblique factor analysis on data from a large group of subjects.

The scale can be strengthened by revising the weaker items and by writing new items which are parallel with the core items of each cluster.

Different measures of reliability should be obtained for the marketing orientation scale. The scale should be readministered to the same group of subjects to measure item stability or test-retest reliability. The 31 pairs which were found are a beginning of the development of alternate forms of the scale. Some of the items make very loose pairs and will have to be revised before alternate forms are ready for use.

The data from females was not examined except to note that it differed from the male data. The structure of the female responses to the marketing orientation scale should be ascertained and compared with the structure for men. Items should be noted which are most and least influenced by sex. Perhaps a sex free scale can be developed by writing new items similar to those which are least influenced by sex. Another possibility is to determine to what extent each cluster is sex specific. It may be that a sex free scale will not tap all the clusters of the marketing orientation. It would seem that cluster MAN more narrowly applies to man only than the other clusters.

The present study was limited to a sample of subjects composed largely of middle class freshmen and sophomores at a large midwestern public university. The items were written with this population in mind. Further research should investigate changes, if any, in the present structure of the marketing orientation scale on both more heterogeneous samples and other homogeneous samples such as a working class population. Further research is needed to see how the marketing orientation scale applies to different age, educational, occupational, and social class groups.

The most pressing need for further research is to establish whether the marketing orientation scale discriminates between groups which appear to differ on a priori

grounds. It is suspected that different occupations attract persons who would vary on the marketing orientation scale. Morticians and car salesmen would probably score high while artists, musicians, and probably researchers would score low. It is also suspected that persons beginning psychotherapy would score high but that their score would drop as a result of successful psychotherapy. The investigator has observed a reduction in marketing characteristics in his successful psychotherapy cases. Another approach to the problem of validation is to clinically study high and low scorers, and see if they possess or lack the characteristics which compose the marketing orientation scale. It is also important to relate the marketing orientation scale to established measures of personality.

SUMMARY

The objectives of this study were to develop a paper and pencil scale whose items reflect Fromm's description of the marketing orientation, to ascertain the structure of the scale developed, and to develop subscales which reliably measure the dimensions of the scale. The three objectives were met.

A review of the literature indicated only one previous attempt at empirically measuring Fromm's marketing orientation. The reliability of the scale was not high and no attempt was made to describe the structural dimensions of the marketing orientation.

On the basis of Fromm's account of the marketing orientation, components of the marketing orientation were identified and related to each other.

Over 160 items were written to measure the different components of the marketing orientation. After being judged by two different panels of graduate students, 70 items remained which formed the preliminary version of the marketing orientation scale. The items were scored on a six point agree-disagree continuum. Both agree and disagree items were included to compensate for positive response set.

The scale was administered to a sample of 53 male and 72 female undergraduate students and to a second sample of 56 male students. The factor analysis for men appeared different from the analysis for women on the data from the first sample. Hence, the development of the marketing orientation scale was based on the combined male data from the two samples (N=109).

Factor analysis failed to satisfactorily cluster the items. The criteria used were that the inter-item correlations for each cluster be positive and that the items of each cluster behave parallel across the other items of the scale. The clusters based on factor analysis failed to meet the second criterion.

Clusters were then searched for directly. The clusters were obtained by first finding pairs of parallel items, then combining them into subclusters, and finally into clusters. To aid in finding parallel items, subclusters, and clusters, the correlation matrix was reorded several times. Six clusters were found with positive inter-item correlations. Parallelism was met for four clusters but was weak in the two largest clusters.

Alpha reliability coefficients were computed for the total set of items of each cluster and for clusters with weak items deleted. The subscales based on each cluster include all the items of the cluster except when deleting items did not reduce the reliability. The

reliability coefficients for the subscales are all above the .60 criterion level.

This study suggests that Fromm's marketing orientation is composed of two correlated dimensions. The first dimension includes only the cluster which reflects manipulation as a life style. The second dimension is tridimensional and includes the three following correlated clusters: other-directedness, imposed conformity, and emptiness or inner loneliness. Two other clusters which reflect quickness and sociability were also found. They were not considered to be part of the marketing orientation since the two clusters were independent of each of the first four clusters and independent of each other. It was noted that the items of both clusters have positive connotations while the items of the other four clusters have negative connotations. Although Fromm describes the characteristics of the marketing orientation in strongly negative terms, he adds that its characteristics can be either positive or negative depending on the degree of productiveness in the character structure of the individual. It was concluded that it was contradictory to maintain that the negative characteristics of the marketing orientation are positive in productive people. They are different characteristics in productive people. It was suggested that Fromm's theory needed to be clarified so that only nonproductive characteristics were included in nonproductive orientations.

Other implications for Fromm's character typology and suggestions for further research were discussed.

BIBLIOGRAPHY

REFERENCES

- Adler, A. The science of living. New York: Greenberg, 1929.
- Buber, M. I and Thou. New York: Scribner, 1937.
- Domhoff, G. W. A paper-and-pencil study of Fromm's humanistic psychoanalysis. J. Human. Psychol., 1964, 4, 149-153.
- Edwards, A. Techniques of attitude scale construction. New York: Appleton-Century-Crofts, 1957.
- Freud, S. New introductory lectures on psychoanalysis. New York: Norton, 1933.
- Fromm, E. The art of loving. New York: Bantam, 1956.
- Fromm, E. Escape from freedom. New York: Avon, 1941.
- Fromm, E. Man for himself. New York: Fawcett, 1947.
- Gough, H. G. California psychological inventory. California: Consulting Psychologists Press, 1956.
- Jung, C. G. Psychological types. London: Kegan Paul, Trench, Trubner & Co., 1946. Originally published, 1920.
- Keniston, K. The uncommitted. New York: Dell, 1956.
- Marx, K. Economic and philosophical manuscripts. In E. Fromm (Ed.), Marx's concept of man. New York: Ungar, 1966. Originally published, 1844.
- Maslow, A. Toward a psychology of being. Princeton: Van Nostrand, 1962.
- Murray, H. A. Explorations in personality. New York: Oxford, 1938.
- Nunnally, J. C. Psychometric theory. New York: McGraw-Hill, 1967.

Riesman, D. The lonely crowd. New Haven: Yale, 1961.

Rogers, C. On becoming a person. Boston: Houghton Mifflin, 1961.

APPENDICES

APPENDIX I

PRELIMINARY VERSION OF THE MARKETING ORIENTATION SCALE

- | | |
|--|----------|
| 1. Adaptability is one of the most important qualities a person can have. | Agree |
| 2. I always try to consider the other fellow's feelings before I do something. | Agree |
| 3. It is generally best to do things in the approved way. | Agree |
| 4. Most people insist on their own beliefs even when others disagree. | Disagree |
| 5. The main reason a person does a job well is that he expects to be rewarded. | Agree |
| 6. As a general rule, as long as things look all right it's o.k. | Agree |
| 7. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to. | Disagree |
| 8. I feel that I can dominate a social situation. | Agree |
| 9. I'd rather be at home alone than go to a dull party. | Disagree |
| 10. I don't really care all that much whether people like me or dislike me. | Disagree |
| 11. I'm likely to discontinue doing something others think not worthwhile. | Agree |
| 12. It is a good idea to be able to make several different impressions in order to get along with all kinds of people. | Agree |

- | | |
|--|----------|
| 13. It's pretty hard to adjust to change. | Disagree |
| 14. It is extremely important to get to know the right people in order to get ahead. | Agree |
| 15. I usually maintain my original position even when my superiors disagree. | Disagree |
| 16. I'm pretty good at "bluffing." | Agree |
| 17. I usually try to do what is expected of me. | Agree |
| 18. I know some people who I just really dislike. | Disagree |
| 19. I hate having to make hurried decisions. | Disagree |
| 20. One of my strong points is my ability to present a favorable image. | Agree |
| 21. I like having something to do every minute of the day. | Agree |
| 22. I'd rather not go to a party than go with someone I don't like. | Disagree |
| 23. Who we are is mainly determined by our attributes, e.g., age, style, intelligence. | Agree |
| 24. A person should usually be more concerned with himself than with others. | Disagree |
| 25. I easily change my mind after I hear what others have to say. | Agree |
| 26. I don't particularly enjoy meeting a lot of people. | Disagree |
| 27. I often think about the meaning of life. | Disagree |
| 28. Most people can't stand to be alone for more than a few hours at a time. | Agree |
| 29. I usually avoid doing something that might provoke criticism. | Agree |
| 30. I feel comfortable being different from those around me. | Disagree |
| 31. You can learn a lot about a man from knowing the kind of car he drives. | Agree |

