

VAL --- VALUES

ARRANGEMENT LIST

Facilitator's Reference Manual

John P. Golden, Ed.D.

ACHIEVEMENT • ADVENTURE • AESTHETICS • COMMUNITY • EQUALITY
FAME • FAMILY • FELLOWSHIP • FREEDOM • HAPPINESS • HEALTH • LOVE
NATURE • PEACE • PLEASURE • POWER • SELF-WORTH • SOCIAL SERVICE
SPIRITUALITY • WEALTH • WISDOM

ACCOUNTABILITY • AFFECTION • AUTONOMY • COMPETENCY • COURAGE
COURTESY • CREATIVITY • DISCIPLINE • DRIVE • FAIRNESS • FLEXIBILITY
FORGIVENESS • HONESTY • HUMOR • KNOWLEDGE • LOYALTY • OBEDIENCE
ORDER • REASON • SERVICE • TOLERANCE

Contents

Acknowledgments

Section 1. History and Development of the Values Arrangement List	1
The Importance of Assessing Values	1
Why It Is Important to Measure Values	1
A Better Method For Measuring Values	2
Values Measurement Related Issues	2
Saunders' Methodology	3
The Values Prioritization Exercise	4
Defining Values	5
Values as a Hierarchical System	6
The Development of Personal Values	7
Values Differ From Person to Person	7
Section 2. The Values Arrangement List	8
VAL Values Defined	8
Two Kinds of Values: Operational and Life	9
Life Values Defined	10
Operational Values Defined	11
Administration and the Scoring Procedure	13
Administration of the VAL	14
The VAL Narrative feedback Report	14
Interpretation of the VAL Report	15
Interpretation of the Ranking Consistency	15
How to Interpret Rank Scores	16
Descriptive Statistics of the Normative Sample	16
Reliability and Validity	30
Values and Personality Type & Traits	35
Section 3. Presenting and Applying the VAL	41
General Use Overview	41
Ice Breakers	41
Values & Value Systems Defined	42
VAL Report Features	42
Handing Out Results and Posting Values	43
The Origin of Personal Values	44
Values Clarification Exercises	45
Values Related Quotes	45
References	46

List of Figures and Tables

Figure 1. Life and Operational Values Contained in the VAL	12
Table 1. VAL Descriptive Statistics	19
Table 2. Age Distribution of Sample and Percentile Ranks	20
Table 3. Correlations among Life Values	22
Table 4. Correlations among Operational Values	23
Table 5. Gender Differences in Life Values Rankings	24
Table 6. Gender Differences in Operational Values Rankings.	25
Table 7. Age Cohort Differences in Life Values Rankings	28
Table 8. Age Cohort Differences in Operational Values Rankings	29
Table 9. VAL for Teens Parts I and II Value Terms	31
Table 10. VAL Life Values with VAL for Teens Related Constructs	33
Table 11. VAL Operational Values with VAL for Teens Related Constructs	34
Table 12. Life Values and Personality	36
Table 13. Operational Values and Personality	38

Acknowledgments

I would like to thank two pioneers in the application and systematic study of human values. Without them the Values Arrangement List (VAL) would not exist. The first is The Reverend Dr. Edward S. Golden, founder of ORA, for embracing the necessity of values identification and clarification in the process of self-development, and for providing his unselfish support for research and development efforts that led to the creation of the VAL. Secondly we would thank Dr. David R. Saunders, for his tireless work in capturing individual values data by hand and recommending the enhanced scoring methodology that makes the VAL what it is today. Aside from his contributions to the study of Personality, which included assisting Dr. Raymond Cattell in creating the first version of the now famous Sixteen Personality Factor Questionnaire (16PF) and guiding Isabel Myers in the scientific study of the Briggs-Myers Type Indicator when it was first published by Educational Testing Service, Dr. Saunders was noted as a contributor to the development of the Taxonomy of Educational Objectives: Handbook II Affective Domain (Krathwohl, Bloom, and Masia, 1956).

John Patrick Golden, Ed.D.

Section 1. History and Development of the Values Arrangement List

The Importance of Assessing Values

As early as 1965, when he was involved in the founding of the Northeast Career Center at Princeton Theological Seminary, The Reverend Dr. Edward S. Golden, recognized the importance of identifying one's values as a base for attaining greater self-knowledge. Dr. Golden realized that if his clients at the Center were to be successful at managing their lives and careers they would need an in-depth knowledge of their system of values. During this period he used two assessment surveys designed to help individuals explore their values and related career plans. The *Study of Values* survey (Allport, Vernon and Lindsey, 1951) and the *Ways to Live* survey (Morris, 1956) worked well for his counseling and coaching purposes. Then in the early 70's he read Milton Rokeach's book, *The Nature of Human Values* (1973).

This exhaustive study of values theories and research, as well as the simple and eloquent design of his *Value Survey* (1967), prompted Dr. Golden to adopt Rokeach's theory and tool as the primary means for helping career counselees explore the meaning and applications of their own values. He continued to use Rokeach's *Value Survey*, published by Halgren Tests, until 1988. According to Rokeach himself, at that time, Dr. Golden and the company he founded in 1971, Organizational Renewal Associates, Inc., was one of the largest purchasers of the instrument.

Why It Is Important to Measure Values

Rokeach (1973) believed that the values concept is an intervening variable that is applicable across many domains involving human behavior. In other words, values drive almost every aspect of human behavior. Rokeach made five assumptions about the nature of human values: (1) the total number of values that any person holds is relatively small; (2) all individuals throughout the world possess the same values to different degrees; (3) values are organized into value systems; (4) the antecedents of human values can be traced to culture, community, society, and personality; and (5) the consequences of human values can be manifested in almost every aspect of an individual's life. Values define who we are, what we are, why we act the way we do, and how we interact with others. Therefore, it is vital that we have a means for measuring the degree of importance we place on each value term, thereby giving us an understanding of the total construct of the value system we live by.

Having a means to measure how important each of the value concepts is to us, leads to an understanding of what we really do value most, how and why we conduct our lives the way we do and why we work toward specific goals. Knowing what is important to us allows us to gain a deeper self-knowledge and awareness that can contribute to positive achievement, and help to identify and develop our strengths and gifts. Another positive result of becoming familiar with our own value system is that we realize that there are many other value concepts that others might find to be important to them, which gives us a better understanding of likenesses and differences among people in regard to lifestyle and goals. This understanding and acceptance of differences can help us to work and live together in harmony.

A Better Method For Measuring Values

The origin of the Values Arrangement List goes back to 1988 when Dr. Golden began to question his friend and colleague, Dr. David R. Saunders, about alternative methods of measuring values. Golden was dissatisfied with the fact that the results of the Rokeach Value Survey were not easily transferred into a computer database, making research difficult and expensive. Saunders, who was working for ORA at the time, suggested that his early work at Educational Testing Service with Harold Gulliksen, in the late 1950's and early 1960's, might provide the answer. Unfortunately, due to his pending retirement, Saunders was not in a position to fully undertake the task himself. He recommended that ORA hire one of his former graduate students, Dr. Donald A. Johnson. Through Johnson, Saunders would continue to advise ORA on the development of the improved values measuring assessment tool. ORA hired Johnson in the summer of 1988 and with Saunders advising him, began researching the topic.

Values Measurement Related Issues

There are three basic measurement issues that researchers typically confront when developing a survey to measure values. The first issue is whether a value should be measured by one item or multiple items. Braithwaite and Scott (1991) point out that no one item can be a pure measure of a construct because a single item reflects error. Other studies have reported that a value should be measured by multiple items to increase the reliability and validity of the scale (Braithwaite & Law, 1985; Gorsuch & McFarland, 1972; Mueller, 1974). Single item measures also are particularly problematic when making cross-cultural comparisons (Braithwaite & Scott, 1991). Other studies have found that one well defined item is enough and that multiple items would lengthen and complicate the measurement procedure (Braithwaite & Scott, 1991; Rokeach, 1967).

The second issue is whether the instrument should require the individuals completing it to rate or rank each value. The type of data acquired from ranking is ipsative in nature, meaning that the information gathered is the relative judgment of one value against another. Braithwaite and Scott (1991) say this is a problem because the information gathered on the value is only relative, and knowledge about the absolute strength of the value is not gathered. This also makes the statistical analysis awkward. However, absolute ratings are also problematic. Because values are often perceived as socially acceptable and desirable, individuals may tend to use the extreme positive categories on a rating scale. This leads to a skewed distribution, which also creates statistical analysis problems.

The third issue, related to the first two, is whether values should be evaluated alone or in comparison to others. Many values may have a high importance. However, what happens when a choice must be made between two values that are both extremely important to the individual completing the survey?

Saunders' Methodology

True to his personality, Saunders had in mind a more efficient means of measuring the importance of each value concept that also minimized the problems associated with measuring them. Saunders' idea was to utilize a complex method referred to as the Balanced Incomplete Block Design (BIBD). The BIBD method is similar to the method of paired comparisons that can be used to assign scores to attributes that possess an interval level of measurement. In the BIBD method of paired comparisons, one is presented with pairs of attributes and chooses one over the other. This is done for all possible pairings of attributes. For prioritizing values, the method of paired comparisons would compare pairs of values, by successively choosing one as more important than another. It would be possible to derive the relative placement and distance between each value on an underlying continuum of importance. However, for 21 values this method would require 210-paired comparisons, which would wear out the patience of most test takers.

One way of reducing the number of sets is to increase the number of values being compared in each set. Instead of choosing one as more important, the test taker ranks each value in importance. By taking advantage of Latin Square designs it is possible to construct balanced, incomplete blocks or sets for some but not all lengths of value lists. For example, it is possible to construct designs for lists comprising 13, 15, 16, 21, 25, 26, and 31 values, but not for numbers in between. "Balanced" means that every value occurs the same number of times; "incomplete" means that the number of sets is reduced by not introducing every possible combination of each value with every other value and each possible ordering. In fact, the minimum number of sets needed to compare each value with the remaining values is introduced.

A survey system that relied on rankings rather than ratings was preferred because many previous values theorists believed that values only possess saliency in relation to some other value. Most people are in favor of a clean environment and economic prosperity, but some people are more in favor of economic prosperity over a clean environment, and for others the opposite applies. Saunders believed that BIBD method would improve the accuracy in determining a person's values priorities over the simple ranking method employed by Rokeach's Value Survey. Subsequent research also showed that problems associated with other values measurement issues would be minimized using the BIBD method.

The VAL BIBD method naturally incorporates a ranking method to compare 21 different Life Values and 21 Operational Values. By this method of prioritizing all 21 values in both categories, those most important to the test taker emerge at the top of each list. From a practical point of view the survey was constructed to help individuals understand their own values in the context of all other values. Therefore, a forced-choice ranking system is most appropriate. Given that a ranking system is important, it would be very difficult to have multiple items expressing the same value. Not only would this be difficult for the person completing the instrument, the scoring and interpretation would be a theoretical and statistical nightmare. Therefore, a single item scale was chosen as most efficient and appropriate.

The BIBD method provided a means of determining how consistent the respondent was in ranking values across sets. It also allows for the possibility of ties to occur across sets. Finally, BIBD had the advantage of reducing the number of values being ranked to a manageable set. William James' (1890) early research found what Miller's (1956) later research confirmed, that limitations of immediate term memory make it difficult for most people to accurately attend to more than six or seven pieces of information at a time. This is one of the factors that made Rokeach's simple ranking exercise consisting of 18 *terminal* and 18 *instrumental* values items less desirable from a measurement perspective.

After a comprehensive study of the Balanced Incomplete Block Design method (Cochran and Cox, 1957; Gulliksen and Tucker, 1959, 1961; Kendall, 1955; and Torgerson, 1958), Johnson and Saunders concluded that a "5-21" design, that relied upon the presentation of 21 values in blocks of 5 was the most appropriate BIBD method available for constructing the improved values survey.

The Values Prioritization Exercise

It was Golden's original hope that Rokeach's publishing company might agree to publish the new and improved value survey after initial testing proved its worth. In 1989, soon after Rokeach's death, publishing of his Value Survey was licensed to the test publisher Consulting Psychologists Press, Inc. (CPP) of Palo Alto, CA. Despite an initial interest in publishing ORA's improved value survey called the Values Prioritization Exercise (VPE), CPP, due to other pressing R&D initiatives, decided against it. Encouraged to press on with its own R&D efforts, ORA continued to collect data using the VPE. In 1992 ORA had received some more positive interest in the VPE from CPP, but once again it ended with them declining to publish the instrument. This time however CPP formally requested that ORA also cease publishing the assessment using Rokeach's Value labels and definitions.

While disappointed and confused by CPP's ultimate rejection, ORA was compelled to continue on by self-publishing the VPE. We knew that the improvements made in the VPE survey were brought about by the use of the BIBD scoring method. The loss of the well-conceived value labels used by Rokeach, while painful and regrettable, was not a total setback. What was required now was the development of new values terms and working definitions, and the collection of a new database.

