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A TEST OF CARL GUSTAV JUNG'S THEORY: THE RELATIONSHIP OF  
EXTRAVERSION -- INTROVERSION TO VALUES, AGE, SEX,  
AND FAMILIAL STATUS

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1978

This Dissertation submitted by Paul T. Hirdman in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

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A TEST OF CARL GUSTAV JUNG'S THEORY: THE RELATIONSHIP OF  
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Signature Paul T. Widman

Date April 21, 1978

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## ABSTRACT

### Problem

The purpose of this study was to compare the Jungian personality types of extraversion and introversion according to sex, age periods, and familial relationship. Another major focus of this study was a comparison of extraversion and introversion with personality values.

### Procedure

The subjects in this study consisted of the fathers and mothers, and sons and daughters of 27 families (a total of 112 subjects) who were members of a rural Lutheran Church in North Dakota during 1977.

All subjects were administered the Myers-Briggs Type Indicator, Form F, the Study of Values, and completed a personal data form. Subjects were divided into groups based on age, sex, and familial status.

The statistical techniques employed were a one-way analysis of variance and Dunn's 'C' Procedure for mean comparisons. The .05 level was used as the criterion level for statistical significance.

### Results

1. There was no significant difference on extraversion and introversion between the group of fathers and mothers and the group of sons and daughters.

2. No significant differences were found among fathers, mothers, sons, and daughters on extraversion and introversion.

3. No significant differences were found within the fathers, mothers, sons, and daughters groups classified by their extraversion and introversion scores on any of the six values of the Study of Values.

#### Conclusions

No statistically significant support was found for differences on extraversion and introversion values according to the age stages of youth and young adulthood and middle age as postulated by Jung. No statistically significant support was found for a relationship between extraversion-introversion and personality values.

## CHAPTER I

### INTRODUCTION

#### Background of the Study

American psychologists have a penchant for 'objective' or 'empirical' data which can be accepted or rejected in relation to the acceptance of psychological theory. Thus, Jung's theory of the psyche has generally been met with cool acceptance within the American community of personality theorists and psychologists, partially in response to a lack of experimental validation of his theoretical constructs. Recent texts on personality theory have made strong suggestions for research which would empirically test aspects of Jung's theory (Baschhof, 1970; Hall & Lindzey, 1970).

Jung's (1953) developmental theory of personality types centers around a mid-life change from an extraverted to an introverted valuing system. Two different and basic types of personality were postulated: (1) the extravert, whose life is primarily object-oriented and (2) the introvert, who is subject-oriented. The two periods in life on which Jung (1966) focused were: (1) youth and young adulthood stage-beginning around the age of 16 and lasting until the ages of 35-40 and, (2) middle age stage-beginning between the ages of 35-40 and lasting until extreme old age.

Studies utilizing Jung's concept of extraversion and introversion have not been related to his theory of psychic development in relation to

age. They have consisted mainly of studying individuals in the youth and young adulthood stage, primarily students. During the 1960's several investigators studied seminary students. Myers (1962) administered the Myers-Briggs Type Indicator to 69% of 341 Concordia Seminary students at St. Louis, Mo. found that on the extraversion-introversion index the students preferred the extraverted attitude and practical orientation. Ashbrook's (1967) study found Concordia students to be extraverted and practical and not introverted and introspective. Nauss (1968) studied 341 Concordia Seminary students and found that 78% registered on the extraverted attitude.

There are indications of a change in attitudes in individuals from their second decade of life and their fourth decade which suggest that Jung's stages in personality development deserve more study. Kelly (1955) conducted a longitudinal study of adult personality characteristics and concluded that between the mid-twenties and mid-forties individuals underwent considerable change in personality characteristics.

Jung's stages of youth and young adulthood and middle age are paralleled by two stages included in Van Zelst and Kerr's (1951) research. Their study dealt with building-trades union leaders. It was found that during their thirties the leaders were concerned about vocational success, meeting people, envying others, giving up their major ambitions, relationships with fellow workers, and politics. During their forties, called mid-life stress period, the leaders worried about peace of mind, morality, sexual relationships, marital problems, and religion and philosophy.