- | | |
|--|----------|
| 32. It is hard to be nice to people I don't like. | Disagree |
| 33. A person should adapt his ideas and his behavior to the group that happens to be with him at the time. | Agree |
| 34. I would be happy if I could be with lots of people most of the time. | Agree |
| 35. The pressures of the modern world often requires us to change our beliefs. | Agree |
| 36. The qualities of a good salesman are an important part of any job. | Agree |
| 37. I don't mind working alone. | Disagree |
| 38. In order to succeed, a person has to be willing to change. | Agree |
| 39. I am quite flexible when dealing with other people. | Agree |
| 40. Lack of money is the greatest single cause of unhappiness. | Agree |
| 41. Society owes a lot more to the artist and the musician than it does to the businessman and the manufacturer. | Disagree |
| 42. I'd rather be thought of as intelligent than sociable. | Disagree |
| 43. Before I do something I try to consider how my friends will react to it. | Agree |
| 44. It is important to me to someday wear fine clothes. | Agree |
| 45. I like dramas better than musical comedies. | Disagree |
| 46. I make friends quicker than most people. | Agree |
| 47. I'd like to know much more about social etiquette. | Agree |
| 48. Promises are really hard to keep. | Agree |
| 49. Most of the arguments or quarrels I get into are over matters of principle. | Disagree |

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|---|----------|
| 50. Success seems to depend more on luck than on ability. | Agree |
| 51. Most people act the same way regardless of whom they are with. | Disagree |
| 52. One of the most important things a father can do for his son is to be successful. | Agree |
| 53. A pleasant voice is an important part of a desirable personality. | Agree |
| 54. More often than most people are willing to admit, an individual has to stand alone to maintain his principles. | Disagree |
| 55. I try to do what is fitting and appropriate. | Agree |
| 56. More often than most people think, it is necessary to tell a lie. | Agree |
| 57. I feel comfortable acting unconventionally if an important issue is involved. | Disagree |
| 58. The mark of a happy man is that he is well thought of by his peers. | Agree |
| 59. Since things change so fast in this modern age of ours, it is important that a man doesn't believe in any one thing too deeply. | Agree |
| 60. There are few people with whom I feel comfortable enough to be really honest. | Agree |
| 61. A person's appearance is not very important. | Disagree |
| 62. I like doing things in which I have to act quickly. | Agree |
| 63. In choosing a job, the opportunity to develop one's own abilities is more important than the opportunity for advancement. | Disagree |
| 64. I would like to belong to several clubs or lodges. | Agree |
| 65. Probably the most important way to be happy is to please others. | Agree |
| 66. I don't make as many compromises as most people. | Disagree |

- | | |
|---|----------|
| 67. It is important to be able to take orders without getting angry or resentful. | Agree |
| 68. I am more sensitive than most people to the desires of others. | Agree |
| 69. Although not perfect, the American way of life comes closer to the ideal than any other system. | Agree |
| 70. I am slow in making up my mind. | Disagree |

APPENDIX II

REORDERED CORRELATION MATRIX

The computer print out shows items, pairs, subclusters, and clusters in reordered form. The items are arranged to show the chaining effect across pairs, subcluster sums, and cluster sums. Going from left to right, the matrix begins with the 12 miscellaneous items not belonging to any cluster. Next is the eight items of Cluster OD which are moderately correlated with Clusters CON, EMP, and MAN. Cluster CON is next since it is moderately correlated with EMP but slightly correlated with MAN. Clusters EMP and MAN form a single submatrix with the items most in common to the two clusters in the center and items at the extremes which negatively correlate with the other cluster in the submatrix. Items in the center correlate higher with Cluster OD than items at the extremes. Pair 97 is next and forms a bridge to Clusters QIK and SOC.

The matrix continues with subcluster sums for the three largest clusters: OD, EMP, and MAN. Next is the submatrix of the six cluster sums. The submatrix of pairs was intended to be between the item submatrix and the subcluster sums submatrix, but was put at the rear so that most of the pairs could be on the same page. The total

matrix includes 70 items, 31 pairs, ten subcluster sums, and six cluster sums.

Since the computer could not print the subcluster and cluster abbreviations used in the text, the print out includes only numbers. Numbers one through 70 are the items. Numbers 71 through 102 are the pairs. The pairs are composed of the following items:

| | | | |
|------------|------------|------------|-------------|
| 71 = 36,53 | 79 = 57,10 | 87 = 65,58 | 95 = 48,56 |
| 72 = 47,7 | 80 = 4,22 | 88 = 54,43 | 96 = 24,32 |
| 73 = 44,61 | 81 = 9,34 | 89 = 52,40 | 97 = 16,8 |
| 74 = 33,6 | 82 = 15,66 | 90 = 12,31 | 98 = 62,70 |
| 75 = 63,50 | 83 = 51,59 | 91 = 5,14 | 99 = 19,13 |
| 76 = 25,11 | 84 = 42,45 | 92 = 38,35 | 100 = 46,39 |
| 77 = 55,29 | 85 = 27,49 | 93 = 23,69 | 101 = 20,26 |
| 78 = 3,30 | 86 = 64,37 | 94 = 18,60 | |

Numbers 102 through 111 are the subcluster sums and numbers 112 through 117 are the cluster sums. The cluster sums are composed of the following subcluster sums, pairs, and items:

| Clusters | Sub-clusters | Pairs | Items | Cluster Abbreviation |
|----------|--------------|------------|---------------------|----------------------|
| 112 | = 102 | = 73,74 | = 44,61,33,6 | OD |
| | = 103 | = 75,76 | = 63,50,25,11 | |
| 113 | = | = 77,78,79 | = 55,29,3,30,57,10 | CON |
| 114 | = 104 | = 80,81 | = 4,22,9,34 | EMP |
| | = 105 | = 82,83 | = 15,66,51,59 | |
| | = 106 | = 84,85 | = 42,45,27,49 | |
| | = 107 | = 86,87,88 | = 64,37,65,58,54,43 | |
| 115 | = 108 | = 89,90 | = 52,40,12,31 | MAN |
| | = 109 | = 91 | = 5,14 | |
| | = 110 | = 92,93,94 | = 38,35,23,69,18,60 | |
| | = 111 | = 95,96 | = 48,56,24,32 | |
| 116 | = | = 98,99 | = 62,70,19,13 | QIK |
| 117 | = | = 100,101 | = 46,39,20,26 | SOC |

MISCELLANEOUS POOL

CLUSTER OD

CLUSTER CON

CLUSTER EMP (Cont.)

ORDERED CORRELATION MATRIX

[illegible]

| Path | Cluster | | | | | | | | | | Path | Cluster | | | | | | | | | | Path | Cluster | | | | | | | | | | Path | Cluster | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | Path | | | | | Cluster | | | | | | Path | | | | | Cluster | | | | | | Path | | | | | Cluster | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 |