By mid 1993 two lists of 21 "life values" or superordinate goals and 21 "operational values" or desired ways of achieving one's life goals, had been developed. Two intermediate versions of the VAL were created: 2.1 was administered to a sociology class at Rutgers University in Camden, New Jersey in the Autumn of 1993. Version 2.2 was very similar to version 2.3 but was never used to collect data. Version 2.3 was finished in December 1993 and we began data collection with it in January 1994. For those of you who like to keep track of such things, the VPE is considered to be version 1.0.

Defining Values

There have been many attempts to define what values are and to differentiate values from beliefs and attitudes. In our opinion, *Taxonomy of Educational Objectives: Part II The Affective Domain* (Krathwohl, Bloom and Masia, 1964) and *The Nature of Human Values* (Rokeach, 1973) are two of the most comprehensive works dealing with human values. Although they are both out of print, readers are highly encouraged to find and read these great works.

Krathwohl, et.al. (1964) defined the term value "in its usual sense, that a thing, phenomenon, or behavior has worth." What is of worth to an individual is both a part of the individual's own valuing and the result of the slow process of social indoctrination that results in the individual's acceptance of the value/s. In the end the value or values come to form the criteria by which the individual's own worth is judged.

Rokeach's understanding and definition of values and value systems relied heavily on the prior work of American Sociologist Robin M. Williams, Jr. (1961). For Williams, values are:

"modes of organizing conduct - meaningful invested pattern principles that guide human action. They are real determinants of behavior, acting as the criteria by which goals (and means) are chosen among alternatives...Values and their hierarchical arrangements thus are observable as choices; they provide a means of studying all human action in a way that culture in its strict normative sense cannot. (p. 502)

For Morris (1951) a value is "the tendency or disposition of living beings to prefer one kind of object rather than another. . .such values may be called operative values," in that they must influence to some degree a course of action. Whereas for English and English (1958) a value is defined as:

"an abstract concept, often merely implicit, that defines for an individual or for a social unit what ends and means to an end are desirable. These abstract concepts of worth are usually not the result of the individual's own valuing; they are social products that have been imposed on him and only slowly internalized, i.e., accepted and used as his own criteria of worth."

So important was the concept of values for personality theorist, Prescott Lecky, that his theory of self-consistency conceived of personality as the organization of values which are felt to be consistent with one another. Lecky proposed that behavior expresses the effort to maintain the integrity and unity of this organization of one's values. The organization of a person's values not only defines their role in life, but furnishes them with the standards which they are obligated to maintain. Lecky theorized that with age one's values become more firmly established and as a result adaptability decreases.

Values as a Hierarchical System

Another important aspect of the concept of values is that values do not exist alone. They are part of a system or a hierarchy. A value system is an enduring set of beliefs about how we should behave or act and what is most important to us. A values system is a set of our life priorities. When organized into a hierarchy, values give us valuable information about what is most important to us. Allport (1955) captured this idea when he noted that:

William James hastened to repair his doctrine of habits by affirming that the one ultimate act of freedom at man's disposal is his ability 'to keep the selected idea uppermost,' by which he meant that when we call upon our self-image we automatically reappraise, inhibit, steer or activate subordinate courses of conduct. Higher-level systems determine the 'go' of the lower, and it is for this reason that man is able to keep as closely as he does to his own major system of values.

English and English (1958) aptly captured the notion that values do not operate independently:

Value System 1: The more or less coherent set of values that regulate a person's conduct, often without his awareness that they do so. 2: The set of values overtly accepted by a person or by a social group. The value systems of 1 and 2 are often quite divergent.

Jung's Analytic Theory (Hall & Lindzey, 1957) also accounts for the great importance of values invested in an element of the personality and the considerable force that values play in instigating and directing behavior, and support the notion that values must be conceived of as fitting within a hierarchical system of values. Jung recognized that the absolute value for an idea or feeling could not be measured, but its relative value could be and could be ascertained by simply asking a person if he or she preferred one thing more than another. The order of preference can be taken as a rough measure of the relative strengths of a person's values.

Krathwohl, et. al. (1964) concluded that the taxonomy of the affective domain operates as continuum or hierarchy. The continuum begins with the individual merely *receiving* stimuli and passively attending to it. At the next stage the individual *responds* to stimuli on request willingly and receives satisfaction from responding. The third stage is *valuing* where the individual voluntarily responds and seeks out ways to respond. The fourth stage is *comprehension* when the student is able to acknowledge and describe what is valued. At the final stage, an individual's values become *organized* into an integrated value system.

In conclusion, a complete assessment of individual values must incorporate the idea that whatever values are individually measured, are contained within a broader values system. The VAL fundamentally takes this fact into account by measuring human values as part of a complete value system.

The Development of Personal Values

Our values are developed and influenced by many factors including parents, personal experiences, peers, school, religious teachings, the community, culture, and by our own personality. Young children live according to and are most greatly influenced by their parents' values. As children develop into adolescents, they learn that other people have values that are different from their parents. These values do not exist in a vacuum. Culture plays a dominant role in shaping the values of everyone. For example, the Japanese culture is known for its strong work ethic and working together as a group for a higher goal, whereas, the American culture values independence and individuals working hard to achieve their own personal goals. Each person's values are an integration of the values observed and learned over the life span. It is up to each individual to decide which values are most important to him or her.

Values are not fixed or stable, and change at various points in the lifespan. For example, teenagers often focus on getting a driver's license and a new car, which reflects their desire to be independent. Once independence is achieved, the Life Value of Independence may be replaced by other values. The teenager may not give much priority to the Life Value of Health; whereas, a person approaching his or her 80's may think that good health is something of great value. According to Maslow (Moustakas, 1956) self-actualized people, most of whom he reported to be at least 65 years old, lived to their values quite distinctively. He stated that the self-actualized "most of the time behave as though, for them, mean and ends were clearly distinguishable. They are fixed on ends rather than on means, and means were quite definitely subordinated to those ends.

Values Differ From Person to Person

Many individuals have difficulty identifying and listing their top three values. However, they can identify situations in which they have felt uncomfortable when asked to do something they did not believe was right. For example, a secretary may be asked to lie to a client; by saying the boss is out of the office when the boss is really in. The secretary may feel extremely uncomfortable because lying conflicts with his or her Operational Value of Honesty.

Not everyone has the exact same set of values. What is important to one person may not be important to another. For example, making money may be the most important thing to an employer; whereas, honesty and integrity are not as important. An employee may believe that honesty is the most important thing, even at the cost of losing business. This may cause conflict on both sides. The employee may feel forced into doing what he or she does not want to do; and the employer may believe that the employee does not have the company's best interest in mind. Most people do not want to be forced into acting in a way that violates their values. In fact, individuals tend to feel the most uncomfortable, upset or angry when their values are not respected or are violated by others.

Section 2. The Values Arrangement List

VAL Values Defined

The developers of the VAL have found that Rokeach's definition, with origins and ties from the previous ideas of Aristotle, James, Jung, Krathwohl, Morris and perhaps countless others who studied, researched and theorized about the nature of human values remains very practical, comprehensive and complete. According to Rokeach (1973):

A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence. A value system is an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance.

Values are multifaceted standards that guide our lives in a variety of ways. It is our values that lead us to take particular positions on social issues. Our values predispose us to favor one particular philosophical, political, or religious ideology over another. Arnold (1995, unpublished draft) believes that values usually underlie the stand that we take on 'hot' or controversial issues. They also are guidelines that determine how we present ourselves to others. They are basic assumptions that allow us to rationalize beliefs, attitudes, and actions that would otherwise be personally and socially unacceptable, so that we can maintain our feelings of morality and competence, which are the essential elements of self-esteem.

Values (Rokeach, 1973) have cognitive, affective, and behavioral components. A value is a cognition or perception about something that is desirable. When an individual says that he or she holds a value, the individual perceives a correct way to behave or a life goal for which to strive; and the individual can define the value and behavior intellectually and rationally, without emotion getting in the way. An individual can state that family values are very important and can define exactly what family means to him or her. A value can also be affective, because individuals can become very emotional about their values. For example, individuals become very emotional when the topic of abortion is raised. An individual can feel for or against the value, like it or dislike it, and approve or disapprove of someone who exhibits a particular value or behavior. Third, a value is behavioral in the sense that it leads to action when it is triggered. For instance, the individual who firmly believes in pro-choice may march in a rally or an individual who believes in pro-life may picket an abortion clinic.

The values an individual holds as important are made up of the beliefs and attitudes one has learned and been influenced by. Beliefs are defined as what we think is true or real and require faith and trust on the part of the believer. Attitudes are defined as the way we put our beliefs into action through our thoughts, acts and feelings. Values are enduring beliefs and attitudes that a certain way of behaving or a specific goal is more preferable than any other. The things we value are those that have some perceived worth, usefulness, or importance to us, or those things that give meaning or have some positive effect on our lives.

Two Kinds of Values: Operational and Life

The conceptualization of values as modes of conduct or, *instrumental* ends, or final, *terminal* ends, was not new to Rokeach, but can be traced back to the ancient writings of Aristotle who recognized that all action aims toward some end. Aristotle conceived two distinct forms of ends. The first he called *instrumental* ends and described them as acts that are done as a means to some other ends. The second he called *intrinsic* ends, those that were done for their own sake.

American Psychologist Gordon Allport (1955) wrote: “philosophically speaking, values are the termini of our intentions. We never fully achieve them. Some writers make much of this fact. Jung, for example, defines personality in terms of the ideal state of integration toward which the individual is tending. Personality is not what one has, but rather the projected outcome of his growth.”

Following Aristotle, and Allport’s use of the terms, Butler (1957) identified two fundamental types of values:

Of course there is almost an infinite number and variety of values which do not have this status, but are relative to the human scene alone and have the same kind of transiency that human experience has. Some of these values are instrumental; eventually they are means to some other ends or to ultimate values. Some of them are terminal values, being enjoyed for what they are at the time without ever becoming means to any other end, or only indirectly being means to ultimate ends.”

The terms *terminal* and *instrumental* adopted by Rokeach in his Value Survey were applied by Golden in career counseling and organizational development training settings for more than 15 years. However, these terms never felt right to him. It was his experience that many capable and intelligent people had difficulty understanding and incorporating these terms into their everyday language. *Terminal* was often perceived as final or is associated with “death” itself and in combination with *instrumental* left the lay user feeling rather cold about the entire topic. To resolve these problems and to inspire people to learn about their values Golden recast the terms, calling them Life and Operational Values for ‘terminal’ and ‘instrumental’ respectively. Our observation, after more than 10 years of using the VAL, is that these new terms do facilitate learning and retention of the VAL components and underlying theory.

With a large Value Survey database sample in excess of three-thousand adults, the developers originally sought permission to utilize the value labels and definitions employed by Rokeach (see Appendix A) in the Value Survey. That possibility ended with CPP’s formal request to the publishers to cease and desist using the Rokeach language. While unfortunate from a historical and research perspective, the act of developing new value labels and definitions resulted in a grammatically more consistent and overall better assessment. In determining the new value labels and definitions the developers conducted an exhaustive review of the literature, consulted previously

developed values surveys and dictionaries to determine whether similar value terms could be combined into the same concept, as well as how to choose the best value label or words to describe each value. Working within the confines of the "5-21" Balanced Incomplete Block Design method, the master lists of suitable values was narrowed to two final lists of 21 Life and 21 Operational Values. Although many sources were consulted, in writing the definitions of the values or in selecting synonyms contained in label/definitions, the developers most often referred to the Oxford Unabridged dictionary and the thesaurus included with Word Perfect for Windows v.6.0 to check for synonyms.

In making revisions from version 2.1 to 2.3 of the VAL we subsequently had available Braithwaite and Scott's (1991) extensive review of tests that assess values. Their book basically confirmed for us that we had selected terms that tapped universal concepts that were in widespread use. Of particular interest was a study conducted by Braithwaite and Law (1985). Using 115 semi-structured interviews to obtain a more comprehensive coverage of the universe of content, their interviews identified 54 goals in life and 71 ways of behaving, which factor analysis reduced to 19 basic dimensions. These 19 basic dimensions correspond well to the VAL items. Two values they identified as omissions from the Rokeach Value Survey that have also been mentioned by other researchers were physical well-being and individual justice. Both of these we had previously decided to include in the VAL, physical well being through the Life value "Health -- soundness of body and mind" and justice through the Life value of "Equality -- justice and fair treatment for all." We also address justice and fairness as an Operational value or desirable mode of conduct, with the Operational value "Fairness -- being unbiased, impartial and just."

Finally, in developing the value items the developers also conducted a first-hand analysis of Allport and Odberts (1936) monograph of trait-names. The result of which was the identification of 366 trait terms that also conveyed positive values. The results of this analysis were used to confirm the terms already chosen for inclusion in the VAL. This approach was similar to Rokeach's reliance on another researcher's analysis of Allport and Odberts trait monograph.

Life Values Defined

These values are associated with long-term goals or ultimate aspirations, and are the ones that individuals strive to maintain or achieve over their lifespan. The Life Values are the core of an individual's highest ambitions and are the essential foundations that guide and motivate individuals to achieve their most desired ambitions, needs, personal goals, and life-long desires. Life Values are the "end" state; they are those things that individuals work toward to achieve or obtain.