Much energy particularly has been expended on the study of aging since the 1930's. Miles (1933) addressed this need:

Psychologists have exhibited great interest in the first two and a half decades of life. Insofar as human behavior has been carefully measured and check-measured, attention has usually been directed to this segment of positive development . . . . Important as this work has been and now is, still it leaves five or six decades of human adult life relatively untouched. Maturity, later maturity, and senescence are still a realm of folklore, anecdote, and personal impression [p. 101].

Studies have been done, but the belief that individuals do not change still remains as part of our view of man. This view is typified by James' (1950) concept of habit:

Habit is thus the enormous fly-wheel of society, its most precious conservative agent . . . . Already at the age of twenty-five you see the professional mannerism settling down on the young commercial traveller, on the young doctor, on the young minister, on the young counselor-at-law. You see the little lines of cleavage running through the character, the tricks of thought, the prejudices, the ways of the 'shop', in a word, from which the man can by-and-by no more escape than his coatsleeve can suddenly fall into a new set of folds. On the whole, it is best he should not escape. It is well for the world that in most of us, by the age of thirty, the character has set like plaster, and will never soften again [p. 121].

Jung's theory of personality type and his developmental stages deal with values, which he believes are not "set like plaster" but offer change. Change in values seems to be motivated by a sense of loss of meaning. Values which were once important are no longer meaningful. The loss or change of meaning in life creates a vacuum in one's personality (Hall & Nordby, 1973). If the change in the meaning of life is not dealt with then life could be empty and without value. To regain a sense of meaning the individual must discover, in his inner being, what his new values are.

Spranger (1928) postulated six basic personality values or interests which might be related to Jung's personality theory. These six basic personality values are the theoretical, economic, aesthetic, social, political, and religious values. Within the framework of Jung's concepts

of extraversion and introversion Spranger's personality values might be related in the following manner: (1) extraversion-economic, social, and political, and (2) introversion-theoretical, aesthetic, and religious.

The basic purpose of this study was to test Jung's theory that one's personality type varies from the youth and young adulthood stage, with its extraverted values, to the middle age stage, with its introverted values.

#### Statement of the Problem

The problems to be examined in this study are: (1) to what extent does the personality type of an individual, as measured by the Myers-Briggs Type Indicator (M-BTI), utilizing the extraversion-introversion (E-I) index, vary in relation to age, sex and familial status and (2) what is the relationship between extraversion-introversion to Spranger's personality values, as measured by the Study of Values (SV), in relation to sex and age.

#### Null Hypotheses

1. Fathers and mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons and daughters 39 years old and younger.
2. Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than mothers 40 years of age and older.
3. Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons 39 years old and younger.
4. Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

5. Mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons 39 years old and younger.

6. Mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

7. Sons 39 years old and younger are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

8. Fathers 40 years of age and older who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than fathers 40 years of age and older who are extraverted.

9. Fathers 40 years of age and older who are extraverted do not score significantly different on the economic, social, and political scales of the SV than fathers 40 years of age and older who are introverted.

10. Mothers 40 years of age and older who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than mothers 40 years of age and older who are introverted.

11. Mothers 40 years of age and older who are extraverted do not score significantly different on the economic, social, and political scales of the SV than mothers 40 years of age and older who are introverted.

12. Sons 39 years old and younger who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than sons 39 years old and younger who are extraverted.



13. Sons 39 years old and younger who are extraverted do not score significantly different on the economic, social, and political scales of the SV than sons 39 years old and younger who are introverted.

14. Daughters 39 years old and younger who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than daughters 39 years old and younger who are extraverted.

15. Daughters 39 years old and younger who are extraverted do not score significantly different on the economic, social, and political scales of the SV than daughters 39 years old and younger who are introverted.

#### Delimitations

1. This study was delimited to the examination of extraversion and introversion as measured by the Myers-Briggs Type Indicator.

2. This study was delimited to the examination of six basic interests in personality: the theoretical, economic, aesthetic, social, political, and religious, as measured by the Study of Values.

3. This study was delimited to the comparison of 27 Lutheran families, consisting of parents 40 years of age and older and children 16 years of age and older to 39 years of age, living in a northeastern North Dakota rural community in 1977.

4. This study was further delimited only to those subjects who completed the Myers-Briggs Type Indicator and the Study of Values.

#### Limitations

1. The researcher assumed that the subjects were forthright and honest in answering the Myers-Briggs Type Indicator and the Study of Values.