CLUSTER EMP

CLUSTER MAN

15 66 51 59 42 45 27 49 64 37 65 58 54 43

52 40 12 31 5 14 38 35 23 69 18 60 48 56 24 32

| | | | | | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 9 | -1 | 11 | -1 | -1 | 6 | -20 | -11 | -1 | 1 | *1 | 4 | -13 | -3 |
| 28 | 16 | 16 | -1 | -3 | 4 | 5 | -8 | -10 | 15 | 4 | 2 | -2 | *1 | 10 |
| 21 | 6 | 9 | 4 | 8 | -5 | 6 | -16 | -9 | 12 | 14 | 4 | 17 | 8 | -2 |
| 41 | 10 | -5 | 5 | -6 | -7 | -20 | 6 | -4 | -6 | 7 | 16 | 6 | -5 | 20 |
| 58 | 3 | 2 | 8 | 5 | 16 | 0 | 1 | 20 | -11 | *8 | 11 | 17 | 6 | 20 |
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| 44 | 11 | 7 | 7 | 9 | 22 | 14 | -1 | 13 | 39 | 37 | 30 | 23 | 25 | 28 |
| 61 | 14 | -1 | 10 | 6 | 26 | 19 | 5 | 20 | 16 | 17 | 23 | 14 | 9 | 27 |
| 33 | 9 | 11 | 1 | 21 | 7 | 5 | 9 | 10 | 9 | 24 | 2 | 11 | 12 | 19 |
| 6 | -2 | 7 | 10 | 5 | 13 | 16 | 9 | 1 | 22 | 12 | 8 | 19 | 4 | 13 |
| 63 | 32 | 15 | 5 | 30 | 20 | 14 | 25 | 18 | 21 | 26 | 20 | 17 | 23 | 18 |
| 50 | 12 | 17 | 1 | 12 | -1 | 18 | -4 | -10 | 18 | -2 | 19 | 3 | 5 | 16 |
| 25 | 26 | 25 | 12 | 9 | 16 | 17 | 11 | 1 | 17 | 8 | 0 | 11 | 9 | 23 |
| 11 | 35 | 27 | 11 | 8 | 25 | 14 | 13 | 7 | 11 | 9 | 11 | 19 | 21 | 18 |
| 55 | 5 | 7 | -0 | -5 | 23 | 23 | 11 | 15 | 16 | 10 | 1 | 30 | 17 | 14 |
| 29 | 17 | 15 | -4 | -3 | 24 | 17 | 12 | 13 | 28 | 11 | 5 | 17 | 19 | 26 |
| 3 | 14 | 1 | 8 | 2 | -4 | 21 | 0 | 4 | 15 | 16 | 10 | 20 | 17 | 14 |
| 30 | 28 | 6 | 11 | -0 | 25 | 16 | 20 | 19 | 8 | 16 | 3 | 20 | 23 | 17 |
| 57 | 22 | 6 | 9 | 13 | 13 | 25 | 4 | 16 | 16 | 15 | 12 | 12 | 14 | 11 |
| 10 | 27 | -0 | 9 | 8 | 19 | 11 | *6 | 10 | 4 | 16 | 18 | 19 | 15 | 24 |
| 4 | 22 | 13 | -3 | 3 | 11 | 2 | -0 | 12 | 12 | 7 | 13 | 2 | 28 | 5 |
| 22 | 20 | 11 | -14 | 7 | 7 | 8 | 9 | -5 | -11 | 3 | -5 | -2 | 5 | 5 |
| 9 | 9 | 19 | 6 | 6 | 19 | 15 | 11 | -1 | 21 | 19 | *1 | -5 | 0 | 2 |
| 34 | 8 | 19 | 26 | 13 | 21 | 16 | 7 | 4 | 32 | 27 | 8 | 13 | 7 | 24 |
| 15 | 100 | 37 | 18 | 17 | 25 | 21 | 15 | 28 | 7 | *31 | 7 | 27 | 47 | 4 |
| 66 | 37 | 100 | 4 | 11 | 20 | 25 | 12 | 16 | 29 | 12 | 9 | 4 | 20 | 20 |
| 51 | 18 | 4 | 100 | 27 | 25 | 22 | 11 | 16 | 14 | 15 | 18 | 22 | 11 | 9 |
| 59 | 17 | 11 | 27 | 100 | 8 | 14 | 1 | -9 | 22 | 16 | 24 | 21 | 18 | 5 |
| 42 | 25 | 20 | 25 | 8 | 100 | 28 | 19 | 15 | 15 | 8 | 5 | 28 | 17 | 13 |
| 45 | 21 | 25 | 22 | 14 | 28 | 100 | 19 | 10 | 30 | 6 | 7 | 6 | 12 | 29 |
| 27 | 15 | 12 | 11 | 1 | 28 | 19 | 15 | 30 | 100 | 1 | 4 | 14 | 12 | 13 |
| 49 | 28 | 16 | 18 | 9 | 31 | 15 | 30 | 100 | 1 | 4 | 14 | 12 | 12 | 13 |
| 64 | 7 | 29 | 14 | 22 | 13 | 15 | 6 | 1 | 100 | 22 | 15 | 12 | 20 | 17 |
| 37 | -1 | 12 | 15 | 16 | 31 | 8 | 7 | 4 | 22 | 100 | 23 | 24 | 20 | 18 |
| 65 | 31 | 9 | 18 | 24 | 9 | 5 | 6 | 14 | 15 | 23 | 100 | 27 | 26 | 24 |
| 58 | 7 | 4 | 22 | 21 | 17 | 28 | 12 | 12 | 24 | 27 | 100 | 42 | 27 | 33 |
| 54 | 27 | 20 | 11 | 18 | 28 | 17 | 29 | 12 | 20 | 26 | 42 | 100 | 37 | 24 |
| 43 | 27 | 20 | 9 | 5 | 29 | 13 | 12 | 13 | 17 | 18 | 24 | 27 | 37 | 100 |
| 52 | 3 | 2 | 8 | 20 | 2 | -3 | 25 | 23 | 9 | 19 | 26 | 33 | 24 | 28 |
| 42 | 14 | 14 | 24 | 23 | 5 | 12 | 22 | 20 | 4 | 11 | 20 | 12 | 12 | 16 |
| 12 | 9 | 8 | 5 | 19 | -6 | 19 | -1 | 9 | 17 | 16 | 17 | 9 | 10 | 12 |
| 31 | -2 | 6 | -7 | -2 | -6 | 4 | 30 | -2 | 4 | 12 | 4 | 8 | 13 | 11 |
| 5 | 4 | 0 | *2 | -2 | -1 | 0 | 13 | -1 | -10 | 2 | 4 | 16 | 3 | 12 |
| 14 | -8 | -9 | 0 | 4 | -9 | -9 | 5 | -6 | 12 | 20 | 13 | 12 | 3 | 12 |
| 38 | -2 | -12 | *3 | 5 | 13 | 10 | 1 | 5 | 3 | *4 | *1 | -2 | -14 | 1 |
| 35 | 15 | 5 | -3 | 4 | -10 | -8 | -7 | 11 | 5 | 3 | 1 | 2 | -13 | -3 |
| 23 | -16 | -0 | -2 | 5 | -15 | 11 | -11 | -1 | 11 | 2 | 5 | -13 | 12 | 8 |
| 69 | -1 | 4 | 4 | 3 | 10 | 24 | -15 | 1 | 7 | 2 | -7 | -30 | 6 | 3 |
| 18 | -2 | -20 | 2 | -6 | 6 | 13 | 3 | 7 | 2 | -7 | -16 | -33 | -13 | -1 |
| 40 | 3 | -13 | -8 | -1 | 8 | 13 | 1 | 1 | -2 | -16 | -33 | -13 | -1 | 10 |
| 60 | 3 | -4 | -0 | -4 | -2 | -6 | 11 | -2 | 5 | 2 | 5 | -5 | -10 | 10 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| -10 | 6 | 9 | -1 | 14 | 1 | 11 | 11 | 10 | 1 | 20 | 8 | -10 | 3 | 0 | -3 |
| -10 | 8 | -5 | 12 | 14 | 3 | 6 | 19 | -1 | -18 | 3 | 7 | 9 | 3 | 8 | 15 |
| 5 | 6 | 11 | -8 | 6 | 20 | -14 | 12 | 17 | 17 | -11 | -5 | -14 | -24 | -2 | 23 |
| 3 | 5 | 5 | -3 | 8 | 2 | -1 | 3 | -5 | -8 | -13 | 8 | 27 | 10 | -9 | -6 |
| 8 | 9 | -0 | -3 | -3 | -0 | 10 | 2 | -30 | -6 | 12 | 8 | 3 | 16 | 0 | -15 |
| 5 | -18 | 12 | 11 | 10 | 3 | 6 | -1 | 5 | 11 | 1 | 0 | -8 | 13 | -2 | 2 |
| 9 | -15 | -2 | 13 | 6 | 9 | 19 | 7 | 11 | -6 | 8 | 24 | 12 | 9 | -3 | 5 |
| 1 | 7 | 6 | -13 | 18 | 3 | 18 | -22 | -7 | *7 | 7 | 1 | -3 | 1 | -17 | -20 |
| 11 | 5 | -13 | -0 | 9 | -1 | 12 | -2 | -6 | *4 | 7 | -14 | -1 | -11 | -6 | 1 |
| -15 | -21 | 6 | 2 | 7 | 9 | 27 | 10 | 3 | 17 | 4 | 6 | -4 | 3 | -3 | 9 |
| -19 | -26 | -13 | -6 | -16 | -9 | -3 | -4 | -19 | 18 | -4 | -6 | -6 | -13 | -15 | -15 |
| 33 | 23 | 28 | 6 | 19 | -30 | 23 | 17 | 16 | 8 | 2 | 5 | -1 | 18 | 10 | 1 |
| 6 | 13 | 3 | 20 | 24 | 25 | 10 | 16 | 6 | 11 | 12 | 15 | 13 | 8 | 17 | 1 |
| 8 | 16 | 25 | 3 | -7 | 22 | 10 | 17 | -1 | 10 | 19 | 11 | 6 | 12 | 0 | 13 |
| 16 | 12 | 30 | 15 | -3 | 13 | 13 | 5 | 10 | -1 | 10 | 10 | 2 | 21 | 19 | 4 |
| 34 | 22 | 9 | 16 | 18 | 14 | 11 | 10 | 6 | 8 | -9 | 10 | 27 | 20 | 15 | 15 |
| 26 | 11 | 20 | -2 | 5 | 17 | 24 | 8 | -2 | -24 | 6 | -1 | 14 | 18 | -15 | 15 |
| -8 | 6 | 10 | 20 | 23 | 2 | 6 | 5 | -12 | 7 | 4 | 13 | 34 | 16 | 0 | -19 |
| 3 | 5 | 16 | 17 | 28 | 25 | 14 | 11 | 11 | 15 | 14 | 14 | 4 | 28 | 7 | -1 |
| 9 | -5 | 16 | 11 | 16 | 17 | 12 | -8 | -2 | 16 | 33 | 11 | -9 | 8 | 1 | -2 |
| -2 | -13 | 12 | -2 | 16 | 15 | 6 | 9 | -6 | 6 | 16 | 27 | -4 | 2 | -4 | -0 |
| 3 | -8 | 19 | 11 | 4 | 9 | -3 | 5 | 4 | 3 | 16 | 10 | -1 | 7 | 6 | 2 |
| -3 | 3 | 8 | -5 | 14 | 8 | 11 | -1 | 2 | 22 | 10 | -2 | -0 | -8 | -5 | -2 |
| 2 | -10 | 21 | -9 | 4 | 4 | 19 | 17 | -2 | 2 | 1 | -8 | 1 | -10 | -7 | -14 |
| -1 | -8 | 2 | -12 | 6 | -14 | 5 | -1 | -19 | -1 | 7 | -10 | -21 | 8 | -2 | 13 |
| 12 | -9 | -9 | -15 | -11 | -19 | -21 | -4 | -14 | -4 | 5 | 3 | -17 | -18 | -3 | -13 |
| 5 | 16 | -3 | -7 | 1 | -14 | -11 | -9 | -3 | -5 | -8 | -7 | -9 | -6 | -9 | -9 |
| -2 | -9 | -4 | -5 | 6 | -4 | 1 | 5 | 1 | -7 | 9 | -7 | -2 | -13 | -12 | -16 |
| 1 | 11 | -3 | 3 | -8 | -3 | 3 | -8 | -6 | -3 | 14 | -8 | 5 | -8 | -16 | -14 |
| 3 | 14 | 9 | -2 | 4 | -2 | 15 | -16 | -1 | -2 | 3 | 3 | 11 | -15 | -13 | -13 |
| 2 | 14 | 8 | 6 | 0 | -9 | -12 | 5 | -0 | 4 | 20 | 3 | -4 | 1 | 0 | -19 |
| 8 | 24 | 5 | -7 | -2 | 0 | -3 | -3 | -2 | 4 | 2 | -13 | -0 | -15 | -12 | -7 |
| 20 | 23 | 19 | -2 | -2 | 4 | 5 | 4 | 5 | 3 | -6 | -8 | -4 | -0 | 4 | 5 |
| 2 | 5 | -6 | -6 | -1 | -9 | 13 | -10 | -15 | 10 | 6 | -1 | -2 | 1 | -7 | -20 |
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| 25 | 22 | -1 | 30 | 13 | 5 | 1 | -7 | -11 | 15 | 3 | 13 | 11 | 3 | 8 | -14 |
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| 9 | 4 | 17 | 4 | 10 | 12 | 3 | 5 | 11 | 6 | 2 | -7 | -5 | -13 | -5 | -14 |
| 19 | 11 | 16 | 12 | 2 | -20 | -4 | 3 | 2 | 5 | -7 | -16 | 2 | -6 | 9 | -2 |
| 26 | 20 | 17 | 4 | 4 | 13 | 1 | -1 | 2 | -13 | -30 | -13 | -5 | 2 | -4 | -15 |
| 33 | 12 | 9 | 8 | 16 | 12 | -8 | -2 | 13 | 12 | 6 | -13 | -5 | -4 | 0 | -5 |
| 24 | 12 | 10 | 13 | 4 | 3 | -16 | -14 | -3 | 8 | 3 | -1 | -10 | 0 | 7 | -1 |
| 28 | 16 | 12 | 11 | -2 | 12 | 2 | 1 | -13 | 4 | -1 | -8 | 10 | 23 | 6 | 10 |
| 100 | 46 | 22 | 19 | 27 | 31 | 5 | 2 | 19 | 10 | 3 | -5 | 14 | 28 | 28 | 9 |
| 46 | 100 | 24 | 5 | 25 | 19 | 6 | 8 | 20 | 10 | 6 | -2 | 23 | 31 | 21 | 18 |
| 22 | 24 | 100 | 20 | 27 | 30 | 12 | 32 | 23 | 8 | 19 | -5 | 7 | 16 | 3 | 6 |
| 11 | 19 | 5 | 20 | 100 | 38 | 24 | -2 | 12 | 31 | 5 | 15 | 26 | 23 | 14 | 25 |
| 27 | 25 | 27 | 38 | 100 | 30 | 21 | 22 | 19 | 3 | 22 | 19 | 18 | 25 | 29 | 19 |
| 31 | 19 | 30 | 24 | 30 | 15 | 15 | 26 | 9 | 31 | 19 | 30 | 29 | 33 | 16 | 16 |
| 2 | 5 | 6 | 12 | -2 | 21 | 100 | 19 | 4 | 10 | 9 | 3 | 13 | 20 | 2 | 0 |
| 1 | 2 | 8 | 12 | 22 | 15 | 19 | 100 | 12 | 9 | 13 | 6 | 25 | 16 | -2 | 16 |
| 19 | 20 | 23 | 3 | 31 | 26 | 4 | 12 | 100 | 27 | 9 | -7 | 2 | 10 | 19 | 34 |
| 4 | 10 | 8 | 15 | 22 | 9 | 10 | 9 | 27 | 100 | 1 | 6 | 4 | 12 | 7 | 22 |
| 3 | 6 | 19 | 26 | 19 | 31 | 9 | 13 | 9 | 1 | 100 | 29 | 11 | 19 | 22 | 15 |
| -5 | 2 | -5 | 23 | 18 | 19 | 3 | 6 | -7 | 6 | 29 | 100 | 6 | 26 | 15 | 13 |
| 14 | 23 | 7 | 14 | 25 | 30 | 13 | 25 | 2 | 4 | 11 | 6 | 100 | 42 | 8 | -1 |