Life Values can be described as having a personal or a social focus (English and English, 1958; Williams, 1961, Rokeach, 1973). Personal-oriented Life Values relate to the individual alone, because they focus on the self or on the intra-personal. Social oriented Life Values suggest the involvement and importance of other people to the individual. They have an interpersonal or society-centered focus. While most Life Values have a personal or a social focus, some can be defined as both, depending on

how they are defined by each individual. Life Values differ from Operational Values because Life Values are more difficult to define and put into practice. There are 21 Life Values, Shown in Figure 1. Next to the definition, a capital letter (P) notes the Personal-Oriented focus, (S) the Social-Oriented, and (P/S) having both.

Operational Values Defined

Operational values are the underlying beliefs that can be carried out in everyday living. These values are associated with short-term goals. By their very nature, the process of Operational value attainment is shorter in duration and easier to define or measure than Life values. Operational values are the "means" to an "end." An individual may use any of the 21 Operational Values, shown in the Figure 1, to obtain one or more of the Life Values. For example, a person may consider the Life Value of Fellowship to be very important. There are several Operational Values that may be used for the end result of Fellowship. For example, Maria believes that a responsible person ends up having a lot of friends. She would use the Operational Value of Accountability to achieve Fellowship. On the other hand, Jamie believes that caring and truthfulness go hand in hand in achieving Fellowship. Therefore, the Operational Values of Affection and Honesty would be more important than other Operational Values. When understood and used effectively, Operational Values link the short term goals to long term goals. Operational Values can have a Competence or a Moral (Rokeach, 1973) focus, or both. Moral values refer mainly to ethics and rules of right and wrong, and are therefore interpersonal in nature. Competency values are those related to performance and effectiveness, and enhance self-development. These values are more personal in nature. Next to the definitions, a capital letter indicates the focus: Competence (C), Moral (M), or both (C/M).

Figure 1. Life and Operational Values Contained in the VAL

Life Values

ACHIEVEMENT: attainment of goals and aspirations (P)
ADVENTURE: pursuing excitement and taking risks (P)
AESTHETICS: appreciation and enjoyment of the arts (P)
COMMUNITY: activity in social or citizen groups (S)
EQUALITY: justice and fair treatment for all (S)
FAME: recognized and known for your contributions (P)
FAMILY: close relations and support of loved ones (S)
FREEDOM: independence in thought and lifestyle (P/S)
FELLOWSHIP: having important relationships with friends (S)
HAPPINESS: satisfaction, joy and contentment (P)
HEALTH: soundness of body and mind (P)
LOVE: intimacy, devotion and warmth (S)
NATURE: respect for animals and the environment (S)
PEACE: enduring harmony and freedom from violence (S)
PLEASURE: entertainment, relaxation and fun (P)
POWER: authority, control and influence (P/S)
SELF-WORTH: high regard for oneself and others (P/S)
SOCIAL SERVICE: contributing to the welfare of others (S)
SPIRITUALITY: at one with God; religious beliefs (P)
WEALTH: affluence, ease, and prosperity (P)
WISDOM: insight, knowledge, and understanding (P)

P = Personal and S = Social

Operational Values

ACCOUNTABILITY: being responsible, credible, trustworthy (C)
AFFECTION: being passionate, loving and caring (M)
AUTONOMY: being self-directing, self-reliant and free (C)
COMPETENCY: being productive, efficient and skillful (C)
COURAGE: being brave, intrepid and fearless (M)
COURTESY: being respectful, considerate and polite (M)
CREATIVITY: being inventive, original and innovative (C)
DISCIPLINE: being restrained and self-controlled (C/M)
DRIVE: being industrious and goal directed (C)
FAIRNESS: being unbiased, impartial and just (M)
FLEXIBILITY: being adaptable and able to change (C)
FORGIVENESS: being able to excuse and let go (M)
HONESTY: being moral, ethical and truthful (M)
HUMOR: being light-hearted, witty and funny (C/M)
KNOWLEDGE: being wise and scholarly (C)
LOYALTY: being dedicated, devoted and steadfast (M)
OBEDIENCE: being compliant, deferential and yielding (M)
ORDER: being systematic, organized and well-kept (C/M)
REASON: being rational, analytical and logical (C)
SERVICE: being supportive, aiding and assisting (M)
TOLERANCE: being open, accepting and patient (M)

M = Moral and C = Competency

Administration and the Scoring Procedure

The VAL was originally available for use as a scannable Optical Mark Read Survey. In 2001 Renewal Publishing commissioned the development of an online version of the VAL. The advantages of the online version over the scannable survey were so quickly apparent that a decision was made to promote the online version as primary means of administering the VAL survey. Among the many advantages achieved by relying on the online survey were: 1) the reduction in the number of ranking errors cause by respondents filling in the survey bubbles incorrectly; 2) reduction of errors associated with respondents misreading the instructions; 3) a decrease in the amount of time required to complete the ranking of 42 sets of 5 life and operational values; and 4) only correctly completed sets of values are submitted and scored, thus eliminating further ranking and respondent error.

Respondents are provided with access to the VAL survey by their test administrator. Once online, the respondent is provided with specific survey instructions which read in part:

The VAL survey contains 42 sets of values arranged in groups of five. Each value is accompanied by a definition. As each set appears on the screen study the five choices. Decide which value is most important to you in your life now and select that button. As you make each selection the name of the value moves to the box below. Continue by choosing the second most important value to you, and so on down to the least important of the five in the set.

When you have made your five selections you can see your ranking of the set. If you would like to re-do the set click **Reset**. When you are satisfied that you have correctly ranked the set click **Submit**. Your responses will be saved and the next set will appear on the screen. You must rank all five values in each set or you will not be able to proceed. Take your time but do not over analyze your responses.

In the VAL each value appears five times in unique combination with the other 20 values of its type in blocks of five values at a time. There are 21 sets required; when multiplied by the number in each set (5) this produces 105 responses for both the life values and operational values sets. The respondent ranks each of 21 sets from 1 to 5. Ranks for each occurrence of the value are summed; the maximum possible score is 25 and the minimum possible score is 5. The sum of rank scores for each value is subtracted from the maximum score of 25 and this difference is squared. A sum of squares is obtained (SSOBS).

To report the sum of ranks as equivalent to a "rank score", a constant of 4 is subtracted from each. The highest possible rank score becomes 1 and the lowest 21. For example, if "Family" is ranked first five times, it will have a rank sum of 5; subtracting 4 gives it a rank score of 1. If "Power" is ranked last five times, it will have a rank sum of 25; subtracting 4 gives it a rank score of 21. So rather than scores falling along a continuum from 5 to 25, scores now are reported from 1 to 21. Ties and missing gaps between scores are meaningful. If a list does not have a value with a

rank score of 1, it means that the person did not rank any value of paramount importance every time it occurred. If three values have rank scores of 5, those values are assumed to be of equal importance to that person.

A ranking consistency coefficient, Z, is computed from the formula

$$Z = (1 - D/385) \times 100 \quad (\text{formula 3.1})$$

where D is the difference of the observed sum of squares from the maximum sum of squares:

$$D = (2870 - \text{SSOBS})/2 \quad (\text{formula 3.2}).$$

When the ranking is completely consistent (which only occurs when the test taker makes no logical mistakes in ranking across sets) the maximum sum of squares is achieved and the ranking consistency = 100%. Every time a “logical triad” occurs the observed sum of squares is reduced. A logical triad takes the form “value A is preferred to value B, value B is preferred to value C, but value C is preferred to value A.” The best reference for this scoring method and the “5-21” design is Cochran and Cox (1957).

Administration of the VAL

The VAL, an A level assessment; can be administered by most human services professionals without any special qualifications. Familiarization with the contents of this manual and the reference material listed in the reference section are designed to give the administrator the knowledge and skills required to professionally administer the reports in both a group training or individual coaching session. Human services professional seeking to be administrators of the VAL are encouraged to sign up for an account with Renewal Publishing at www.RenewalSurveys.com. Once registered you will be provided with the specific information you will need to begin administering the VAL or other Renewal Publishing assessments to your clients. The VAL is designed for adults over the age of 16 who can read at least at the 10th grade level. The VAL takes approximately 30 minutes, on the average, for individuals to complete.

The VAL Narrative feedback Report

The Val report consists of 8 pages designed for easy interpretation by the respondent. The report is configured in two sections - Section 1 (pages 1 to 7) is the respondent’s report. Page 1 of the report provides a general introduction to values and an overview of the individual’s core (or top seven) Life and Operational values. Page 2 breaks down the respondent’s Life and Operational value system into Core, Situational and Less Preferred categories. Page 3 reports the respondent’s Operational and Life Ranking Consistency Scores and specifies how they should interpret their own scores. Pages 4 and 5 review how the respondent’s value system can be interpreted in terms of its overall ranking as a value system beginning with the Operational Values on Page 4 and Life Values on Page 5. These pages also provide an explanation of Rank Scores and the categories Competency/Moral and Social/Personal. Pages 6 and 7

provide the respondent with the opportunity to compare their results to a sample of American Adults. Section 2 (page 8), is a one-page summary of the respondent's results, intended for the report administrator or counselor as a file copy, but often given to the respondent as well.

Interpretation of the VAL Report

Each VAL report is as unique as the person who completes the survey. Therefore, interpretation of the VAL is a highly personal process. It is important to remember that the VAL is not a test, that there are no right or wrong answers, and that no set of rankings is better than another. In other words, one set of values is no better than another set of values. They are just different.

The VAL report is designed to shed meaning on what a person's life priorities are. The report is only a first step in helping individuals to understand their real values and it is important to recognize that the outcome of the VAL report is not always a reflection of how well individuals use their values as guiding principles in their lives. For example, a person may believe that creativity is the way to achieve long-term goals. However, the individual may be in an educational program or job that discourages creativity and forces submission and cooperation. Understanding current values can be a guide to the future decisions they will make as their life priorities change. There are two types of scores that are important in the interpretation of the VAL, the Ranking Consistency and the Rank Scores. Administrators of the VAL are encouraged to take the survey themselves and use their own report as a means of familiarizing themselves with the contents and structure of the report. Downloadable examples of the Val report are available at www.oraonline.com/renewal.

Interpretation of the Ranking Consistency

The Ranking Consistency (RC) is an overall measure of how consistent an individual was in ranking each set of values in the survey. There are two RCs, one for Life Values and one for Operational Values. Each RC is interpreted separately. The RC can range from 0 to 100. Because the VAL is not a test, the RC is not an indication of pass or fail. The RC is a suggestion of the reliability or dependability of value priorities from one situation to the next. 90 to 100 are reported as highly consistent, 80 to 89 clearly consistent, 70 to 79 somewhat consistent and 0 to 69 as less consistent. Generally speaking the higher the RC, the more consistent the individual was in the overall ranking process. However, interpretation of the RC needs to be made with some caution. A low RC may indicate that an individual is very flexible in the application of values from one situation to the next. While rare in our experience, this inconsistency may be a quite conscious and carefully thought out sign, as Maslow might have described them, of a highly self-actualized person. On the other hand, the individual may not have a well-established value system and may act differently in various situations, without really knowing why. Therefore, the interpretation of the RC is not entirely clear-cut. It is up to the individual to determine whether he or she varies the importance of values according to the situation or if the individual really needs to evaluate life priorities and values.

How to Interpret Rank Scores

The Life Values rank scores range from 1 to 21. A rank of "1" indicates that an individual considers the value to be the most important and a rank of "21" indicates that the value is the least important to the individual. The Operational Values rank scores range from 1 to 21. A rank of "1" indicates that an individual considers the value to be the most important and a rank of "21" indicates that the value is the least important to the individual. It is rare for an individual to consistently rank all 21 values. It is very common to have some ties and some gaps between rank scores.

Descriptive Statistics of the Normative Sample

The mean and median scores for each of the terms used in the Values Arrangement List for the normative sample are shown in Table 1, along with the standard deviation, the highest and lowest scores achieved, the skewness, and the kurtosis. The most important life value to our normative sample of 4,268 people, nearly all of whom are Americans, is family. Love, self worth, health, and happiness follow in importance. The least in importance is aesthetics, followed by fame.

With three exceptions, the normative sample consists of people ranging in age from 18 to 79. The three exceptions are teenagers who were age 13, 15, and 17 at the time they completed the survey. The average age is 35.45 years (SD = 12.3 years); the median age is 35. The percentiles for the age distribution are shown in Table 2, and a histogram of the age distribution of respondents is shown in Figure 1. The normative sample is 61.0% male. The race or ethnic group of the respondents was reported by 97.4%. Of those reporting their race or ethnic group, 89.2% listed themselves as White, 4.8% listed themselves as Black, 2.3% were Asian or Pacific Islander, 2.2% listed themselves as Hispanic, .4% listed themselves as American Indian or Native American, and 1.1% listed themselves as "Other."