2. The study was further limited by the reliability and validity of the two sources of data: the Myers-Briggs Type Indicator and the Study of Values.

### Significance of the Study

Since no studies were found that determine extraversion-introversion in relation to age, sex, familial status and values this present study will provide a basic test of Jung's personality theory.

The majority of studies utilizing Jung's extraversion-introversion attitudes have been done with high school and college age individuals. Adding information about middle age adults can serve to fill the gap in our understanding of values in middle age.

This study can be useful for expanding and confirming the theoretical framework of Jungian Psychology.

### Definition of Terms

Extraverts. Subjects with more points for E than I, on the EI index of the M-BTI, are classed as extraverts and are said to have E scores.

Introverts. Subjects with more points for I than E, on the EI index of the M-BTI, are classed as introverts and are said to have I scores.

Subjects were considered to hold high theoretical, economic, aesthetic, social, political or religious values if their scores fell within the upper quartile of the standard scores on these SV scales.

### Organization of the Study

The remainder of this study is organized in four subsequent chapters. Chapter II contains a review of the related literature. The description

of the research population, the instruments used, and the statistical procedures employed are presented in Chapter III. The results are reported in Chapter IV. A summary, discussion of the findings and conclusions, and recommendations which emerge from this study are presented in Chapter V.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Jung's Concepts of Extraversion and Introversion

Jung (1953) postulated two different and basic types of personality: (1) the extravert, whose life is primarily object-oriented and (2) the introvert, who is subject-oriented.

Individuals are either extraverts or introverts depending upon the direction that their libido flows. Jung (1971) defined libido in the following manner:

By libido I mean psychic energy. Psychic energy is the intensity of a psychic process, its psychological value. This does not imply an assignment of value, whether moral, aesthetic, or intellectual; the psychological value is already implicit in its determining power, which expresses itself in definite psychic effects. Neither do I understand libido as a psychic force, a misconception that has led many critics astray. I do not hypostatize the concept of energy, but use it to denote intensities or values [pp. 455-456].

The libido, or psychic energy, expresses itself in the form of either actual or of potential processes which perform psychological work. Such activities as perceiving, remembering, thinking, feeling, wishing, willing, attending, and striving are psychological activities in the same way as breathing, digesting, and perspiring are physiological activities. The personality of an individual thus has predispositions, latent tendencies and inclinations which may be activated at any time (Hall & Nordby, 1973). Murphy (1947) stated Jung's concept of libido this way:

The term libido designates for Jung the entire system of energies apparent in the living organism, the life energy available to the person; specific drives, such as the nutritive, sexual, or maternal, are developed later on as the tissues themselves develop. Second, the fund of life energy may be turned in the direction of outer response and be discharged upon the outer world, or it may be inwardly disposed, discharged within [p. 595].

Jung theorized personality types to be the result of directing one's libido, psychic energy or the holding of one's values in relation to activities outside one's self or within one's self. Jung (1971) defined the terms extraversion and introversion as follows:

EXTRAVERSION is an outward-turning of libido (q.v.). I use this concept to denote a manifest relation of subject to object, a positive movement of subjective interest towards the object. Everyone in the extraverted state thinks, feels, and acts in relation to the object, and moreover in a direct and clearly observable fashion, so that no doubt can remain about his positive dependence on the object. In a sense, therefore, extraversion is a transfer of interest from subject to object. If it is an extraversion of thinking, the subject thinks himself into the object; if an extraversion of feeling, he feels himself into it. In extraversion there is a strong, if not exclusive, determination by the object. Extraversion is active when it is intentional, and passive when the object compels it, i.e., when the object attracts the subject's interest of its own accord, even against his will. When extraversion is habitual, we speak of the extraverted type (q.v.) [p. 427].

INTROVERSION means an inward-turning of libido (q.v.), in the sense of a negative relation of subject to object. Interest does not move toward the object but withdraws from it into the subject. Everyone whose attitude is introverted thinks, feels, and acts in a way that clearly demonstrates that the subject is the prime motivating factor and that the object is of secondary importance. Introversion may be intellectual or emotional, just as it can be characterized by sensation or intuition (qq.v.). It is active when the subject voluntarily shuts himself off from the object, passive when he is unable to restore to the object the libido streaming back from it. When introversion is habitual, we speak of an introverted type (q.v.) [pp. 452-453].