Miscellaneous Pool

Cluster OD

| 97 | Pair | | | | | | | | | | 97 | QJR | | | | | | | | | | Cluster | SOC | Subclusters | Clusters | | | | | | |
|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|-----|-------------|----------|-----|-----|-----|-----|-----|----|
| | 1 | 11 | 1 | -15 | -0 | 1 | 1 | 8 | 6 | -13 | | -6 | 2 | -4 | 0 | 23 | 2 | 31 | 16 | 25 | 29 | | | | | 29 | 20 | 16 | 10 | 12 | 19 |
| 24 | -15 | 0 | -12 | 4 | -7 | 5 | 8 | 8 | -5 | 9 | -4 | 0 | 7 | 6 | 28 | 21 | 3 | 24 | 19 | 33 | 2 | -2 | 19 | 7 | 22 | 15 | 8 | 29 | 100 | 33 | 33 |
| 32 | -13 | -19 | -7 | 5 | -20 | -7 | -1 | 8 | -14 | -2 | -15 | 5 | -9 | 10 | 9 | 18 | 6 | 10 | 18 | 16 | -0 | 16 | 34 | 22 | 15 | 13 | 1 | 20 | 33 | 100 | |
| 16 | -32 | -2 | 6 | -21 | 2 | -11 | 2 | -6 | -4 | -6 | -13 | -10 | -3 | -4 | 14 | 16 | 12 | -1 | 15 | 19 | 3 | 10 | 17 | 9 | 13 | 13 | 15 | 25 | 22 | 19 | |
| 6 | -32 | -2 | 6 | -12 | 7 | -1 | 1 | -2 | 3 | -2 | 6 | -14 | 8 | 7 | 1 | 10 | 13 | -12 | 10 | 9 | 18 | 15 | -5 | 9 | 13 | 12 | -6 | -6 | 6 | 20 | 6 |
| 62 | -19 | -21 | -8 | -11 | -9 | 6 | 1 | -3 | 1 | -6 | -19 | 9 | -6 | -5 | 12 | -0 | -13 | 16 | 2 | 4 | 5 | -5 | 24 | 1 | 13 | 0 | 3 | -0 | 15 | 7 | 0 |
| 70 | -26 | -28 | -9 | -8 | 4 | -9 | 2 | 12 | -4 | -1 | -11 | 2 | 8 | -12 | 13 | 1 | 15 | -1 | 0 | 10 | 11 | -2 | 19 | -24 | 21 | 0 | -4 | 2 | -3 | -5 | 0 |
| 19 | -14 | -10 | -13 | -18 | 6 | -1 | -9 | 8 | 5 | 2 | -11 | -14 | 2 | 1 | 3 | 4 | -2 | -5 | -10 | -14 | 1 | -12 | -2 | -18 | 5 | -14 | 2 | -9 | 2 | -9 | 0 |
| 13 | -12 | -11 | -7 | -15 | -18 | -3 | -10 | -4 | -9 | -1 | -10 | -26 | -22 | -8 | -6 | -4 | 0 | -6 | -4 | -13 | -12 | 4 | 2 | 1 | -7 | -6 | 5 | 4 | -5 | 0 | 0 |
| 46 | 5 | -5 | 4 | 1 | 11 | 7 | -7 | -12 | -12 | 11 | 13 | 5 | 3 | 7 | 8 | 17 | 6 | -9 | -6 | 1 | 9 | 9 | 9 | 5 | 10 | -20 | -10 | -9 | 3 | 1 | 0 |
| 39 | -10 | -4 | -17 | -16 | -6 | 7 | -12 | 8 | -2 | -13 | 4 | -9 | -13 | 2 | -17 | -10 | 7 | -21 | -17 | -14 | 11 | 2 | 0 | 8 | 1 | -10 | -2 | -2 | -7 | -11 | 0 |
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| 26 | 13 | 8 | 11 | 10 | 19 | 14 | -1 | 16 | 2 | 11 | 9 | 13 | 3 | -3 | -4 | -4 | -9 | -29 | -16 | -6 | 12 | 5 | 1 | 5 | -6 | -18 | -18 | -22 | -20 | -11 | 0 |
| 102 | 13 | 9 | 10 | 26 | 20 | -1 | 17 | 33 | 35 | 24 | 26 | 20 | 33 | 24 | 22 | 37 | 11 | 34 | 27 | 19 | 16 | 9 | 17 | 15 | 8 | 24 | 14 | 13 | 24 | 14 | 13 |
| 103 | 42 | 34 | 12 | 24 | 24 | 26 | 18 | 6 | 27 | 16 | 21 | 20 | 24 | 30 | 23 | 18 | 22 | 20 | 30 | 24 | 24 | 15 | 3 | 1 | 13 | 7 | 24 | 36 | 19 | -8 | 0 |
| 104 | 22 | 34 | 17 | 11 | 23 | 16 | 11 | 8 | 27 | 16 | 8 | 1 | 11 | 6 | 5 | 12 | -7 | -8 | -4 | -12 | -12 | -6 | -5 | 7 | 8 | -8 | -3 | -18 | -15 | -20 | 0 |
| 105 | 68 | 62 | 60 | 61 | 32 | 33 | 15 | 28 | 29 | 17 | 33 | 22 | 30 | 25 | 13 | 30 | 16 | -2 | -0 | -5 | -5 | 9 | -6 | 4 | -11 | -6 | -2 | -1 | -9 | -14 | 0 |
| 106 | 34 | 28 | 29 | 12 | 70 | 65 | 66 | 62 | 14 | 19 | 13 | 27 | 33 | 25 | 17 | 22 | 8 | 10 | 5 | -7 | 11 | -6 | -10 | 20 | 11 | 2 | 0 | 4 | -0 | -18 | 0 |
| 107 | 28 | 26 | 25 | 33 | 34 | 24 | 19 | 16 | 52 | 54 | 62 | 65 | 66 | 62 | 39 | 21 | 23 | 14 | 4 | 19 | -6 | -2 | 3 | 5 | -8 | -23 | -4 | 1 | | | |