With the exception of spirituality, all of the life values have standard deviations between 3.40 and 4.67 and tend to be unimodally distributed. Some of the highest ranked values, such as family and love, are positively skewed, while the lowest ranked values are negatively distributed. On some of the values there is quite a bit of agreement on their relative importance, and these values tend to have leptokurtic distributions with most of the rankings clustering around a few rank scores. Examples of the leptokurtic distributions are family and love, which tend to be almost universally ranked high, and aesthetics, which usually tends to be ranked low. The interesting exception is spirituality, which has a U-shaped distribution and a fairly large variance. Although over 23% rank spirituality first in importance, a significant number rank it last in importance and the least common rank score is in the middle at 10. Spirituality, defined as oneness with God and religious beliefs, tends to be a value that people either want or reject.

The most important Operational value is honesty. It is followed in importance by accountability, loyalty, competency, and fairness. The least important Operational value in American society appears to be obedience. Both obedience and honesty have small variances and leptokurtic distributions indicating that most of the rank scores

cluster around a few values at the low and high ends of the importance continuum. Affection and autonomy are the two Operational values with the most variability in importance.

Both sets of 21 values measured by the VAL as a system are ipsative measures. Measures with more than one score per participant, when the total for each participant equals the same constant, are called "ipsative." Ipsativity occurs when data are ranked and each participant's total equals the sum of the ranks. Because of this the number of degrees of freedom is reduced by one and the score for the last value is always determined by the other 20 scores. Some have criticized Ipsative measures because they force a quality of inter-dependency upon the scores and result in a negatively correlated relationship among the scores (Hicks, 1985). The magnitude of this negative correlation varies greatly as a function of the number of values contained within the system. The extreme example is when there are only two values contained in a system, because when you rank one high you must rank the other one low and the correlation between the two scores will always be -1.00. With three values the average intercorrelation between the three ranks equals -.50; with four values the average intercorrelation equals -.33. As more and more values are considered as part of the value system this effect becomes smaller and smaller; with 21 values it can be considered negligible. Table 3 shows the correlations among the VAL Life values and Table 4 shows the correlations among the VAL Operational values. In both cases the average of the 210 correlations is -.05.

Gender differences. There are significant differences between the value rankings of men and women for some but not all values. Table 5 shows the Life value rank scores for males and females separately and reports the size of the difference where significant. Males ranked achievement, adventure, fame, power and wealth higher than females did on average. Females averaged significantly higher Life value rank scores for aesthetics, fellowship, happiness, health, love, nature, peace, self-worth, social service, and wisdom. The greatest mean differences were for adventure and power, with rank scores for these Life values averaging about two points higher for men. The greatest mean difference in the other direction was for peace, with women ranking peace about one and a third points higher than men on average.

Table 6 shows the operational value rank scores for males and females and reports the size of the difference where significant. With the exception of the importance of loyalty and order there are significant differences between men and women for all of the Operational values as desirable modes of conduct. In general, women rank affection, tolerance, forgiveness, service (helpfulness), courtesy, flexibility, humor, fairness, accountability, honesty, and autonomy higher than do men. Men rank discipline, reason, courage, drive, obedience, knowledge, competency and creativity higher than do women. The mean differences range from slightly less than one half point (.41) for autonomy and creativity to nearly three points for discipline (2.87) and affection (2.79).

Age cohort differences. For the purpose of analyzing age group differences the normative sample was divided into four age cohorts. Based upon life span developmental stage theories (Buehler, 1933; Gould, 1978, Levinson, 1978; Lowenthal, et. al., 1975; Sheehy, 1974; Super, 1957) and theorized effects of generational differences in American society (Strauss and Howe, 1991), four age groups were chosen. These four age groups are 18 to 25 years old, 26 to 35 years old, 36 to 50 years old, and 51 to 79 years old. The small group of teenagers under age 18 was dropped from the analysis.

The age group of 18 - 25 years old reflects the years of college and early work experience, the age of setting out on one's own and establishing financial and emotional independence from one's family of origin. This cohort comprises 1169 members or 27.4% of the sample. The 26 to 35-year-old age group reflects the life span stage of early establishment in one's career and family life. This cohort comprises 1005 members or 23.5% of the sample. Groups 1 and 2 combined represent the post-Baby Boom generation or "Generation X," those born between the years of 1962 and 1979.

Table 1. VAL Descriptive Statistics

Life Values	Mean Rank Score	Median Rank Score	<u>SD</u>	Highest Rank Score	Lowest Rank Score	Skewness	Kurtosis
Achievement	8.81	9	3.74	1	20	.16	-.48
Adventure	14.76	16	4.67	1	21	-.78	-.08
Aesthetics	17.31	18	3.57	1	21	-1.32	1.75
Community	15.88	16	3.40	2	21	-.82	.45
Equality	10.39	10	3.43	1	21	.06	-.70
Fame	16.60	18	4.16	1	21	-1.16	.85
Family	4.10	3	3.42	1	21	1.65	2.71
Fellowship	9.13	9	3.73	1	21	.30	-.48
Freedom	8.23	8	3.97	1	21	.27	-.40
Happiness	6.87	6	3.48	1	19	.60	-.01
Health	6.55	6	4.00	1	20	.64	-.23
Love	5.45	4	3.97	1	21	1.18	1.02
Nature	15.64	16	3.89	1	21	-.81	.38
Peace	11.07	11	4.36	1	21	.08	-.62
Pleasure	12.43	13	3.90	1	21	-.29	-.47
Power	15.58	17	4.60	1	21	-.93	.19
Self-worth	6.30	5	3.88	1	20	.88	.34
Social Service	13.76	14	4.18	1	21	-.48	-.30
Spirituality	9.98	10	7.34	1	21	.11	-1.50
Wealth	14.61	15	4.46	1	21	-.69	-.14
Wisdom	7.56	7	3.77	1	20	.39	-.34
Operational Values	Mean Rank Score	Median Rank Score	<u>SD</u>	Highest Rank Score	Lowest Rank Score	Skewness	Kurtosis
Accountability	7.04	6	4.38	1	21	.75	-.18
Affection	9.43	9	6.03	1	21	.23	-1.21
Autonomy	10.36	11	5.77	1	21	.01	-1.16
Competency	8.59	8	4.17	1	21	.32	-.64
Courage	13.86	15	5.64	1	21	-.58	-.80
Courtesy	11.26	11	4.85	1	21	-.06	-1.01
Creativity	12.11	13	5.43	1	21	-.25	-.93
Discipline	12.18	13	5.17	1	21	-.23	-.96
Drive	11.07	11	5.12	1	21	-.03	-.98
Fairness	8.86	8	4.39	1	21	.36	-.58
Flexibility	10.88	11	4.18	1	21	.07	-.58
Forgiveness	12.64	13	5.20	1	21	-.42	-.80
Honesty	4.22	3	3.74	1	21	1.41	1.54
Humor	13.75	15	5.34	1	21	-.52	-.69
Knowledge	9.82	10	5.13	1	21	.18	-.94
Loyalty	8.34	7	5.03	1	21	.52	-.74
Obedience	17.91	19	3.82	2	21	-1.49	1.89
Order	13.69	14	5.08	1	21	.47	-.77
Reason	10.92	11	4.91	1	21	.02	-.90
Service	12.58	13	4.53	1		-.28	-.71
Tolerance	11.42	11	4.43	1		-.06	-.73

Table 2. Age Distribution of Sample and Percentile Ranks.

Age	Frequency	Percentile Rank
13	1	0
15	1	0
17	1	0
18	17	0
19	388	1
20	360	10
21	141	18
22	76	21
23	65	23
34	62	25
25	60	26
26	74	26
27	83	28
28	68	29
29	93	31
30	99	33
31	97	35
32	134	37
33	136	40
34	113	43
35	108	46
36	97	49
37	121	51
38	129	53
39	136	56
40	109	59
41	111	62
42	110	65
43	105	68
44	110	70
45	103	73
46	92	75
47	76	78

Table 2. Age Distribution of Sample and Percentile Ranks (cont'd).

Age	Frequency	Percentile Rank
48	95	80
49	76	82
50	73	84
51	82	86
52	68	87
53	57	89
54	52	91
55	41	92
56	23	93
57	30	94
58	36	95
59	33	96
60	24	97
61	17	97
62	11	98
63	10	98
64	5	98
65	8	99
66	1	99
67	7	99
68	14	99
69	5	99
70	2	100
71	2	100
72	1	100
73	1	100
74	3	100
75	0	100
76	1	100
77	1	100
78	2	100
79	1	100

Table 3. Correlations among Life Values

	Ach	Adv	Aes	Com	Equ	Fame	Fam	Fell	Fre	Hap	Hea	Lov	Nat	Pea	Ple	Pow	Sel	Soc	Spi	Wea
Achievement																				
Adventure	.20																			
Aesthetics	-.10	-.03																		
Community	-.19	-.07	.05																	
Equality	-.20	-.21	-.06	.13																
Fame	.35	.10	-.06	-.22	-.27															
Family	-.16	-.23	-.27	.02	.03	-.20														
Fellowship	-.17	-.07	.00	.18	-.04	-.16	.15													
Freedom	-.02	.12	.06	-.12	.13	-.11	-.19	-.12												
Happiness	.00	.04	-.11	-.23	-.26	.01	.06	.05	-.11											
Health	-.05	-.15	-.12	-.18	-.06	-.08	.12	-.14	-.04	.06										
Love	-.28	-.21	-.05	-.04	-.13	-.22	.33	.20	-.18	.14	-.03									
Nature	-.27	-.05	.14	.05	.18	-.30	-.06	-.02	.09	-.09	.00	-.01								
Peace	-.40	-.38	.05	.06	.36	-.34	.07	-.06	.04	-.09	.03	.10	.25							
Pleasure	.03	.26	-.06	-.20	-.34	.10	-.06	.05	-.04	.48	-.03	.04	-.09	-.23						
Power	.40	.27	-.17	-.16	-.27	.49	-.23	-.24	-.03	-.08	-.10	-.29	-.33	-.43	.07					
Self-worth	.11	-.14	-.06	-.12	-.08	.02	-.04	-.04	-.06	-.01	.04	-.05	-.12	-.09	-.11	-.03				
Social Service	-.25	-.23	.02	.48	.27	-.26	.03	.13	-.12	-.26	-.19	.02	-.12	.18	-.31	-.30	-.07			
Spirituality	-.30	-.25	-.08	.08	.06	-.26	.09	-.07	-.18	-.26	-.08	.07	-.03	.17	-.34	-.22	-.08	.19		
Wealth	.30	.11	-.13	-.34	-.37	.45	-.12	-.20	-.07	.17	.09	-.14	-.28	-.36	.30	.46	-.03	-.45	-.30	
Wisdom	.17	-.07	.15	-.09	.00	.01	-.24	-.19	.04	-.19	-.03	-.17	-.09	-.07	-.24	.09	.06	-.07	-.02	-.04

Table 4. Correlations among Operational Values

	Acc	Aff	Aut	Com	Cou	Cre	Dis	Dri	Fair	Fle	For	Hon	Hum	Kno	Loy	Obe	Ord	Rea	Ser	Tol
Accountability																				
Affection	-.17																			
Autonomy	-.08	-.18																		
Competency	.17	-.36	.13																	
Courage	-.28	-.14	.09	-.07																
Courtesy	.05	.29	-.30	-.28	-.28															
Creativity	-.27	-.07	.19	.06	.08	-.26														
Discipline	.13	-.34	-.05	.14	.11	-.22	-.23													
Drive	.02	-.36	.18	.39	.13	-.36	.09	.29												
Fairness	.00	.05	-.15	-.21	-.17	.12	-.14	-.19	-.30											
Flexibility	-.03	-.10	.07	.03	-.14	-.09	.23	-.22	-.06	.05										
Forgiveness	-.12	.35	-.28	-.44	-.13	.24	-.12	-.31	-.45	.23	.06									
Honesty	-.25	.04	-.19	-.17	-.13	.14	-.23	-.05	-.21	.24	-.13	.11								
Humor	-.36	.24	-.02	-.19	.06	.07	.15	-.28	-.19	-.07	.01	.09	-.18							
Knowledge	-.18	-.23	.14	.21	.13	-.29	.17	.05	.15	-.19	-.11	-.27	-.17	-.03						
Loyalty	.07	.12	-.27	-.24	-.01	.16	-.31	.02	-.15	.04	-.21	.07	.21	-.10	-.23					
Obedience	.03	-.11	-.28	-.11	.03	.08	-.26	.26	-.05	-.11	-.20	.03	-.01	-.14	-.10	.21				
Order	.15	-.24	-.03	.26	-.15	-.09	-.18	.31	.22	-.23	-.16	-.32	-.13	-.21	.02	-.07	.15			
Reason	-.03	-.36	.08	.25	.05	-.29	-.03	.16	.18	-.07	-.10	-.33	-.09	-.13	.29	-.18	-.03	.17		
Service	.06	.16	-.22	-.18	-.26	.25	-.07	-.24	-.27	.08	.01	.22	.05	-.04	-.27	.05	.00	-.12	-.27	
Tolerance	-.04	.20	-.12	-.30	-.22	.18	-.04	-.32	-.35	.25	.22	.42	.01	.03	-.27	-.08	-.14	-.28	-.27	.26

Table 5. Gender Differences in Life Values Rankings

Life Values	Mean Rank Score Males	Mean Rank Score Females	Ranked Higher by Gender	t-value	Difference in Score	Lower Bound	Upper Bound
Achievement	8.47	9.33	Males	-7.43	0.87	0.64	1.10
Adventure	13.95	16.01	Males	-14.93	2.06	1.78	2.34
Aesthetics	17.72	16.65	Females	9.50	1.06	0.84	1.28
Community	15.83	15.95					
Equality	4.57	4.20					
Fame	16.38	16.94	Males	4.44	0.57	0.32	.082
Family	4.07	4.16					
Fellowship	9.40	8.70	Females	6.01	0.70	0.47	0.93
Freedom	8.16	8.33					
Happiness	6.98	6.69	Females	2.69	0.29	0.08	0.51
Health	6.74	6.25	Females	3.94	0.50	0.25	0.74
Love	5.79	4.93	Females	7.10	0.86	0.62	1.10
Nature	15.90	15.22	Females	5.54	0.68	0.44	0.92
Peace	11.59	10.26	Females	9.98	1.33	1.07	1.60
Pleasure	12.35	12.56					
Power	14.82	16.78	Males	-14.36	1.96	1.69	2.23
Self-worth	6.67	5.72	Females	8.06	0.96	.072	1.19
Social Service	14.18	13.10	Females	8.30	1.08	.083	1.34
Spirituality	9.95	10.02					
Wealth	14.17	15.30	Males	-8.39	1.13	0.87	1.40
Wisdom	7.41	7.79	Males	-3.25	0.38	0.15	0.62

Table 6. Gender Differences in Operational Values Rankings.