Thus the extraverted individual is concerned primarily with social relationships and is unaware of a subjective determinancy which is viewed as insignificant (Jung, 1966). The important events for the extravert

are those which are external to him. The introverted individual, on the other hand, maintains a subjective attitude which designates the inner, subjective determinancy to be paramount. The introvert's main interests are his inner world. An introvert tends to be introspective, concentrating on affairs within himself (Jung, 1970).

Myers (1962) concluded that Jung's typology of extraversion and introversion would best be understood by the way an individual prefers to use perception and judgment. If perception and judgment are directed upon the environment the individual is extraverted. An individual who directs perception and judgment upon the inner world of ideas is introverted. Extraversion and introversion are on a continuum. An individual is neither totally extraverted nor totally introverted, rather he will tend to be more of one than the other.

#### Jung's Stages of Life

Jung recognized four stages in an individual's life-time development: a. childhood-which begins at birth and lasts until puberty or sexual maturity; b. youth and young adulthood - which begins with the advent of sexual maturity and lasts until the age of 35-40; c. middle age - which begins around the age of 40 and lasts until extreme old age; and d. extreme old age - which begins at 70 and lasts until death. The stages of childhood and old age held little interest for Jung and he concentrated mainly upon manifestations within and the changes between the youth and young adulthood stage and middle age stage (Hall & Nordby, 1973).

Jung (1969) used as an analogy the course of the sun to describe the changes which take place in the life of an individual's development:

Take for comparison the daily course of the sun - but a sun that is endowed with human feeling and man's limited consciousness. In the morning it rises from the nocturnal sea of unconsciousness and looks upon the wide, bright world which lies before it in an expanse that steadily widens the higher it climbs in the firmament. In this extension of its field of action caused by its own rising, the sun will discover its significance; it will see the attainment of the greatest possible height, and the widest possible dissemination of its blessings, as its goal. In this conviction the sun pursues its course to the unforeseen zenith-unforeseen, because its career is unique and individual, and the culminating point could not be calculated in advance. At the stroke of noon the descent begins. And the descent means the reversal of all the ideals and values that were cherished in the morning [p. 137].

The change in ideals and values are related to Jung's concepts of extraversion and introversion. If an individual values those things outside himself in the morning of life then as the descent begins, following the stroke of noon, the direction of his ideals and values is turned inward.

The changing of ideals and values involves fear for it is in a very real sense a fear of the unknown. As an individual approaches middle age, or the stroke of noon, fears are expressed about life. But are these fears related to death or to the need for change? Jung (1969) conceived of this fear not in relation to death but to change, a deep-seated and peculiar change within the psyche.

Damage to the psyche will incur if appropriate change is not forthcoming with the onset of middle age. An aid to helping individuals through this period is enabling them to realize that middle age, or the afternoon of life has significance. Inability to make this change, said Jung (1969), will result in psychic damage:

A human being would certainly not grow to be seventy or eighty years old if this longevity had no meaning for the species. The afternoon of human life must also have a significance of its own and cannot be merely a pitiful appendage to life's morning. The significance of the morning undoubtedly lies in the development of the individual, our entrenchment in the outer world, the propagation of our kind, and the care of our children. This is

the obvious purpose of nature. But when this purpose has been attained - and more than attained - shall the earning of money, the extension of conquests, and the expansion of life go steadily on beyond the bounds of all reason and sense? Whoever carries over into the afternoon the law of the morning, or the natural aim, must pay for it with damage to his soul, just as surely as a growing youth who tries to carry over his childish egoism into adult life must pay for this mistake with social failure [p. 141].

Significance, value and meaning in life do not perish with the disappearance of youth, they are changed. For some in our society older people can be dismissed because nothing more can happen to them, they have their lives behind them, and they are considered no better than petrified pillars of the past. Jung (1953) saw this as a great mistake, e.g., to suppose that the meaning of life is exhausted with the period of youth and outward expansion. Jung (1953) stated: "The afternoon of life is just as full of meaning as the morning; only, its meaning and purpose are different [p. 138]." Jacobi (1959) quoted Jung on our present cultures over emphasis upon youth and its destruction for those in middle age:

The nearer we approach to the middle of life, and the better we have succeeded in entrenching ourselves in our personal attitudes and social positions, the more it appears as if we had discovered the right course and the right ideals and principles of behaviour. For this reason we suppose them to be eternally valid, and make a virtue of unchangibly clinging to them. We overlook the essential fact that the social goal is attained only at the cost of a diminution of personality. Many - far too many - aspects of life which should also have been experienced lie in the lumber-room among dusty memories; but sometimes, too, they are glowing coals under grey ashes [p. 134].