| | PAIR 97 | | CLUSTER QIK | | | | CLUSTER SOC | | | | SUBCLUSTERS | | | | | | | | | | | CLUSTERS | | | | | | PAIRS (Cont.) | | | | |
|----|---------|-----|-------------|-----|-----|-----|-------------|-----|-----|-----|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|-----|-----|-----|-----|---------------|----|-----|--------------------|----|
| | 16 | 8 | 62 | 70 | 19 | 13 | 46 | 39 | 20 | 26 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 71 | 72 | 73 | 74 | | |
| 1 | -4 | -0 | 12 | 16 | 1 | -2 | 7 | -0 | 6 | 10 | 7 | -2 | -0 | 7 | -9 | -4 | 2 | 4 | 21 | -3 | 3 | 3 | -3 | 9 | 10 | -8 | 16 | -7 | 10 | 1 | Miscellaneous Pool | |
| 28 | 5 | 3 | -3 | -5 | 0 | -13 | 2 | -8 | -7 | -5 | 18 | 16 | 13 | 12 | -3 | 8 | 1 | 10 | 6 | 14 | 20 | 8 | 11 | 9 | -8 | -6 | -1 | 19 | 19 | 9 | | |
| 21 | 3 | 7 | 6 | -5 | -7 | -12 | 14 | -9 | 4 | 37 | 7 | -11 | 20 | 10 | -8 | 15 | 6 | 16 | 5 | -6 | -2 | -3 | 14 | 6 | -6 | 19 | 3 | 16 | 9 | 2 | | |
| 41 | -1 | -3 | -3 | -17 | -4 | -5 | -11 | 2 | -0 | -10 | -1 | 4 | -3 | 2 | -10 | 8 | 9 | 6 | -5 | 7 | 1 | -12 | -1 | 5 | -10 | -7 | 16 | -15 | -4 | 2 | | |
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| 15 | -32 | -30 | -19 | -26 | -14 | -12 | 5 | -10 | -1 | 18 | 13 | 42 | 22 | 68 | 34 | 28 | 9 | -2 | -2 | -6 | 22 | 50 | 51 | 0 | -26 | 5 | -20 | 13 | 16 | 5 | | |
| 66 | -2 | -0 | -21 | -28 | -10 | -11 | -5 | -4 | 2 | 8 | 9 | 34 | 24 | 62 | 28 | 26 | 11 | -6 | -7 | -9 | 25 | 9 | 47 | -3 | -25 | 1 | 1 | -3 | 4 | 11 | | |
| 91 | -6 | -4 | -8 | -9 | -13 | -7 | 4 | -17 | -7 | 11 | 10 | 12 | 17 | 60 | 29 | 25 | 12 | -1 | -6 | -14 | 13 | 9 | 44 | -3 | -14 | -2 | -9 | 7 | 10 | 5 | | |
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| 42 | 2 | 7 | 9 | 4 | 6 | -18 | 11 | -8 | 6 | 19 | 26 | 24 | 23 | 32 | 7 | 40 | 22 | -7 | -0 | -11 | 30 | 25 | 56 | -6 | -6 | 11 | 16 | 19 | 30 | 12 | | |
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| 37 | 6 | 6 | -6 | -1 | -2 | -1 | 11 | -13 | -2 | 11 | 35 | 16 | 16 | 17 | 19 | 54 | 22 | 13 | -7 | 2 | 32 | 22 | 41 | 9 | -3 | 3 | 23 | 11 | 34 | 22 | | |
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| 98 | -10 | 8 | 9 | -2 | -14 | -26 | 5 | -9 | 6 | 13 | 26 | 20 | 1 | 22 | 27 | 65 | 24 | 17 | 2 | -1 | 29 | 30 | 45 | 13 | -11 | 7 | 16 | 11 | 24 | 19 | Cluster MAN | |
| 94 | -3 | 7 | -6 | 8 | 2 | -22 | 3 | -13 | -5 | 3 | 20 | 24 | 11 | 30 | 33 | 66 | 23 | 4 | -7 | -4 | 26 | 27 | 53 | 5 | -7 | -3 | 6 | 20 | 22 | 10 | | |
| 43 | -5 | -1 | -5 | -12 | 1 | -8 | 7 | 2 | -3 | -3 | 33 | 30 | 6 | 25 | 25 | 62 | 26 | 6 | -6 | -19 | 39 | 27 | 45 | -15 | -9 | 1 | 12 | 14 | 34 | 20 | | |
| 52 | 14 | 10 | 12 | 13 | 3 | -6 | 8 | -17 | -1 | -4 | 24 | 23 | 5 | 13 | 17 | 39 | 71 | 36 | 12 | 31 | 29 | 3 | 29 | 49 | 8 | -4 | 9 | -7 | 24 | 15 | | |
| 40 | 16 | 13 | -0 | 1 | 4 | -4 | 17 | -10 | -10 | -4 | 22 | 18 | 12 | 30 | 22 | 21 | 67 | 28 | 18 | 36 | 25 | -10 | 30 | 49 | 0 | -2 | -21 | 7 | -4 | 26 | 34 | |
| 12 | 12 | -12 | 13 | 15 | -2 | 0 | 6 | 7 | 4 | -9 | 37 | 22 | -7 | 16 | 8 | 23 | 65 | 36 | 29 | 12 | 37 | 19 | 13 | -7 | 9 | 2 | 7 | -4 | 26 | 34 | | |
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| 69 | 9 | 13 | 1 | -24 | -18 | 1 | 5 | -8 | 14 | 5 | 9 | 1 | -7 | 4 | 20 | 5 | 17 | 20 | 48 | 18 | 7 | | | | | | | | | | | |

[illegible]