Operational Values	Mean Rank Score Males	Mean Rank Score Females	Ranked Higher by Gender	t-value	Difference in Score	Lower Bound	Upper Bound
Accountability	7.30	6.63	Female	4.97	0.67	0.41	0.94
Affection	10.52	7.73	Female	15.34	2.79	2.43	3.14
Autonomy	10.52	10.11	Female	2.26	0.41	0.06	0.77
Competency	8.33	9.01	Males	-5.23	0.68	0.43	0.94
Courage	13.02	15.18	Males	-12.92	2.16	1.84	2.50
Courtesy	11.76	10.46	Female	8.60	1.30	1.00	1.60
Creativity	11.95	12.36	Males	-2.36	0.41	0.07	0.74
Discipline	11.06	13.93	Males	-18.73	2.87	2.57	3.17
Drive	10.32	12.23	Males	-12.12	1.92	1.61	2.23
Fairness	9.15	8.41	Female	5.48	0.74	0.48	1.00
Flexibility	11.24	10.32	Female	7.06	0.92	0.67	1.18
Forgiveness	13.32	11.58	Female	10.79	1.74	1.42	2.06
Honesty	4.39	3.95	Female	3.74	0.44	0.21	0.67
Humor	14.11	13.20	Female	5.48	0.91	0.58	1.23
Knowledge	9.29	10.65	Males	-8.50	1.36	1.04	1.67
Loyalty	8.23	8.51					
Obedience	17.37	18.76	Males	-12.43	1.39	1.17	1.61
Order	13.59	13.86					
Reason	9.96	12.43	Males	-16.49	2.47	2.17	2.76
Service	13.19	11.63	Female	11.14	1.56	1.29	1.84
Tolerance	12.33	9.98	Female	17.50	2.35	2.09	2.61

Table 7 shows the mean age cohort differences in rank scores of Life values and reports from a one-way Analysis of Variance (ANOVA) and post-hoc multiple range tests which age group differences were significant and for which groups. The 18-25 year old age group had significantly higher rank scores for freedom, adventure, power, community, and nature. They had significantly lower rank scores for health, peace, wealth, and fame. Combined with the 26-35 year olds, the "Generation X'ers" had significantly higher rank scores for love, fellowship, and pleasure; they had significantly lower scores for wisdom compared to the older age groups and significantly lower scores for spirituality compared to the over 50 age group. The 26-35 year-old age group had the highest mean rank scores for achievement, happiness, and wealth. Thus we see some differences in value priorities that may be attributable to youth, such as the characteristically lower value placed upon health and higher value placed upon freedom and adventure. Other differences might be attributable to generational differences, such as the higher value placed upon nature.

The 36 to 50-year-old age group represents the Baby Boom generation, born between approximately 1946 and 1961. In terms of life stage, this age cohort is in the later establishment stage for both their careers and families. They are perhaps experiencing some midlife transitions and some are beginning to enter midlife. This is the largest cohort, with 1543 members, or 36.2% of the sample.

Despite all the hoopla over the distinctiveness of the Baby Boom generation, the 36 to 50 year old age group tends to achieve intermediate scores between the younger and older age groups. With the 26-35 year olds they share the highest concern for family--close relations and support of loved ones--as a global Life value. This is perhaps not surprising because they are still in their child raising years. They also share with the 26-35 year olds a significantly lower ranking for the importance of social service. With the over age 50 cohort they place higher importance upon self-worth and peace, and less importance upon love, freedom, achievement, fellowship, and power. Also similar to the 51-79 age group, they place intermediate importance on wealth. The 18 to 25 year olds rank wealth three-quarters of a point lower in importance to the Baby Boomers while the 26 to 35 year olds have an average wealth rank score about half a point higher.

The last age group spans the ages of 51 to 79 and comprises 538 members or 12.6% of the sample. Most (N = 497) are under age 65; while 41 are between 65 and 79 years old. These people are in midlife and entering their early retirement years, a period that Levinson refers to as the "golden years" when the last of the children have left home, careers are at their highest point in earnings and responsibility, and other concerns such as health and retirement are beginning to gain in importance. All but four were born after 1925 and represent what Strauss and Howe refer to as the "Silent Generation," those born during the years of the Great Depression or World War II. As a result they were more likely to have experienced childhoods with some deprivations and sacrifice but later years of post-war affluence.

The 51-79 year old age group had significantly higher rank scores for health, wisdom, and aesthetics. In addition to the mean scores they shared in importance with the 36-50 year old group, they shared in importance a concern for social service--contributing to the welfare of others--with the youngest (18-25 year old) age group. On

the other hand, they differed from the younger age cohorts by having the lowest mean rank scores for adventure, community (being active in social and civic groups), fame, pleasure, and happiness. Many of these show significant linear trends: the importance placed upon health, aesthetics, self-worth, and peace increases with age, while the importance placed upon adventure, pleasure, and power decreases with age. The greatest mean difference was for adventure, with nearly a four point difference between the mean score for the youngest group and the oldest group. Health had a two and a half point difference while peace and pleasure both had about a two point difference.

Table 8 shows the mean age cohort differences in rank scores of Operational values and reports from a one-way Analysis of Variance (ANOVA) and post-hoc multiple range tests which age group differences were significant and for which groups. The 18-25 year old age group had significantly higher rank scores for courage, discipline, humor, loyalty, obedience, and reason. They had significantly lower rank scores for accountability, competency, fairness, flexibility, honesty, order and tolerance. Combined with the 26-35 year olds, the "Generation X'ers" had significantly lower rank scores for the importance of creativity when compared to the older age groups. The 26-35 year-old age group had the highest mean rank score for courtesy. Some of these differences in value priorities that may be attributable to youth, such as the higher value placed upon courage and the lower value placed upon accountability, order, and tolerance. Other differences might be attributable to generational differences. The lower importance placed upon creativity and flexibility is puzzling because younger people are generally thought to be more flexible and creative in their thinking, but for both these Operational values there is more than a two point difference on average between the youngest and oldest age groups.

The 36-50 year old age group share with the over age 50 cohort a higher importance placed upon fairness and service, and a lower importance placed upon humor and loyalty. Like the 26-35 year old age cohort, they place intermediate importance on tolerance.

The over 50 year old members of the "silent generation" are described by Strauss and Howe (1991) as a generation that was behaviorally conservative in their younger years but tending to be more experimenting and increasingly tolerant in their later years. They rank flexibility and tolerance significantly higher in importance than the younger groups, and rank discipline significantly lower. They give the highest endorsement to service or helpfulness as an important way of living, but they also rank forgiveness the lowest of any age group.

Table 7. Age Cohort Differences in Life Values Rankings

Life Values	Mean Rank Scores				F Ratio (df = 3, 4251)	Multiple range tests (Tukey-HSD, p,.05)
	(1) 18-25 years old	(2) 26-35 years old	(3) 35-50 years old	(4) 51-79 years old		
Achievement	8.73	8.52	8.92	9.20	4.55	(2) > (3) & (4)
Adventure	12.67	14.78	15.68	16.53	135.33	(1) > (2) > (3) > (4)
Aesthetics	17.94	17.47	17.13	16.29	27.65	(4) > (3) > (1) > (2)
Community	15.08	16.10	16.17	16.24	30.75	(1) > (2), (3) & (4)
Equality	10.26	10.64	10.38	10.25	NS	No difference
Fame	17.52	16.42	16.24	15.93	28.90	(1) < (2), (3) & (4)
Family	4.63	3.75	3.85	4.31	16.58	(2) & (3) > (1) & (4)
Fellowship	8.65	8.97	9.42	9.65	13.78	(1) & (2) > (3) & (4)
Freedom	7.59	8.31	8.56	8.80	16.40	(1) > (2), (3) & (4)
Happiness	6.97	6.21	6.97	7.59	20.85	(2) > (1), (3) & (4) (4) < (2), (3) & (1)
Health	7.77	6.57	6.08	5.21	66.95	(4) > (3) > (2) > (1)
Love	5.38	5.17	5.50	5.95	4.79	(1) & (2) > (3) & (4)
Nature	15.16	16.04	15.74	15.66	9.88	(1) > (2) & (3)
Peace	12.18	11.19	10.50	10.09	44.73	(4) & (3) > (2) > (1)
Pleasure	11.80	11.83	12.79	13.87	48.16	(1) & (2) > (3) > (4)
Power	14.93	15.48	15.94	16.13	13.82	(1) > (2) > (3) & (4)
Self-worth	7.17	6.26	5.88	5.72	3056	(4) & (3) > (2) > (1)
Social Service	13.44	14.18	13.91	13.24	9.16	(4) & (1) > (3) & (2)
Spirituality	10.27	10.48	9.79	8.90	6.41	(4) > (1) & (2)
Wealth	15.27	13.94	14.48	14.72	16.64	(2) > (3) & (4) > (1)
Wisdom	8.02	7.95	7.24	6.75	21.66	(4) > (3) > (2) & (1)

Table 8. Age Cohort Differences in Operational Values Rankings

Operational Values	Mean Rank Scores				F Ratio (df = 3, 4251)	Multiple range tests (Tukey-HSD, p,.05)
	(1) 18-25 years old	(2) 26-35 years old	(3) 35-50 years old	(4) 51-79 years old		
Accountability	8.73	6.49	6.24	6.64	86.83	(1) < (2), (3) & (4)
Affection	9.48	9.35	9.51	9.18	NS	
Autonomy	10.27	10.57	10.36	10.13	NS	
Competency	9.50	8.32	8.07	8.60	28.41	(1) < (2), (3) & (4)
Courage	10.56	15.21	15.14	14.87	212.77	(1) > (2), (3) & (4)
Courtesy	11.60	10.70	11.27	11.57	7.04	(2) > (1), (3) & (4)
Creativity	12.96	12.45	11.65	10.92	23.56	(4) > (3) > (2) & (1)
Discipline	10.92	12.36	12.67	13.17	35.59	(1) > (2), (3) & (4); (2) > (4)
Drive	10.51	10.79	11.28	12.16	14.83	(4) < (1), (2) & (3); (3) < (1)
Fairness	9.36	8.87	8.60	8.52	7.90	(1) < (3) & (4)
Flexibility	12.10	10.89	10.36	9.78	56.00	(4) > (3) > (2) > (1)
Forgiveness	13.00	13.00	12.53	11.53	11.84	(4) < (1), (2) & (3)
Honesty	4.83	4.10	3.92	3.98	14.67	(1) < (2), (3) & (4)
Humor	12.51	13.68	14.47	14.52	34.80	(1) > (2) > (3) > (4)
Knowledge	9.59	9.76	9.94	10.11	NS	
Loyalty	7.25	8.15	8.99	9.20	33.37	(1) > (2) > (3) > (4)
Obedience	16.82	18.09	18.37	18.67	49.13	(1) > (2), (3) & (4); (2) > (4)
Order	14.66	13.34	13.21	13.62	20.52	(1) < (2), (3) & (4)
Reason	10.55	10.66	11.11	11.67	8.15	(1) > (3) & (4); (2) > (4)
Service	13.49	12.64	12.12	11.81	26.39	(4) & (3) > (2) > (1)
Tolerance	12.30	11.52	11.10	10.23	31.74	(4) > (3) & (2) > (1)

Reliability and Validity

The VAL relies upon a single word or phrase and a single definition to define each value construct. Because the conventional approach to arriving at a reliable and valid measure of a construct is to use multiple items comprising a scale, concerns about single-item measurement naturally arise. As Braithwaite and Scott point out (1991), single-item measures possess both advantages and disadvantages to multi-item scales. The VAL offers a wide coverage of values in a rank-ordering procedure that facilitates its use in a variety of applied and research contexts. For example, respondents can be asked to complete the VAL twice: once to represent their own values, and a second time to record their perceptions of the values of their spouse or company. Multiple items would lengthen and complicate the measurement procedure enormously and the flexibility of the instrument would be lost.