Jung is concerned that individuals become aware of the values which exist within the different stages of life. Youth must act out the extraverted values of youth and middle aged individuals must act out the introverted values of middle age. The young person must achieve and educate his will in relation to his outer directed values. He must feel himself a man of will and depreciate everything else within him in order



to successfully adapt himself socially. The middle aged person no longer needs to educate his will but, to understand the meaning of his life, must experience his own inner being. Social usefulness is no longer his main aim but rather he turns to acquire an inner stability and a new trust in himself (Jung, 1966). To seek change in middle age is, for Jung (1969), both a duty and a necessity. The middle aged person does not need to adapt to his environment but to give serious attention to himself. Jung returns to the analogy of the sun:

After having lavished its light upon the world, the sun withdraws its rays in order to illuminate itself. Instead of doing likewise, many old people prefer to be hypochondriacs, niggards, pedants, applauders of the past or else eternal adolescents - all lamentable substitutes for the illumination of the self, but inevitable consequences of the delusion that the second half of life must be governed by the principles of the first [pp. 138-139].

Man has two aims to be achieved and these aims are met in the two stages of life, youth and young adulthood and middle age. These aims are the natural and the cultural, one Jung (1969) sees as extraverted and one as introverted:

Man has two aims: the first is the natural aim, the begetting of children and the business of protecting the brood; to this belongs the acquisition of money and social position. When this aim has been reached a new phase begins: the cultural aim. For the attainment of the former we have the help of nature and, on top of that, education; for the attainment of the latter, little or nothing helps. Often, indeed, a false ambition survives, in that an old man wants to be a youth again, or at least feels he must behave like one, although in his heart he can no longer make believe. This is what makes the transition from the natural to the cultural phase so terribly difficult and bitter for many people; they cling to the illusion of youth or to their children, hoping to salvage in this way a last little scrap of youth. One sees it especially in mothers, who find their sole meaning in their children and imagine they will sink into a bottomless void when they have to give them up. No wonder that so many bad neuroses appear at the onset of life's afternoon. It is a sort of second puberty, another 'storm and stress' period, not infrequently accompanied by tempests of passion - the 'dangerous age'. But the problems that crop up at this age are no longer

to be solved by the old recipes: the hand of this clock cannot be put back. What youth found and must find outside, the man of life's afternoon must find within himself [pp. 142-143].

Meaning in life for middle aged persons is, according to Jung, to be found within one's self. The natural aims of money-making, social achievement, family and posterity must be left behind as the guiding force in life. A new guiding force or centering aim must be found for middle age and that is the cultural aim. Jung (1969) lamented the lack of assistance available for those entering middle age with its shift from extraverted to introverted values and its attending tragedy:

Wholly unprepared, we embark upon the second half of life. Or are there perhaps colleges for forty-year-olds which prepare them for their coming life and its demands as the ordinary colleges introduce our young people to a knowledge of the world? No, thoroughly unprepared we take the step into the afternoon of life; worse still, we take the step with the false assumption that our truths and ideals will serve us as hitherto. But we cannot live the afternoon of life according to the programme of life's morning; for what was great in the morning will be little at evening, and what in the morning was true will at evening have become a lie [pp. 137-138].

#### Spranger's Value Types

Spranger's (1928) typing of personality according to values was first set forth in Types of Men. Spranger asserted the personality of individuals are principally determined through a valuing process. One's personality or mental character is determined through the value organ, one's dominate value, by means of which he lives and shapes his own life. Six values are set forth, any of which can be the dominate value of an individual's life. These values are the theoretical, economic, aesthetic, social, political, and religious.