PAIRS

75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101

Miscellaneous Pool

Cluster OD

Cluster CON

Cluster ENDP

Cluster MAN

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 28 | 2 | -5 | 2 | -3 | 7 | 4 | -1 | 1 | 4 | 7 | 4 | -20 | -1 | 1 | -9 | 2 | 6 | 4 | 15 | 8 | 17 | -4 | -1 | -2 | 16 | -0 | 5 | 10 | |
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| 58 | 58 | 12 | 19 | 27 | 25 | 20 | -2 | 4 | 7 | 27 | 29 | 15 | 22 | 78 | 42 | 27 | 11 | 17 | -7 | 16 | -5 | -5 | 3 | -2 | 6 | -25 | -1 | 13 | |
| 54 | 54 | 18 | 20 | 21 | 25 | 18 | 15 | 5 | 28 | 18 | 28 | 26 | 26 | 42 | 81 | 21 | 15 | 4 | -19 | 2 | 1 | -5 | -1 | 3 | 1 | -12 | -5 | -1 | |
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| 92 | 92 | 39 | -2 | 6 | 0 | 0 | 11 | -1 | 3 | 17 | -0 | 30 | 17 | 37 | 32 | 85 | 26 | 36 | 5 | 19 | -1 | 25 | 23 | 15 | 15 | -2 | -4 | -4 | |
| 40 | 40 | 21 | 7 | -11 | -3 | -11 | 6 | 13 | 17 | 30 | 11 | 26 | 9 | 21 | 17 | 85 | 19 | 28 | 9 | 20 | 5 | 32 | 24 | 18 | 0 | -1 | 5 | -9 | |
| 12 | 12 | 19 | 17 | 16 | 17 | 14 | -8 | -4 | 10 | 15 | 9 | 4 | 21 | 16 | 14 | 27 | 79 | 36 | 29 | 20 | 7 | 14 | 6 | 0 | 16 | -1 | 7 | -5 | |
| 31 | 31 | 9 | 23 | 7 | 3 | -13 | -14 | -1 | 2 | -6 | -1 | 19 | 9 | 7 | 15 | 14 | 76 | 38 | 6 | 11 | 30 | 23 | 20 | 15 | 9 | -7 | -17 | -24 | |
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| 14 | 14 | 20 | 16 | 18 | 10 | -12 | -22 | -1 | -10 | 3 | -11 | 0 | 20 | 15 | 9 | 29 | 35 | 80 | 23 | 30 | 35 | 31 | 23 | 8 | -16 | -7 | 12 | 18 | |
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| 23 | 23 | 5 | 0 | -5 | 3 | -14 | -5 | -3 | -10 | 1 | -2 | -16 | 9 | 9 | -10 | 23 | 17 | 35 | 10 | 85 | 0 | 7 | 32 | 17 | 26 | 0 | 5 | 11 | |
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| 18 | 18 | 9 | 12 | 28 | 16 | 5 | -3 | 15 | -14 | -3 | 12 | 6 | -3 | -16 | 2 | 6 | 29 | 31 | 14 | 7 | 77 | 18 | 23 | 10 | 20 | -1 | 7 | 1 | |
| 60 | 60 | -6 | 17 | 23 | 8 | -11 | -3 | -9 | 4 | -14 | -6 | 10 | -14 | -29 | -6 | -2 | 11 | 23 | 6 | -2 | 83 | 19 | 17 | 5 | 0 | -12 | -17 | 19 | |
| 48 | 48 | 16 | 22 | -8 | -1 | -13 | -8 | 1 | -1 | -3 | -5 | 6 | -3 | -6 | 1 | 21 | 13 | 34 | 25 | 4 | 10 | 84 | 4 | 6 | -0 | 4 | -7 | -18 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 29 | 28 | 5 | -1 | -1 | -17 | -13 | 7 | -9 | 1 | 5 | *12 | -1 | 15 | 34 | 26 | 36 | 23 | 14 | 29 | 85 | 30 | 19 | 1 | -4 | -7 | -16 | |
| 24 | 24 | 5 | -2 | 0 | -5 | -7 | -18 | -9 | -5 | -1 | 1 | 2 | -2 | 7 | 29 | 17 | 32 | -0 | 17 | 23 | 22 | 82 | 27 | 7 | -2 | -2 | -19 |
| 32 | -1 | -12 | -1 | -1 | 0 | -15 | -19 | -19 | -1 | -16 | -14 | *11 | -6 | 1 | 15 | 10 | 22 | 10 | 36 | 17 | 11 | 81 | 16 | 1 | -5 | -6 | -10 |
| 16 | -1 | -0 | 2 | -20 | -24 | -21 | -6 | -20 | -17 | -6 | *2 | 1 | -15 | -5 | 17 | 7 | 21 | 9 | 17 | 11 | 24 | 25 | 80 | 16 | 17 | 0 | -9 |
| 8 | 2 | 3 | 4 | -7 | -16 | -13 | -18 | -18 | -10 | 5 | 0 | 2 | -5 | 5 | 13 | -1 | 17 | 6 | 14 | 3 | -0 | 16 | 79 | 19 | 18 | 24 | -31 |
| 62 | -10 | -4 | -9 | -3 | -15 | -6 | -5 | -24 | -17 | -2 | 1 | -3 | -7 | -7 | 7 | 18 | 3 | 0 | 17 | 7 | 2 | 14 | 15 | 85 | 25 | -1 | 7 |
| 70 | -5 | -20 | 3 | -5 | -12 | 2 | -32 | -10 | -4 | 5 | -3 | -6 | -3 | 8 | 9 | 7 | 6 | 1 | 12 | -1 | -5 | 23 | 84 | 37 | 13 | 11 | 7 |
| 19 | -0 | -10 | -13 | -9 | -2 | 19 | 4 | -14 | -20 | 3 | *1 | 5 | -16 | 2 | 4 | -4 | -15 | -8 | -11 | -7 | -5 | -4 | 23 | 46 | 82 | 19 | 7 |
| 13 | -12 | -8 | -20 | -21 | -21 | 3 | -2 | -14 | -14 | -13 | -9 | -7 | -22 | -18 | -6 | -3 | -11 | -5 | 2 | -8 | 5 | -3 | 12 | 14 | 80 | 25 | 10 |
| 46 | 11 | -9 | -3 | 3 | 7 | 3 | 9 | 0 | 3 | 11 | *0 | -2 | 12 | 6 | 14 | -2 | -3 | 12 | 9 | -7 | -12 | 2 | 17 | 8 | 19 | 88 | 58 |
| 39 | -15 | -13 | 5 | -1 | -2 | -5 | -13 | -8 | -21 | -10 | -10 | -9 | -3 | -6 | 15 | -9 | -19 | 8 | -4 | -6 | -2 | -11 | 9 | 5 | 29 | 84 | 37 |
| 20 | 7 | -7 | 16 | -7 | 5 | -2 | 15 | 0 | -10 | 6 | -12 | 3 | 8 | -5 | -7 | *1 | 1 | 17 | 20 | -2 | -6 | -7 | 22 | 8 | 7 | 7 | 73 |
| 26 | 3 | 6 | -7 | -0 | 8 | 26 | 23 | 15 | 13 | 21 | *2 | 7 | 14 | 0 | -5 | -25 | -14 | 11 | 3 | -16 | -24 | -19 | 1 | 9 | 10 | 41 | 83 |
| 102 | 29 | 25 | 46 | 27 | 32 | -12 | 9 | 13 | 16 | 29 | 15 | 43 | 32 | 32 | 27 | 31 | 28 | 30 | 16 | 19 | 17 | 7 | 7 | 7 | 10 | 5 | 16 |
| 103 | 79 | 79 | 26 | 21 | 15 | -4 | 16 | 46 | 22 | 31 | 16 | 29 | 26 | 32 | 24 | 28 | 34 | 25 | 3 | 13 | 36 | 7 | 1 | -14 | -11 | -9 | 4 |
| 104 | 15 | -3 | 2 | 4 | 7 | 82 | 88 | 28 | 18 | 24 | 12 | 28 | 6 | 10 | 10 | -10 | -10 | -11 | -7 | -1 | -12 | -21 | -7 | -3 | 8 | -1 | 25 |
| 105 | 31 | 39 | 8 | 18 | 23 | 24 | 27 | 78 | 75 | 40 | 26 | 30 | 34 | 33 | 25 | 9 | -3 | 3 | -2 | -10 | -2 | -14 | -26 | -32 | *25 | -9 | 9 |
| 106 | 20 | 26 | 31 | 25 | 22 | 14 | 23 | 37 | 26 | 85 | 80 | 21 | 25 | 35 | 32 | 12 | -2 | 3 | -4 | 8 | 3 | -11 | -1 | -0 | -7 | -2 | 7 |
| 107 | 33 | 28 | 31 | 31 | 31 | 11 | 21 | 33 | 34 | 36 | 22 | 67 | 80 | 77 | 35 | 24 | 14 | -5 | 5 | -20 | -2 | -2 | -5 | 8 | 16 | 1 | 9 |
| 108 | 34 | 17 | 7 | -3 | -2 | 2 | 12 | 21 | 7 | 30 | 22 | 31 | 30 | 81 | 78 | 53 | 19 | 27 | 16 | 36 | 28 | 15 | 16 | -4 | -3 | -1 | 6 |
| 109 | 21 | 32 | 23 | 14 | -3 | -17 | -1 | -5 | -0 | -7 | 6 | 17 | 6 | 37 | 48 | 100 | 31 | 36 | 33 | 41 | 33 | 24 | 6 | 16 | -13 | -9 | 8 |
| 110 | 10 | 22 | 24 | 17 | -0 | -14 | -2 | *9 | -4 | 9 | 5 | 1 | -16 | -8 | 17 | 36 | 33 | 61 | 62 | 66 | 33 | 35 | 20 | 14 | -12 | 3 | -6 |