The overriding question is whether single-item measures possess the same amount of validity as multi-item scales. Gorsuch and McFarland's (1972) work suggests that there is no simple answer; it depends on the items and the research questions being asked. Findings based upon the Rokeach Value Survey's measures of "salvation" and "equality," for instance, are highly consistent (see Braithwaite & Scott, 1991, p. 665 for a list of references). In contrast, studies relying on the measures of "helpful" and "freedom" have produced discrepant results. It is true that multi-item measurement provides a stronger basis for inferring group differences. Five items that tap different aspects of freedom, for example, provide the researcher with a clearer basis for interpretation than one question. When working in applied settings, however, we often do not have the luxury of extended time or unlimited patience on the part of our clients. We have by necessity chosen ease of use over expanded interpretability.

The VAL is simply a survey that allows one to accurately rank value terms. Although each value appears five times in the survey, it appears in unique combination with the other values, so there are no redundant sets from which some traditional measurement of internal consistency can be derived. However, the ranking consistency coefficient can serve as a good indicator of whether the completed questionnaire is valid or not.

Norms for the ranking consistencies of both adults and students can be used to obtain a percentile rank for a ranking consistency. There are no significant differences in ranking consistency by education or race, but women and those adults over age 25 have somewhat higher-ranking consistencies than men and those ages 25 and under. The mean ranking consistency score for Life Values is 92.75 (SD = 7.65), and the median is 94.8. The mean ranking consistency for Operational Values is 86.96 (SD = 10.98), and the median is 90.10.

Ranking consistencies below 70% are encountered two percent of the time for Life values and 7% of the time for Operational values. As a general rule, if a test contains a ranking consistency below 70% those results should not be considered valid for that section.

The question of whether the value terms used by the VAL produce consistent and reliable results that are generalizable can be answered for at least some of the constructs being measured. Two shorter versions of the Values Arrangement List were developed for use with high school populations. The VAL for Teens Part I measures value priorities for 15 Life values thought to be relevant to high school students, and the VAL for Teens Part II measures value priorities for 15 Operational values. The balanced incompleted block design employs a “15-3” design, i.e. the fifteen values are presented in blocks of three and the student test taker ranks one in each set as “most important”, one as “2nd”, and one as “least important” to him or her. Lists of the VAL for teens values and their definitions are shown in Table 9.

Table 9. VAL for Teens Parts I and II Value Terms

Life Values

Achievement: reaching your goals
 Adventure: pursuing excitement and taking risks
 Easy Life: no need to work hard; time to have fun
 Faith: belief in a higher power

 Family: a good home environment, parents
 Friendship: having friends you trust and relate to
 Health: a sound mind and healthy body
 Independence: freedom to be what you want

 Inner Peace: lasting harmony and freedom from violence
 Love: a lasting romantic relationship
 Power: influence, control of others

 Self-Worth: being proud of oneself
 Service: helping others

 Wealth: money to buy whatever you want
 Wisdom: knowledge, education

Operational Values

Athletics: being good at sports
 Beauty: being good looking and physically attractive
 Competence: being skillful, efficient and productive
 Cooperation: being helpful to others, a team player
 Courage: being brave and fearless
 Creativity: being imaginative and innovative

 Drive: being ambitious and hard working
 Forgiveness: being able to forgive, forget and let go
 Honesty: being truthful and sincere

 Humor: being entertaining, witty and funny
 Intelligence: being smart, knowledgeable and intellectual
 Love: being affectionate, loving and tender
 Popularity: being in with the right crowd, fashionable
 Self-reliance: being independent and free
 Tolerance: being patient, open-minded and accepting

Both the VAL and the VAL for Teens were completed by 59 college students, friends and family members during the Spring of 1997. The related value terms were correlated and the results for the Life values is shown in Table 10. When the terms are identical or nearly identical the correlations tend to be higher; such is the case for adventure with a cross-test correlation of $r = .79$. Wealth, health, family and power also appear to have highly consistent results, with cross-test correlations ranging from .70 to .80. Achievement had only a modest cross-test correlation of .32 and pleasure correlated with “easy life” $r = .36$.

The correlations for related Operational value terms is shown in Table 11. Some Operational value terms show good cross-test consistency and appear to have a good deal of saliency. These include humor, forgiveness, honesty, and creativity. Drive was alternatively defined as “being industrious and goal directed” in the VAL and “being ambitious and hard working” in the VAL for Teens. It had only a moderate cross-test correlation of $r = .47$, although drive as measured by the VAL for Teens had a higher correlation with “order -- being systematic, organized and well-kept” of $r = .60$. Affection as measured by the VAL had a correlation with love on the VAL for Teens, defined as “being affectionate, loving and tender”, of only $r = .30$. Apparently love and affection mean somewhat different things to people and are weighted somewhat differently in importance.

The external validity of the value rankings methodology was validated in two studies conducted in 1990 with an earlier version of the instrument known as the Values Prioritization Exercise (VPE). The first study predicted the importance of different values on the basis of Wechsler Adult Intelligence Scale (WAIS) subscale scores and two other tests included in the Personality Assessment System or PAS (Krauskopf & Saunders, 1994) known as the Stroop Color Word test and the Time Estimation test. The Stroop and Time Estimation were found to be especially good predictors of such instrumental values as ambition and politeness. These results were presented in a paper to the PASF annual meeting in Columbus, Ohio in April 1990 (Johnson, 1990). The second study correlated the VPE values with subscales of the Type Differentiation Indicator (TDI). These results were presented in a workshop at the Great Lakes APT conference in Dayton, OH in October 1990 (Johnson & Coppola, 1990).

Table 10. VAL Life Values with VAL for Teens Related Constructs

Achievement - attainment of goals and aspirations	
Achievement - reaching your goals	.32
Adventure - pursuing excitement and taking risks	
Adventure - pursuing excitement and taking risks	.79
Family - close relations and support of loved ones	
Family - a good home environment, parents	.70
Freedom - independence in thought and lifestyle	
Independence - freedom to be what you want	.51
Fellowship - having important relationships with friends	
Friendship - having friends you trust and relate to	.54
Health - soundness of body and mind	
Health - a sound mind and healthy body	.76
Love - intimacy, devotion and warmth	
Love - a lasting romantic relationship	.64
Pleasure - entertainment, relaxation and fun	
Easy Life - no need to work hard, time to have fun	.36
Power - authority, control and influence	
Power - influence, control of others	.70
Self-Worth - high regard for oneself and others	
Self-Worth - being proud of oneself	.69
Social Service - contributing to the welfare of others	
Service - helping others	.63
Spirituality - at one with God; religious beliefs	
Faith - belief in a higher power	.68
Wealth - affluence, ease, and prosperity	
Wealth - money to buy whatever you want	.80
Wisdom - insight, knowledge, and understanding	
Wisdom - knowledge, education	.61

Note. (n= 59), Significance: $p < .01$ (two-tailed) for all correlations except $p < .05$ for $r = .32$

Table 11. VAL Operational Values with VAL for Teens Related Constructs

Affection -- being passionate, loving and caring	
Love -- being affectionate, loving and tender	.30
Competency -- being productive, efficient and skillful	
Competence -- being skillful, efficient and productive	.55
Creativity -- being inventive, original and innovative	
Creativity -- being imaginative and innovative	.68
Drive -- being industrious and goal directed	
Drive -- being ambitious and hard working	.47
Forgiveness -- being able to excuse and let go	
Forgiveness -- being able to forgive, forget and let go	.79
Honesty -- being moral, ethical and truthful	
Honesty -- being truthful and sincere	.73
Humor -- being light-hearted, witty and funny	
Humor -- being entertaining, witty and funny	.81
Knowledge -- being wise and scholarly	
Intelligence -- being smart, knowledgeable and intellectual	.54
Order -- being systematic, organized and well-kept	
Drive -- being ambitious and hard working	.60
Service -- being supportive, aiding and assisting	
Cooperation -- being helpful to others, a team player	.30
Tolerance -- being open, accepting and patient	
Tolerance -- being patient, open-minded and accepting	.64

Note. (n= 57), Significance: $p < .01$ (two-tailed) for all correlations except $p < .05$ for $r = .32$

Values and Personality Type & Traits

Career development consultants have been aware for many years that there exists a modest, but important relationship between one's personality and the importance one places on certain values. It has also been observed that there is a stronger relationship between one's personality and one's Operational values, i.e. the desirable modes of conduct for achieving one's life goals, than between one's personality preferences and one's ultimate goals or Life values. It has been estimated that up to 25% of the variance in the ranking of the importance of values is determined by personality preferences.

The author conducted a study relating values derived from the VAL to psychological type, using the Myers-Briggs Type Differentiation Indicator. A summary of the study was published in the Autumn 1995 issue of the *Bulletin of Psychological Type* (Johnson, 1995). This chapter summarizes the relationships found to exist between the Personality Profiler and the Values Arrangement List (VAL). We have correlated the Personality Profiler with the VAL for a sample of 774 cases. The sample consists predominately of ORA cases from organizational consulting and management development programs.

Nearly all of the study participants are adults (average age = 36.9 years, standard deviation = 9.8 years, ranging in age from 18 to 65). Fifty-six percent of the participants are males. Their years of formal education ranged from 9 years of school to over 20 years including college, graduate school, and postdoctoral study. By highest educational level attained, 1% have less than a high school diploma, 16% have a high school diploma, 21% have some college, 45% possess a college degree, 17% have masters degree level degrees, and 1% have doctorate level or postdoctoral level training. Among those who reported their racial or ethnic identity, 88.2% reported they were White, 5.3% said they were Black, 3.5% were Asian, and 3.1% reported being from other racial or ethnic groups.

The important correlations are summarized in Tables 12 and 13 in systematic order, making the assumption that the personality factors predict the importance of one's values. First we report the important personality contributions to the importance of the Life Values, in alphabetical order, and then the Operational Values. Keeping with the convention adopted by the Association for Psychological Type (APT), all correlations are reported as negative if the direction of the relationship is toward the E, S, T, or Z poles, and reported as positive if in the direction of the I, N, F, or A poles.

As we expected from our previous research relating personality and values (Johnson & Coppola, 1990; Johnson, 1995), the size of the correlations found to exist between personality preferences and the Operational values are larger than those generally found to exist between the Life values and personality. The most important relationships were found to exist between the importance of *creativity* and **intuition** ($r = .56$ with S-N), the importance of *reason* and **thinking** ($r = -.59$ with T-F), and the importance of *order* and **organizing** ($r = -.51$ with Z-A). *Affection*, *service* and *tolerance* were all found to be important values for preference for **feeling** (affection correlated .44 with T-F and both service and tolerance correlated $r = .40$ with T-F).

In order to estimate the amount of variance accounted for in one's Operational value system by psychological type we ran a multiple regression with each of the four dimensions of psychological type (E-I, S-N, T-F, and Z-A) continuous variables as predictors for each Operational value. The multiple R correlations ranged from a low of .21 to a high of .60 and the average across the 21 values was $R = .395$. The average amount of variance accounted for (R squared) was 15.6%.

Table 12. Life Values and Personality

Life Value	Personality Correlates
Achievement --attainment of goals and aspirations.	Correlates with the thinking end of the thinking-feeling continuum, $r = -.32$. Correlates with all four T-F facet scales in the direction of a thinking preference: Rational-Empathetic, $r = -.25$; Autonomous-Compassionate, $r = -.27$; Analytic-Warm, $r = -.20$; Competitive-Nurturing, $r = -.27$.
Adventure --pursuing excitement and taking risks	Correlates with the extraverted preference on the Participative-Reflective facet scale $r = -.22$. Correlates with a preference for intuition on the S-N scale, $r = .19$. Correlates with a preference for thinking on the T-F scale, $r = -.21$. The highest facet scale correlation is: Competitive-Nurturing $r = -.26$. Correlates with the adaptive preference $r = .24$ and with: Deliberate-Spontaneous, $r = .29$; Conforming-Non-conforming, $r = .21$.
Aesthetics --appreciation and enjoyment of the arts	Correlates with intuition $r = .22$ and with: Concrete-Abstract, $r = .32$; Conventional-Visionary, $r = .22$.
Community --activity in social or citizen groups	There is a slight tendency for a feeling preference to be related, $r = .23$ and with: Autonomous-Compassionate, $r = .22$
Equality --justice and fair treatment for all	No important relationships.
Fame --recognized and known for your contributions	A slight relationship with extraversion , $r = -.15$ and with: Outgoing-Intimate, $r = -.18$.
Family --close relations and support of loved ones	A slight relationship with sensing , $r = -.20$ and with: Concrete-Abstract, $r = -.19$; Conventional-Visionary, $r = -.19$.
Fellowship --having important relationships with friends	No important relationships.
Freedom --independence in thought and lifestyle	A slight relationship with feeling , $r = .21$, and the Rational-Empathetic facet scale, $r = .23$.
Happiness --satisfaction, joy and contentment	No important relationships.
Health --soundness of body and mind	No important relationships.
Love --intimacy, devotion and warmth	This is clearly related to feeling on the T-F scale in a small but significant way, $r = .27$. Rational-Empathetic, $r = .26$; Autonomous-Compassionate, $r = .19$; Analytic-Warm, $r = .20$; Competitive-Nurturing, $r = .17$.