Truth is the main interest of the theoretical individual. He pursues intellectual knowledge with a passion. Beauty or utility are

secondary to observation, ordering and understanding. Science and philosophy are frequent vocational pursuits. Spranger (1928) conceptualized the theoretical man in the following manner:

To give him an old psychological name, he is necessarily an 'intellectualist'. He can have only one passion, that for objective knowledge; only one kind of longing, to solve a problem, explain a question or formulate a theory. He despairs when ignorant and rejoices over a purely theoretical discovery. . . . He exhausts himself as a physical being to give birth to a purely intellectual world based on reason. He has a feeling for the purity of the cognitive process, a feeling which cares for nothing but truth. His world becomes a network of general entities and a system of interrelations. And by means of this he transcends the moment. He lives in an eternal world. . . . And in this reflection he intertwines past and present in an ordered world which his mind can master [pp. 111-112].

Form and harmony, radiating from within, are the centering values for the aesthetic personality. Aesthetic types seek individualism and self-sufficiency. Summarizing the aesthetic type Spranger (1928) stated:

If we wish to summarize the essence of aestheticism we should say: 'it is the formed expression of an impression'. Herein are contained three stages; (1) there is the impression, a sensuous concrete objective picture given in reality or created by the imagination, and which is psychically experienced in its emotional significance; (2) the expression, a sensuous-concrete presentation of my psychological content enlarged by imagination in a physical or imagined material; (3) this form as the product of the mutual interfusion of impression and expression which is achieved in its most pronounced sense if a condition of equilibrium or harmony is established between the objective and subjective factors [p. 147].

Self-development for the aesthetic comes from a balance between impression and expression. The form which results is what Spranger (1928) called the inner form. Without the expression of the inner man no form would emerge in his life. It is the inner forming power which tries to strike a balance between objective experience and its subjective penetration. The artist is one whose inward life is aesthetically organized.

Totality, wholeness or cosmological unity is the highest value of the religious person. He wishes to relate himself to life in a holistic manner. The value of life depends on the meaning of the world insofar as it is susceptible of being personally experienced. Two types of mystics are mentioned by Spranger: (1) the 'immanent mystics' who find their religious experience in the affirmation of life and active participation between themselves and the world and (2) 'transcendental mystics' who seek unity with a higher reality by withdrawing from life and experiencing their inner life through meditation (Allport, et al., 1960). For the religious person the meaning of the world comes through their unique inner revelation or experience. Life is directed toward creation of the highest satisfying value experience. Spranger (1928) concluded that value lies not in the world but within inner experience for the religious individual:

He thus finds the highest value in utter negation of the world. (We mean by world the inclusive concept of value contexts which are experienced in life as directed toward objects) [p. 215].

The economic valuing individual places highest value on what is useful and practical. Self-preservation is the basis of his life and he utilizes his environment through production, marketing, consumption of goods, and accumulating wealth to meet his needs. Economic man's striving, said Spranger (1928), is dedicated toward his own good:

The economic man is . . . he who in all the relations of life prefers utility to all other values. He sees everything as a means for self-preservation, an aid in the natural struggle for existence and a possibility to render life pleasant. He economizes goods and forces, time and space in order to gain the maximum of useful effect for himself. As moderns we might call this the 'practical type', partly because . . . the entire technical field is included in the economic point of view. But the value of practical activity lies not in the depths of a value determining disposition but in the wholly external useful result [pp. 132-133].

Power is the guiding value of the political man. No matter what vocation the political man has chosen he will endeavor to exert his will over those around him. The purely political type makes all value regions of life serve his will to power. To rule, one must think realistically. Knowledge of others in politics or any other field amounts to knowledge of the 'serviceability' of others. Human beings are like pawns or dollars and cents. Power over others is the key and Spranger (1928) defined power in the following manner:

Power is . . . the capacity and (usually) the will; to posit one's own value direction in the other, either as a permanent or a transitory motive [p. 189].

Political man desires direct expression of his will or power above all else for personal power, influence and renown.

The social type seeks to serve his fellow man. Love of people is the highest value which is born out in his altruism or philanthropic interests. Persons are not means to an end, they are the end. They seek union with others that are loved such as a wife who lives in her husband, a mother in her child or a servant in his master. His life is not lived immediately through himself but in others. This may be carried to the point where his own value is found only in other people. There is a strong impulse to give oneself to others. Spranger (1928) stated the following concerning love and the social man's value:

. . . love essentially sees other people (whether one or more) as possible carriers or positors of value, and finds in such comprehension the ultimate value of its own essence [p. 173].