| 111 | 26 | 16 | -2 | -1 | -7 | -18 | -10 | -9 | 7 | -8 | *1 | -9 | -6 | 10 | 39 | 26 | 48 | 22 | 28 | 31 | 75 | 80 | 27 | 4 | -3 | -8 | -24 |
| 112 | 63 | 51 | 45 | 30 | 29 | -10 | 15 | 34 | 23 | 36 | 19 | 44 | 35 | 40 | 31 | 36 | 37 | 34 | 12 | 20 | 33 | 15 | 5 | *3 | 13 | -2 | 12 |
| 113 | 19 | 21 | 78 | 30 | 29 | 15 | 8 | 23 | 6 | 34 | 18 | 28 | 26 | 33 | -5 | 12 | 13 | 12 | 2 | 16 | -5 | -2 | -16 | -10 | *22 | 2 | 4 |
| 114 | 36 | 31 | 28 | 29 | 30 | -45 | 56 | 60 | 53 | 65 | 49 | 56 | 56 | 59 | 34 | 14 | 2 | -4 | 1 | -9 | -5 | -16 | -13 | -14 | -14 | -4 | 18 |
| 115 | 29 | 27 | 17 | 12 | -4 | -16 | -7 | -2 | 4 | 14 | 7 | 7 | 12 | 57 | 62 | 78 | 45 | 52 | 50 | 60 | 57 | 27 | 14 | -10 | -6 | -13 | 3 |
| 116 | -10 | -15 | -14 | -14 | -18 | 7 | -1 | -31 | -22 | -6 | *2 | -3 | -19 | -9 | 5 | 7 | -6 | -3 | 3 | 2 | 0 | 0 | 27 | 83 | 83 | 21 | 13 |
| 117 | 3 | -7 | 3 | -1 | 7 | 9 | 13 | 3 | 4 | -11 | -8 | 0 | -12 | -1 | -4 | -13 | -12 | 16 | 10 | -11 | -16 | -13 | 16 | 10 | 22 | 89 | 88 |
| 71 | -4 | 11 | 21 | 2 | -12 | -17 | -2 | -12 | -6 | 2 | *2 | 28 | 14 | 11 | -7 | 14 | 11 | 12 | 9 | 13 | 1 | 1 | 13 | 19 | 1 | -13 | 6 |
| 72 | 15 | 16 | 28 | 15 | 13 | -3 | 19 | 6 | 17 | 16 | -1 | 12 | 8 | 20 | 9 | -8 | 11 | 2 | -9 | 0 | -5 | -17 | -2 | 1 | -4 | 18 | 8 |
| 73 | 30 | 22 | 41 | 20 | 32 | -2 | 15 | 12 | 12 | 31 | 13 | 44 | 36 | 34 | 25 | 21 | 35 | 30 | 19 | 11 | 16 | 13 | 14 | -4 | -6 | 5 | 17 |
| 74 | 17 | 19 | 34 | 23 | 19 | -17 | -0 | 10 | 14 | 15 | 12 | 26 | 15 | 18 | 19 | 29 | 9 | 18 | 7 | 20 | 15 | 14 | -2 | 7 | -10 | 3 | 9 |
| 75 | 100 | 24 | 16 | 13 | 17 | 5 | 20 | 29 | 19 | 21 | 11 | 27 | 24 | 24 | 35 | 18 | 21 | 24 | -3 | 1 | 27 | 15 | 1 | -9 | -7 | -1 | 6 |
| 76 | 24 | 100 | 25 | 21 | 6 | -12 | 5 | 43 | 16 | 28 | 13 | 19 | 17 | 27 | 2 | 26 | 32 | 15 | 8 | 19 | 30 | -4 | 1 | -14 | -11 | -13 | 0 |
| 77 | 16 | 25 | 100 | 53 | 38 | -4 | 7 | 16 | -4 | 32 | 19 | 26 | 18 | 27 | -3 | 15 | 23 | 8 | 4 | 31 | -1 | -2 | 4 | *3 | *20 | 1 | 4 |
| 78 | 13 | 21 | 53 | 100 | 51 | -2 | 8 | 19 | 8 | 23 | 18 | 22 | 21 | 27 | -2 | 13 | 14 | 5 | 11 | 14 | -1 | -0 | -17 | *5 | 18 | 1 | -4 |
| 79 | 17 | 6 | 38 | 51 | 100 | 7 | 5 | 20 | 15 | 27 | 9 | 20 | 24 | 25 | -6 | 1 | -3 | 16 | -9 | -5 | -8 | -3 | -25 | -16 | *14 | 3 | 9 |
| 80 | 5 | -12 | -4 | -2 | 7 | 100 | 44 | 27 | 10 | 12 | 11 | 6 | 5 | 13 | 10 | -14 | -17 | -19 | -7 | -4 | -15 | -13 | -22 | *3 | 14 | -0 | 17 |
| 81 | 20 | 5 | 7 | 8 | 5 | 44 | 100 | 21 | 20 | 28 | 9 | 39 | 5 | 5 | 7 | -4 | -1 | -2 | -5 | 2 | -7 | -22 | -24 | -33 | -18 | -5 | 11 |
| 82 | 29 | 43 | 16 | 19 | 20 | 27 | 21 | 100 | 18 | 35 | 26 | 20 | 20 | 34 | 12 | 8 | -5 | 3 | -6 | -6 | 4 | -17 | -24 | -33 | -18 | -5 | 11 |
| 83 | 19 | 16 | -4 | 8 | 15 | 10 | 20 | 18 | 100 | 28 | 15 | 27 | 34 | 16 | 27 | 6 | -0 | 1 | 4 | -11 | -7 | -4 | -17 | -16 | -21 | *9 | 3 |
| 84 | 21 | 28 | 32 | 23 | 27 | 12 | 28 | 35 | 28 | 100 | 35 | 26 | 23 | 32 | 6 | 5 | -7 | 2 | 1 | 3 | -2 | 10 | -1 | -3 | -6 | 2 | 18 |
| 85 | 11 | 13 | 19 | 18 | 9 | 11 | 9 | 26 | 15 | 35 | 100 | 7 | 17 | 25 | 33 | 15 | 6 | 4 | -5 | 10 | 7 | -8 | -1 | 4 | -6 | -6 | -9 |
| 86 | 27 | 19 | 26 | 22 | 20 | 6 | 39 | 20 | 27 | 26 | 7 | 100 | 29 | 29 | 15 | 20 | 8 | 4 | 10 | -11 | -9 | -5 | 2 | -4 | -1 | -6 | 7 |
| 87 | 24 | 17 | 18 | 21 | 24 | 5 | 5 | 20 | 34 | 23 | 17 | 29 | 100 | 45 | 34 | 15 | 17 | -4 | 6 | -29 | -4 | -5 | -12 | -8 | -23 | 6 | 15 |
| 88 | 24 | 27 | 27 | 25 | 13 | 5 | 34 | 16 | 32 | 25 | 29 | 45 | 100 | 29 | 18 | 6 | -10 | -3 | -3 | 10 | 5 | -0 | -6 | -10 | 1 | -3 | 3 |
| 89 | 35 | 2 | -3 | -2 | -6 | 10 | 7 | 12 | 17 | 6 | 33 | 15 | 34 | 29 | 100 | 26 | 37 | 8 | 23 | 2 | 33 | 27 | 19 | 9 | -1 | -7 | 7 |
| 90 | 18 | 26 | 15 | 13 | 1 | -14 | -4 | 8 | 6 | 9 | 15 | 20 | 15 | 18 | 26 | 100 | 48 | 23 | 20 | 24 | 17 | 4 | 16 | -5 | -6 | -18 | 10 |
| 91 | 21 | 32 | 23 | 14 | -3 | -17 | -1 | -9 | 0 | -7 | 6 | 8 | 17 | 6 | 37 | 48 | 100 | 31 | 36 | 33 | 41 | 33 | 24 | 6 | 16 | -13 | -9 |
| 92 | 24 | 15 | 8 | 5 | 16 | -19 | -2 | 3 | 1 | 2 | 4 | 4 | -10 | 8 | 23 | 31 | 100 | 14 | 13 | 29 | 6 | 9 | 3 | -8 | 12 | 17 | 7 |
| 93 | -3 | 8 | 4 | 11 | -9 | -7 | *5 | -6 | 4 | 11 | *5 | 10 | 6 | -3 | 23 | 20 | 36 | 14 | 100 | 3 | 10 | 33 | 19 | 11 | -6 | 3 | 14 |
| 94 | 1 | 19 | 31 | 14 | -5 | -4 | 2 | -6 | -11 | 3 | 10 | 11 | -29 | -3 | 2 | 24 | 33 | 13 | 3 | 100 | 23 | 24 | 9 | 12 | -9 | -8 | -12 |
| 95 | 27 | 30 | -1 | 1 | -8 | -15 | -7 | 4 | -7 | -2 | 7 | -9 | -4 | 10 | 33 | 24 | 41 | 29 | 10 | 23 | 100 | 20 | 15 | 0 | -0 | -8 | -20 |
| 96 | 15 | -4 | -2 | -0 | -3 | -13 | -22 | -17 | -4 | -10 | -8 | -5 | -5 | 5 | 27 | 17 | 33 | 6 | 33 | 24 | 20 | 100 | 26 | 5 | -4 | -5 | -18 |
| 97 | 1 | 1 | 4 | -17 | -25 | -22 | 7 | -24 | -17 | -1 | *1 | -2 | -12 | -0 | 19 | 4 | 24 | 9 | 19 | 9 | 15 | 26 | 100 | 22 | 22 | 15 | 13 |
| 98 | -9 | -14 | -3 | -5 | -16 | -3 | -2 | -33 | -16 | -3 | 4 | -4 | -8 | -6 | 9 | 16 | 6 | 3 | 11 | 12 | 0 | 5 | 22 | 100 | 37 | 7 | 11 |
| 99 | -7 | -11 | -20 | -18 | -14 | 14 | 1 | -18 | -21 | -6 | *6 | -1 | -23 | -10 | -1 | -5 | -16 | -8 | -6 | -9 | -0 | -4 | 22 | 37 | 100 | 27 | 11 |
| 100 | -1 | -13 | 1 | 1 | 3 | 0 | -2 | -5 | -9 | 2 | -6 | -6 | 6 | 1 | 1 | -6 | -13 | 12 | 3 | -8 | -8 | -5 | 15 | 7 | 27 | 100 | 56 |
| 101 | 6 | 0 | 4 | -4 | 9 | 17 | 25 | 11 | 3 | 18 | -9 | 7 | 15 | -3 | -7 | -18 | -9 | 17 | 14 | -12 | -20 | -18 | 13 | 11 | 11 | 56 | 100 |