Nature --respect for animals and the environment	This is related to introversion on the E-I scale in a small but consistent way, $r = .21$. Talkative-Quiet, $r = .13$; Intrepid-Reserved, $r = .17$; Outgoing-Intimate, $r = .15$; Participative-Reflective, $r = .25$.
Peace --enduring harmony and freedom from violence	Correlates $r = .17$ with participative-reflective and $r = .21$ with competitive-nurturing.
Pleasure --entertainment, relaxation and fun	No important relationships, but correlates with the thinking end of the autonomous-compassionate facet scale, $r = -.20$
Power --authority, control and influence	Correlates with extraverting , $r = -.16$ and thinking $r = -.32$. The highest facet scale correlation is with: Competitive-Nurturing, $r = -.31$
Self-Worth --high regard for oneself and others	No important relationships.
Social Service --contributing to the welfare of others	This is clearly related to preference for feeling on the T-F scale, $r = .40$. Rational-Empathetic, $r = .30$; Autonomous-Compassionate, $r = .39$; Analytic-Warm, $r = .23$; Competitive-Nurturing, $r = .31$.
Wealth --affluence, ease, and prosperity	Related to thinking on the T-F scale, $r = -.24$ and all of the T-F facet scales in the direction of thinking: Rational-Empathetic, $r = -.16$; Autonomous-Compassionate $r = -.27$ Competitive-Nurturing, $r = -.20$.
Wisdom --insight, knowledge and understanding	Small but significant correlations with introversion , $r = .15$ and the participative-reflective facet scale, $r = .21$. Also with thinking on the T-F scale, $r = -.26$ and the T-F facet scales: Rational-Empathetic, $r = -.26$; Analytic-Warm, $r = -.25$; Competitive-Nurturing, $r = -.20$.

Table 13. Operational Values and Personality

Operational Value	Personality Correlates
Accountability --being responsible, credible and trustworthy	There is a slight but significant correlation with sensing on the S-N scale, $r = -.17$ and with the facet scale concrete-abstract, $r = -.27$. There is also a slight but significant correlation with being organized on the Z-A dimension, $r = -.21$; and with: Reliable-Casual, $r = -.24$.
Affection --being passionate, loving and caring	Clearly related to a preference for feeling on the T-F scale, $r = -.44$, and the T-F facet scales: Rational-Empathetic, $r = .42$; Autonomous-Compassionate $r = .29$, Analytic-Warm, $r = .36$; Competitive-Nurturing, $r = .28$.
Autonomy --being self-directing, self-reliant and free	Clearly related to a preference for intuition on the S-N scale, $r = .22$ and the S-N facet scales: Concrete-Abstract, $r = .19$, Practical-Innovative, $r = .15$; Conventional-Visionary, $r = .18$; Conservative-Trend-setting, $r = .18$. Also related to a thinking preference on the T-F scale $r = -.25$ and the following T-F facet scales: Autonomous-Compassionate, $r = -.17$; Competitive-Nurturing, $r = -.25$. It's also related to non-conforming on the Z-A facet scale, Non-conforming-Conforming, $r = .23$.
Competency --being productive, efficient and skillful	Clearly related to thinking on the T-F scale, $r = -.35$ and all of the T-F facet scales: Rational-Empathetic, $r = -.26$; Autonomous-Compassionate, $r = -.27$; Analytic-Warm, $r = -.30$; Competitive-Nurturing, $r = -.23$.
Courage --being brave, intrepid and fearless	No important relationships, although a slight relationship exists with competitive on the T-F competitive-nurturing facet scale $r = -.16$ and non-conforming on the Z-A non-conforming-conforming facet scale $r = .16$.
Courtesy --being respectful, considerate and polite	Correlated with sensing and feeling . Sensing-Intuiting , $r = -.27$; Thinking-Feeling , $r = .34$. Particularly with the following T-F facet scales: Rational-Empathetic, $r = .25$; Autonomous-Compassionate, $r = .21$; Analytic-Warm, $r = .27$; Competitive-Nurturing, $r = .33$.
Creativity --being inventive, original and innovative	Clearly <u>strongly</u> related to intuition and moderately related to adapting . The correlation with sensing-intuiting is $r = .57$ and is also moderately high with the following facet scales: Concrete-Abstract, $r = .53$; Practical-Innovative, $r = .40$; Conventional-Visionary, $r = .44$; Conservative-Trend-setting, $r = .31$. The correlation with adapting on the Z-A scale is smaller, $r = .30$, as it is with the following Z-A facet scales: Planned-Open-ended, $r = .23$; Deliberate-Spontaneous, $r = .26$; Conforming-Non-conforming, $r = .28$.

Discipline --being restrained and self controlled	A moderate relationship exists with organizing and there appears to be a small but important relationship with thinking . The correlation with thinking-feeling is -.26 and with the following facet scales it is: Rational-Empathetic, $r = -.28$; Analytic-Warm, $r = -.19$; The correlation with organizing-adapting is -.31 and with the following facet scales it is: Planned-Open-ended, $r = -.25$; Reliable-Casual, $r = -.29$, Deliberate-Spontaneous, $r = -.22$.
Drive --being industrious and goal directed	Correlated with thinking on the T-F dimension $r = -.35$ and particularly with the T-F facet scales: Rational-Empathetic, $r = -.30$; Competitive-Nurturing, $r = -.32$; Also related to extraversion , $r = -.21$ and the E-I facet scales: Intrepid-Reserved, $r = -.23$; Participative-Reflective, $r = -.20$ and the S-N facet scale: Practical-Innovative, $r = .21$.
Fairness --being unbiased, impartial and just	No important relationships.
Flexibility --being adaptable and able to change	Clearly correlated with the adapting on the organizing-adapting dimension $r = .30$ and all of the Z-A facet scales: Planned-Open-ended, $r = .27$; Reliable-Casual, $r = .17$; Deliberate-Spontaneous, $r = .23$; Conforming-Non-conforming, $r = .23$.
Forgiveness --being able to excuse and let go	Clearly related to feeling on the thinking-feeling dimension $r = -.37$ and all of the T-F facet scales: Rational-Empathetic, $r = .34$; Autonomous-Compassionate, $r = .22$; Analytic-Warm, $r = .28$; Competitive-Nurturing, $r = .29$;
Honesty --being moral, ethical and truthful	A slight correlation with feeling and compassionate on the T-F autonomous-compassionate facet scale $r = .17$.
Humor --being light-hearted, witty and funny	Related to adapting on the Z-A dimension $r = .29$ and to abstract-concrete $r = .21$. On the Z-A dimension it is particularly related to the facets: Reliable-Casual, $r = .31$; Deliberate-Spontaneous, $r = .23$.
Knowledge --being wise and scholarly	Correlates with thinking ($r = -.34$ with the T-F global scale) and with all of the T-F facet scales: Rational-Empathetic, $r = -.26$; Autonomous-Compassionate $r = -.20$; Analytic-Warm, $r = -.31$; Competitive-Nurturing, $r = -.27$; Slightly correlated with intuiting . With the S-N global scale it correlates $r = .17$ and $r = .16$ with Conservative-Trend-setting.
Loyalty --being dedicated, devoted and steadfast	Correlates with sensing and slightly with feeling . S-N, $r = -.26$; Concrete-Abstract, $r = -.25$; Conventional-Visionary, $r = -.24$; T-F, $r = .24$; Rational-Empathetic, $r = .17$; Autonomous-Compassionate $r = r = .15$; Analytic-Warm, $r = .15$.
Obedience —being compliant, deferential and yielding	Correlates slightly with sensing and organizing . S-N, $r = -.22$; Concrete-Abstract, $r = -.25$; Conventional-Visionary, $r = -.18$; Conservative-Trend-setting, $r = -.19$; Z-A, $r = -.22$; Conforming-Non-conforming, $r = -.30$.

Order--being systematic, organized and well-kept

Moderately related to **organizing** ($r = .51$) and all of the Z-A facet scales: Planned-Open-ended, $r = -.51$; Reliable-Casual, $r = -.40$; Deliberate-Spontaneous, $r = -.35$; Conforming-Non-conforming, $r = -.19$. Also, modestly related to **sensing**. With S/N, $r = -.27$ and **thinking**. T/F, $r = -.26$; The particular facet scales are: For S-N: Concrete-Abstract, $r = -.35$; Conventional-Visionary, $r = -.24$; For T-F: Rational-Empathetic, $r = -.30$; Autonomous-Compassionate, $r = -.21$; Analytic-Warm, $r = -.21$.

Reason--being rational, analytical and logical

Strongly related to **thinking** on the TF scale, $r = -.59$. The correlation observed between reason and thinking is the highest between any value and the Personality Profiler. Reason is also correlated with all of the T-F facet scales: Rational-Empathetic, $r = -.55$; Autonomous-Compassionate, $r = -.37$; Analytic-Warm, $r = -.56$; Competitive-Nurturing, $r = -.32$. It is also related to the Z-A facet scale: Deliberate-Spontaneous, $r = -.21$.

Service--being supportive, aiding and assisting

Clearly related to **feeling** ($r = .40$) and all of the T-F facet scales: Rational-Empathetic, $r = .32$; Autonomous-Compassionate, $r = .31$. Analytic-Warm, $r = .28$; Competitive-Nurturing, $r = .32$.

Tolerance--being open, accepting and patient

Also clearly related to **feeling** ($r = .40$) and to all of the T-F facet scales: Rational-Empathetic, $r = .34$; Autonomous-Compassionate, $r = .26$; Analytic-Warm, $r = .30$; Competitive-Nurturing, $r = .34$.

Section 3. Presenting and Applying the VAL

General Use Overview

The Values Arrangement List has been developed for use in both individual counseling and coaching sessions, and group training seminars. While the following information describes a process commonly used as a guide for facilitators' groups, it has also been used with individual clients and couples in hourly counseling sessions.

Ice Breakers

Initial introduction into the subject of personal values can either set the pace of your program as exciting and worthwhile or lead participants to conclude that the subject of values is merely academic and of little practical value. In many cases the introduction you use will be determined by the goals of the program and the outcomes that are desired. The exploration of values can be a stand-alone topic as in conflict management, or can be a segment of a broader program agenda, such as in career development, teambuilding or management development training. Over a quarter of a century of training and counseling experience in the area of personal values has led to the successful use of several broad icebreaker exercises. These exercises are outlined below.

Ice Breaker Exercise # 1: The 5 Most Important Concerns In Your Life.

In this exercise the facilitator instructs the target audience to identify five of the most important concerns, cares or beliefs in their lives and then list them on a separate piece of paper. After several minutes have passed the instructor asks each person to read his or her list aloud to the group. Once all participants have read their lists the instructor asks the group to identify the common values that were identified. You will generally hear common concerns such as family, work achievement, self-worth, friendship, religion, wealth, as well as others. Generally there is a link to the values they have already seen in the VAL survey, however they are often described in their own terms. This exercise requires approximately 10 to 15 minutes to complete.

Ice Breaker Exercise #2: Identifying Your Ideal Values

In this exercise the VAL sorting cards are used to determine participants' desired values and belief systems. The exercise is described in the companion workbook called "Understanding Your Personal Values" on page 13. The results are tabulated on a separate piece of paper or on page 14 of the workbook when it is used. The results can be discussed and participants can read their top seven "core" values aloud to the group if desired. This exercise is similar to Exercise #1 above but is fundamentally different by asking them to rank their ideal values, not those that are actually believed to be important. The resulting list can be used to compare actual beliefs as described in the VAL report with those that are thought to be important. Generally the lists are very similar, particularly when the participants are in touch with themselves. It is also interesting to note the differences between the two lists. Often one or two desired values are listed higher than the priority given in the survey process. This information may point to a potential need for clarification. This exercise requires 30 minutes to complete. An abbreviated form of this exercise can be performed by asking participants to identify and rank only their top 7 Life and top 7 Operational values. This will require 15 minutes to complete.

While these two exercises have a proven track record we encourage you to create your own introductory values exploration exercises. Additional exercises can be found by examining the additional reference materials found in the Values Clarification Exercise section below.

Values & Value Systems Defined

The next step is to define values and value systems for the participants. We have found that the definition found in the Dictionary of Psychological and Psychoanalytic Terms (English and English, 1958) works well for this purpose.