Like Jung, Spranger viewed a person's dominant value as not an either-or situation but that one value is more ascendant than the others. The values which are not dominant are colored and somewhat changed by the dominant value. Spranger (1928) wrote:

. . . in view of our principle that in every mental phenomenon the totality of mind is somehow immanent, the other mental acts cannot be absent. But their achievements are transformed in every case in such a way that they seem to be subordinated to the dominant value direction. . . . They carry its color, or if this is not possible, are repressed to utter meaninglessness. We may symbolize this in the figure of a gambler's die, of which in every instance one side with its figures must lie uppermost. The others are not, however, absent but are instead in a definite relation to the figures on top [pp. 104-105].

### Theoretical Integration of Jung and Spranger's Concepts

Jung's (1971) typology stated that individuals are either extraverts or introverts. An individual is an extravert or introvert depending upon the direction his libido flows: an extravert's libido flows outward from the individual to the objects surrounding the individual; an introvert's libido flows inward to the individual. Jung defined libido as "psychic energy" which is further understood as "psychological value." It is one's psychological value which determines the individual to be either extraverted or introverted. Thus the extravert values the object above his subjective self while the introvert values his subjective self over objects. The individual is understood, by Jung, as being determined by his values.

Spranger's (1928) typology stated that one's values determine personality. The value organ, one's dominant value, will shape the life of the individual. Spranger identified six values, one of which can dominate the individual's life: theoretical, economic, aesthetic, social, political, and religious.

Spranger's values can be related to Jung's values of extraversion and introversion depending upon their inner (subjective) or outer (objective) directedness.

The concepts of Jung and Spranger would be related in the following manner: (1) extraversion-economic, social, and political and (2) introversion - theoretical, aesthetic, and religious.

Myers (1962) found in correlating the Myers-Briggs Type Indicator with the Allport-Vernon-Lindzey Study of Values, utilizing 877 college freshmen, the following relationships: introversion - theoretical and aesthetic; extraversion - economic and political; and no association - social and religious. No statistical values were listed.

Kelly (1955) studied 227 couples after nearly 20 years in a longitudinal study. They were given the Study of Values at the ages of 25 and 45. Significant change occurred if the difference on scores was at least 2.5 times its standard error. The most significant change was toward higher religious values on which the critical ratio for men was 7.5 and for women 9.5. The age change toward higher religious values would correspond to Jung's theory that as people age they take on more introverted values, one of which is increased valuing of religion and philosophy. Males showed change toward lower theoretical values with a critical ratio of 3.7. A change toward lower aesthetic values was found with males having a critical ratio of 4.7 and women having 6.9.

Integration of Spranger's social value and Jung's extraversion can be seen in that the social persons highest value is love of others. Love of others is an act which is motivated by the interests of altruism which dictates that others are not means to an end, they are the end. The social type lives not for oneself but lives life for and in others. Value is to be found not within oneself but in giving oneself to others. In Jung's typology the social type of Spranger would be classified as an

extravert because there is a directing of libido outward from oneself to an external object rather than inward towards one's inner being.

#### Studies on Youth and Young Adulthood and Middle Age

Research seems to suggest that personality does change from youth and young adulthood to middle age.

Haan (1976a), in a longitudinal study, administered a Q sort dealing with one's own character to 4 samples of 136 men and women of the Oakland Growth and Guidance Studies group. Haan found that two components of the hierarchies differed. The first involved contrasting relationships with other people. Younger people's lives were marked by socially assertive and active engagement with situations while older people's hierarchy suggests more tender, intimate interpersonal involvements. The second involves contrasting modes of experiencing one's self. Younger people showed more cognitive investment and displayed a self-capability which accompanies engaging life in an achieving way while older people centered on preservation of the self's integrity and integration. Youth are engaged with life and active while older individuals are less striving and concerned with sensitivity to others and conserving their own integrity. Haan (1976b) in response to a statistical critique of her previous study re-analysed the data. The findings were consistent with the original interpretation. Changes occurred in becoming more philosophically concerned and less gregarious at age 40-50. There was movement toward greater comfort, candor and a sense of self.