Pair Cluster
97 QIRCluster
SOC

Subclusters

Clusters

Pairs

APPENDIX III

SUBSCALES OF THE PRELIMINARY VERSION OF
THE MARKETING ORIENTATION SCALEItems from Cluster OD

- 44. It is important to me to someday wear fine clothes.
- 61. A person's appearance is not very important. (-)
- 6. As a general rule, as long as things look all right it's o.k.
- 63. In choosing a job, the opportunity to develop one's own abilities is more important than the opportunity for advancement. (-)
- 50. Success seems to depend more on luck than on ability.
- 25. I easily change my mind after I hear what others have to say.
- 11. I'm likely to discontinue doing something others think not worthwhile.

Items from Cluster CON

- 55. I try to do what is fitting and appropriate.
- 29. I usually avoid doing something that might provoke criticism.
- 3. It is generally best to do things in the approved way.
- 30. I feel comfortable being different from those around me. (-)
- 57. I feel comfortable acting unconventionally if an important issue is involved. (-)

10. I don't really care all that much whether people like me or dislike me. (-)

Items from Cluster EMP

54. More often than most people are willing to admit, an individual has to stand alone to maintain his principles. (-)
43. Before I do something I try to consider how my friends will react to it.
58. The mark of a happy man is that he is well thought of by his peers.
65. Probably the most important way to be happy is to please others.
64. I would like to belong to several clubs or lodges.
37. I don't mind working alone. (-)
42. I'd rather be thought of as intelligent than sociable. (-)
45. I like dramas better than musical comedies. (-)
49. Most of the arguments or quarrels I get into are over matters of principle. (-)
15. I usually maintain my original position even when my superiors disagree. (-)
66. I don't make as many compromises as most people. (-)
59. Since things change so fast in this modern age of ours, it is important that a man doesn't believe in any one thing too deeply.
51. Most people act the same way regardless of whom they are with.
34. I would be happy if I could be with lots of people most of the time.

Items from Cluster MAN

5. The main reason a person does a job well is that he expects to be rewarded.

- 14. It is extremely important to get to know the right people in order to get ahead.
- 31. You can learn a lot about a man from knowing the kind of car he drives.
- 12. It is a good idea to be able to make several different impressions in order to get along with all kinds of people.
- 52. One of the most important things a father can do for his son is to be successful.
- 40. Lack of money is the greatest single cause of unhappiness.
- 56. More often than most people think, it is necessary to tell a lie.
- 48. Promises are really hard to keep.
- 24. A person should usually be more concerned with himself than with others.
- 32. It is hard to be nice to people I don't like.
- 23. Who we are is mainly determined by our attributes, e.g., age, style, intelligence.
- 18. I know some people who I just really dislike.
- 35. The pressures of the modern world often require us to change our beliefs.

Items from Cluster QIK

- 19. I hate having to make hurried decisions. (-)
- 70. I am slow in making up my mind. (-)
- 62. I like doing things in which I have to act quickly.

Items from Cluster SOC

- 46. I make friends quicker than most people.
- 39. I am quite flexible when dealing with other people.

26. I don't particularly enjoy meeting a lot of people. (-)
20. One of my strong points is my ability to present a favorable image.

Note: Disagree items are followed by a minus sign (-).

APPENDIX IV.--Means and standard deviations for men (N=109)
and women (N=72) arranged by clusters.

| Cluster | Item | Means | | Standard Deviations | |
|---------|------|-------|-------|---------------------|-------|
| | | Men | Women | Men | Women |
| OD | 44. | 3.376 | 4.014 | 1.915 | 1.629 |
| | 61. | 4.963 | 4.972 | 1.724 | 1.624 |
| | 33. | 3.257 | 3.389 | 1.960 | 1.822 |
| | 6. | 3.028 | 3.264 | 1.774 | 1.599 |
| | 63. | 2.972 | 3.444 | 1.622 | 1.527 |
| | 50. | 3.321 | 2.833 | 1.781 | 1.414 |
| | 25. | 3.174 | 3.431 | 1.520 | 1.526 |
| | 11. | 3.404 | 3.042 | 1.787 | 1.389 |
| CON | 55. | 4.853 | 5.181 | 1.513 | 1.134 |
| | 29. | 3.789 | 3.847 | 1.740 | 1.469 |
| | 3. | 4.202 | 4.278 | 1.707 | 1.557 |
| | 30. | 3.899 | 4.153 | 1.882 | 1.488 |
| | 57. | 3.817 | 3.889 | 1.823 | 1.514 |
| | 10. | 4.505 | 5.250 | 1.957 | 1.543 |
| EMP | 4. | 2.899 | 3.486 | 1.591 | 1.500 |
| | 22. | 3.037 | 3.208 | 1.915 | 1.870 |
| | 9. | 3.009 | 3.389 | 2.011 | 1.976 |
| | 34. | 3.495 | 3.542 | 1.870 | 1.674 |
| | 15. | 3.532 | 3.625 | 1.566 | 1.495 |
| | 66. | 4.321 | 4.250 | 1.680 | 1.639 |
| | 51. | 2.927 | 3.194 | 1.646 | 1.478 |
| | 59. | 2.183 | 2.264 | 1.551 | 1.344 |
| | 42. | 3.716 | 3.833 | 1.782 | 1.546 |
| | 45. | 3.945 | 4.042 | 2.004 | 1.767 |
| | 27. | 2.339 | 2.264 | 1.793 | 1.572 |
| | 49. | 2.972 | 3.083 | 1.511 | 1.320 |
| | 64. | 3.394 | 3.500 | 1.792 | 1.624 |
| | 37. | 2.450 | 2.736 | 1.398 | 1.563 |
| | 65. | 4.248 | 3.750 | 1.940 | 1.762 |
| | 58. | 3.661 | 3.472 | 1.798 | 1.633 |
| | 54. | 2.771 | 2.833 | 1.554 | 1.291 |
| | 43. | 4.018 | 4.750 | 1.703 | 1.320 |

APPENDIX IV.-- (Continued)

| Cluster | Item | Means | | Standard Deviations | |
|---------|------|-------|-------|---------------------|-------|
| | | Men | Women | Men | Women |
| MAN | 52. | 3.266 | 3.292 | 1.938 | 1.759 |
| | 40. | 3.028 | 2.708 | 1.927 | 1.679 |
| | 12. | 4.064 | 4.375 | 2.069 | 1.881 |
| | 31. | 2.826 | 2.500 | 1.972 | 1.633 |
| | 5. | 4.339 | 3.931 | 1.893 | 1.727 |
| | 14. | 4.706 | 4.514 | 1.849 | 1.537 |
| | 38. | 5.083 | 5.208 | 1.609 | 1.433 |
| | 35. | 4.716 | 4.569 | 1.698 | 1.470 |
| | 23. | 4.376 | 4.375 | 2.115 | 1.961 |
| | 69. | 5.239 | 5.181 | 1.631 | 1.946 |
| | 18. | 5.128 | 5.486 | 1.916 | 1.607 |
| | 60. | 4.899 | 5.347 | 2.201 | 1.930 |
| | 48. | 3.294 | 3.639 | 1.633 | 1.593 |
| | 56. | 3.670 | 4.111 | 1.714 | 1.595 |
| | 24. | 3.651 | 5.236 | 1.913 | 1.768 |
| | 32. | 4.046 | 4.097 | 1.849 | 1.660 |
| Pair 97 | 16. | 4.222 | 4.431 | 1.969 | 1.817 |
| | 8. | 3.954 | 4.361 | 1.941 | 1.530 |
| QIK | 62. | 3.862 | 4.278 | 1.815 | 1.766 |
| | 70. | 3.954 | 4.153 | 1.784 | 1.920 |
| | 19. | 3.147 | 3.500 | 1.896 | 1.650 |
| | 13. | 4.367 | 4.403 | 1.811 | 1.705 |
| SOC | 46. | 3.743 | 3.972 | 1.834 | 1.724 |
| | 39. | 4.945 | 5.097 | 1.585 | 1.314 |
| | 20. | 4.835 | 4.972 | 1.651 | 1.453 |
| | 26. | 4.615 | 4.458 | 2.036 | 1.965 |
| Misc. | 1. | 6.128 | 6.056 | 0.910 | 1.012 |
| | 28. | 4.505 | 4.444 | 1.790 | 1.723 |
| | 21. | 3.826 | 4.000 | 2.089 | 1.871 |
| | 41. | 3.257 | 3.162 | 1.721 | 1.658 |
| | 68. | 5.083 | 4.931 | 1.472 | 1.437 |
| | 36. | 4.688 | 4.778 | 1.629 | 1.565 |
| | 53. | 4.780 | 4.444 | 1.576 | 1.461 |
| | 17. | 5.413 | 5.417 | 1.287 | 1.176 |
| | 47. | 3.798 | 4.375 | 1.962 | 1.504 |
| | 7. | 3.303 | 2.917 | 1.800 | 1.392 |
| | 67. | 5.505 | 5.625 | 1.386 | 1.207 |
| | 2. | 5.505 | 5.722 | 1.311 | 0.961 |



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