Value: an abstract concept, often merely implicit, that defines for an individual or for a social unit what ends or means to an end are desirable.

Value System: the more or less coherent set of values that regulate a person's conduct, often without the awareness that they do so. The set of values overtly accepted by a person or a social group.

These definitions may be presented to an individual or group on newsprint or overhead transparency. The first important concept to get across is that the implicit nature of values makes it all the more important to explore, define, clarify and consciously recognize what is important to them. The consequence of not doing so is the blind acceptance of socially derived and defined values. The second concept is that our values are complex and arranged in a hierarchical fashion. The priorities we ascribe to ourselves, when understood, can aid us in achieving a higher quality of life and greater satisfaction in our relationships with others. You may choose to have participants reflect on the values they defined in the ice breaker exercise and ask them "how much time have you spent thinking about or analyzing your values?"

VAL Report Features

When participants have an understanding of what values are and what they mean it is time introduce them to their own VAL results. The method that has worked best is to present an example VAL report on an overhead transparency. Using your own VAL report as the example sends the message that values can be openly shared. If you decide to use an example other than your own you should be familiar with the results and remember to protect the confidentiality of the individual named on the report. Next you will want to cover the mechanics and features of the example report. First review the general features and demographic information such as Name, Gender etc., Ranking Consistency, Rank Scores and the two lists of values, Life and Operational.

At this point you will want to address the distinction between Life and Operational values. On newsprint or overhead transparency define both.

Life Values: The super goals or long-term aspirations and beliefs, they are the "ends" we strive for. They tend to have either a Personal (internal) or Social (external) focus, although some have both.

Operational Values: The daily behaviors and concerns by which we conduct our lives, they act as the "means" to the "ends." They tend to have a Moral (socially right or good) or Competency (personal effectiveness) focus, although some have both.

Going back to the example report, point now to the Social (S) and Personal (P) designations associated with Life Values and Moral (M) and Competency (C) designations associated with Operational Values. Note on the example the specific focus that is being projected.

Then describe the Ranking Consistency Scores (RC) and Rank Score (RS) features in-depth. Start with the RC. Describe what an illogical circle is (A>B>C, but C>A or Family >Self-worth>Health, but Health>Family). Then describe a logical circle (A>B>C, and A>C or Family >Self-worth>Health, and Family>Health). RCs range from 0 to 100% but it is unlikely that you will see scores of 100% or 60% or less. They are commonly found between 80 and 95 percent. The higher the score the more consistent the participant was in ranking the values in each set and the lower the score the less consistent they were. Consistency is not good or bad, right or wrong, although it may point to the individual's clarity or lack of clarity in defining their value system. Note that there are two RCs, one for each list.

Next, point to the RS associated with each value. Note the relationship between the RC and the RS. If a person were completely consistent (100% RC) the values would be ranked from 1 to 21 with no ties. Due to the complexity of the exercise it is likely for ties to occur. Sometimes there is no value ranked as 1. That is, no one single value was always ranked first. Point out that when ties occur they are listed alphabetically. Suggest that participants at some point clarify the actual, non-alphabetical, ranking order. Describe the meaning of gaps in the RS's, particularly when they occur in the top seven values. Finally indicate that the top 7 to 10 values in each list are considered their "core values," those beliefs that define their actions, motivations and aspirations.

Handing Out Results and Posting Values

When participants are ready you should distribute their survey results. Begin by reminding them that the survey is only a reflection of what their values may be and this reflection needs to be clarified and understood. The goal of the survey is to make clarification possible by giving them a point of departure. Where they finally end up is in part the role of the clarification process. Have them review their results. Give them 10 minutes to analyze their reports independently. The facilitator should make him or herself available to clarify the meaning of the RC and RS for anyone who may be concerned about their lower scores. It also aids the facilitator to study individual reports in advance, noting those participants with RC scores below 90% and those with unique RS's.

Once participants have reviewed their reports you may decide to bring these results out into the open by asking people to post their lists on a poster size (18 x 24) size sheet of paper with magic markers. We have found that using a higher quality stock of paper, while costing more, may save markers from leaking through and ruining tablecloths and table veneers. Participants are instructed to write their name in the

upper corner. Down the left hand side they write their 21 Life Value labels only, i.e., Family, Health, etc. Operational Values are then written down the right hand side. Participants should note the RS ties at this point and rearrange them if the alphabetical listing doesn't appear correct for them. Posters are then put on the walls in any order that makes sense. Having used the values arrangement list in conjunction with the Personality Profiler, which measures personality along the four Jungian dimensions, we often arrange the charts by participant's temperament style (NF, NT, SA, or SZ). You may also choose to arrange them by coherent groups or teams. Participants are then encouraged to review others lists and look for patterns or trends. The entire process may take 30 minutes to complete.

The Origin of Personal Values

When participants return from their review of each others' charts we suggest that the facilitator then lead the group through a discussion of the origins of values by asking the question, "Where do your values come from, and how are they formed?" The general concepts they bring up are often related to: Culture, Family, Religion, Education, Work, Age, and Friends among others. Ask questions for clarification on "what they mean" or "how so." Use your own experience to shed light on the subjects. You will often be asked, "but don't values change over time?" And the question is a good one. The answer is that research suggests that values are relatively stable over the course of one's life. What may change is the clarity one has regarding what is important. People become more aware of their beliefs over time. Knowledge of life stages development is a perfect way to explain some of the common value changes that people generally experience. Ask participants, "what values from the two lists do 16 and 17 year olds hold important? What about 40 year old men? What about 70 year olds?" The point becomes immediately clear to them that as we age our values and how we define them develop.

On the other hand it is unlikely that significant shifts in a values ranking will be seen when an individual is 25 to when they are 75. There are situations in which exposure to significant life events result in dramatic behavioral or belief changes, i.e., such as serious health issues arising or religious conversions. However, one might suggest that often these alterations are transient or situational. This discussion should lead to a lively review of the impact of society and culture on unique value systems. What are the core values espoused by American society? How do different foreign cultures express their values i.e., what are the core values expressed in Japan, Russia or Brazil? A brief overview of the impact of religion on our values is appropriate in certain environments, however be sure to include all religions and beliefs represented in the group. The overall objective of this discussion is a deeper understanding of the origins of our values. There is never a final answer when it comes to the values of an individual. A sub-objective is to have participants reflect on the factors influencing their values. Societies and cultures endorse specific values and a person's values, as seen in the results, may be a reflection of these values, not the individual's own consciously determined values. This exercise requires 20 minutes to complete.

Values Clarification Exercises

Now that participants have a basic foundation of what their values are, and how their values have been developed, they can seek to clarify the values they possess and determine if a higher level of clarification is appropriate. Depending on how much time you have devoted to the clarification subject these topics can be covered in class or on their own. The workbook "Understanding Your Personal Values" is a companion piece that can be used in both cases. Experience has led to the use of a few basic exercises outlined in this workbook that show what role values play in our lives, including, Defining your Values, Values and Effective Decision-Making; Values and Resolving Conflict; Understanding and Respecting Yourself and Others, and Writing your Life Mission.

Values Related Quotes

"It is essential that the student acquire an understanding of and a lively feeling for values. He must acquire a vivid sense of the beautiful and of the morally good. Otherwise, with his specialized knowledge, he more closely resembles a well-trained dog than a harmoniously developed person."

Albert Einstein

A thing that will help you in your inner life is to set up in your mind a standard of value so that you know what is really significant, important and valuable.

John Miller

Too many men who know all about financial values know nothing about human values.

Roy L. Smith

Life has value only when it has something valuable as its object.

Hegel

Conscience will stand guard over the values you put into your moral nature.

E. Stanley Jones

References

- Allport, G. W., & Odbert H.S. (1936). Trait names: A psycho-lexical study. Monograph. (no. 211).
- Allport, G.W. Vernon, P.E. and Lindzey G. (1951). A study of values. Boston: Houghton.
- Allport, G.W. (1955). Becoming: basic considerations for a psychology of personality. Hartford: Yale University Press.
- Arnold, W. (1995). A manual for church use of the Values Arrangement List. Unpublished Draft. Mount Laurel, New Jersey: Renewal Publishing.
- Braithwaite, V. A. & Law, H. G. (1985). Structure of human values: Testing the adequacy of the Rokeach Value Survey. *Journal of Personality and Social Psychology*, **49**, 250-263.
- Braithwaite, V. A. & Scott, W. A. (1991). Values. In J. P. Robinson, P. R. Shaver, and L. S. Wrightsman (eds.), *Measures of Personality and Social Psychological Attitudes*. New York: Academic Press.
- Buehler, C. (1933) Der menschliche Lebenslauf als psychologisches Problem. Leipzig: Hirzel
- Butler, D.J. (1957). Four philosophies: and their practice in education and religion. New York Harper and Brothers.
- Chiang, H. and Maslow, A.H. (1969). The Healthy Personality, New York: Van Nostrand Reinhold Co.
- Cochran, W. G. & Cox, G. M. (1957). Experimental designs (second edition). New York: Wiley & Sons. Chapters 9-13.
- English, H.B. & English, A.C. (1958). A comprehensive dictionary of psychological and psychoanalytic terms. New York: Longmans, Green and Co.
- Golden, E. S., Johnson, D. A. & Golden, J. P. (1994). Understanding your personal values. Mount Laurel, New Jersey: Renewal Publishing.
- Gorsuch, R. L. & McFarland, S. G. (1972). Single vs. multiple-item scales for measuring religious values. *Journal for the Scientific Study of Religion*, **11**, 53-64.
- Gould, R.L. (1978). Transformations; growth and change ion adult life. New York: Simon and Schuster.

- Greer, T. & Dunlap, W. P. (1997). Analysis of variance with ipsative measures. *Psychological Methods*, **2** (2), 200-207.
- Gulliksen, H. & Tucker, L. R. (1959). An IBM program for paired comparisons from balanced incomplete blocks--A 6-31 design. Educational Testing Service research memorandum, RM-59-5, Princeton, NJ.
- Gulliksen, H. & Tucker, L. R. (1961). A general procedure for obtaining paired comparisons from multiple rank orders. *Psychometrika*, **26** (2), 173-183.
- Hicks, L. E. (1984). Conceptual and empirical analysis of some assumptions of an explicitly typological theory. *Journal of Personality and Social Psychology*, **46**, 1118-1131.
- Hicks, L. E. (1985). Dichotomies and typologies: Summary and implications. *Journal of Psychological Type*, **10**, 11-13.
- James, W. (1890). *The principles of psychology. Vol 1*. New York: Dover Publications, Inc.
- Johnson, D. A. (1990, April). Using the Personality Assessment System to predict values. Paper presented at the annual conference of the Personality Assessment System Foundation, Columbus, Ohio.
- Johnson, D. A. (1995, Winter). How psychological type influences our values. *Bulletin of Psychological Type*, **18** (2), 41-42.
- Johnson, D. A. & Coppola, R. J. (1990, October). Values and type. Paper and workshop presented at the Association for Psychological Type Great Lakes Region Conference, Dayton, Ohio.
- Kendall, M. G., (1955). *Rank correlation methods* (Second edition). London: Griffin. Chapter 11.
- Kinnier, R. T. (1995). A reconceptualization of values clarification: Values conflict resolution. *Journal of Counseling and Development*, **74**, 18-24.
- Krauskopf, C. J. & Saunders, D. R. (1994). *Personality and ability: The personality assessment system*. Lanham, MD: University Press of America.
- Krathwhol, D. Bloom, B. & Masia, B. (1956). *Taxonomy of educational objectives: the affective domain*, New York: David McKay Company, Inc. out of print.
- Levinson, D.J. (1978). *The seasons of a man's life*. New York: Alfred A. Knopf,
- Loomis, C.P. & Loomis Z.K. (1961) *Modern Social Theories*. Princeton, New Jersey: D. Van Nostrand Company, Inc. pg 489-581

- Lownethal, M.F., Thurnher, M. & Chiriboga, D. (1976). Four stages of life. San Francisco: Joseey-Bass.
- Miller, G.A. (1956). The magical number seven, plus or minus two: some limits on our capacity for processing information. *Psychological review*, 63, 81-97.
- Morris, G. (1956). Varieties of Human Values. Chicago: The University of Chicago Press.
- Moustakas, C.E. (1956). The self: explorations in personal growth. New York Harper & Brothers.
- Mueller, D.J. (1974) A Test of the Validity of Two Scales on Rokeach's Value Survey, *Journal of Social Psychology*, 94, 289-290.
- Rokeach, M. (1967). *Value survey*. Sunnyvale, CA: Halgren Tests.
- Rokeach, M. (1973). The nature of human values. New York: Free Press. Out of print.
- Sheehy, G. (1974). Passages: predictable crises of adult life. New York: E.P. Dutton & Co. Inc.
- Strauss, W. & Howe, N. (1991). Generations: The history of America's future, 1584 to 2069. New York: William Morrow and Company.
- Super, D.E. (1957). The psychology of careers: an introduction to vocational development. New York: Harper & Row.
- Torgerson, Roger (1958). Theory and methods of scaling. New York: Wiley & Sons. Chapters 8-10.