Kelly (1955) conducted a longitudinal study of adult personality characteristics with 300 couples engaged to be married. After a 16 to 18 year period a follow-up study revealed that the personality variables



most stable over time were personal values (48% consistency) and vocational interests (45% consistency). The least stable personality variable was attitudes (8% consistency). Kelly concluded:

Our findings indicate that significant changes in the human personality may continue to occur during the years of adulthood. Such changes, while neither so large nor sudden as to threaten the continuity of the self percept or impair one's day-to-day interpersonal relations are potentially of sufficient magnitude to offer a basis of fact for those who dare to hope for continued psychological growth during the adult years [p. 681].

Neugarten and Berkowitz (1964) reported on the Kansas City studies which were conducted by the Committee on Human Development at the University of Chicago. They investigated three areas of personality functioning to answer the question: What are the changes in personality associated with chronological age in the second half of life? The three areas investigated were: (1) intra-psychic area or inner-life processes, (2) adaptational area, and (3) social interaction. It was found that the subjects perception of self as related to external environment and style of coping with inner world experiences changed with age. Analysis of the data showed: a. preoccupation with inner life became greater with age; b. there was movement from outer- to inner-world orientation - described as increased interiority; c. inability to integrate wide ranges of stimuli with age; d. reduction in willingness to deal with complicated and challenging situations; and e. older people gave evidence of lessened sensitivity to the reactions of others and a lessened sense of relatedness to others. It was concluded that developmental processes account for the age-related differences. There were significant increases in inward orientation and decreases in outer-world orientation beginning in the late 40's and early 50's.

Myths concerning middle age and aging in relationship to youth are abundant in our popular culture. Change with aging is popularly assumed as can be noted in recent novels and films. These myths, which might be fact, deal with such details as alienation, need for wisdom, the male's emptiness with approaching age, man's penchant for looking back on youth as an ideal, mother's loss and loneliness when faced with the empty nest, and the need for both men and women to remain outer-directed with approaching age to maintain health. The need for wisdom and the need to remain outer-directed at the expense of one's interiority and integrity seem to be paradoxical. Popular culture maintains the struggle with alienation and the need for growth in wisdom to be paramount with aging. Many recent novels and films have presented a picture in which the approach of middle age brings about a profound existential crisis and is associated with malaise, alienation from one's milieu and personal disorganization. At best, the crisis is seen as liberating, allowing the individual to take a fresh look at himself and his environment. Individuals emerge with a kind of wisdom, maturity and insight which are beyond the grasp of youth. At worst, the crisis is kept from becoming fully conscious and results in destructiveness toward both the individual and others. Attitudes become rigid and domination of others to confirm one's being is experienced and it is a painful experience. Concerning the male's emptiness Rosenberg (1976) stated:

As he (the dissenter-anti hero) arrives at 'successful' middle age, he seems to evince a sense of shock and disbelief, as if to ask, 'is this all there is?' Finally released from the pressure of achievement striving in the quest for status and material comfort, he finds that 'having made it' is in no sense the gratifying state of affairs he foresaw when he gave up the freedom of youth to enter the 'system'. In one way or another, he strives to look into himself and find a way out of the box of his intolerable, self-chosen existence [p. 160].

Rosenberg (1975) noted the following popular works: Bellow's Herzog; Vonnegut's Slaughter House Five; Wheelie's The Seeker, Kazan's The Arrangement; Miller's Collected Plays; Friedman's Stern and The Dick; and Roth's Portnoy's Complaint and he concluded, "Finally, in many of these works, youth itself gets resurrected as an ideal [p. 161]."

Research has found some indices indicating the inner turmoil in midlife change which is assumed in popular culture. The increasing divorce rate involves not only the young but also those entering what is called the midlife crisis. Pineo (1968) reported a longitudinal study which indicated that marital satisfaction for both men and women declined in middle years. Psychoneurosis was studied by Leighton (1963) who found initial peaking of psychoneurosis to be in the late thirties through the mid-forties. Srole et al. (1962) studied symptom formation and identified greater symptom formation in the middle aged group than the younger adults. Alcoholism was researched by Palton and Moon (1963) which showed a peaking for alcoholism admissions to state hospitals to be in the 45-57 age group. First admissions for mental hospitalizations (for reasons other than alcohol) peaked for the age group of 45-57 (Jaffe & Gordon, 1968). In Vital & Health Statistics-Selected Symptoms of Psychological Distress, Series 11, No. 37, U.S. Dept. of HEW, PHS, (1965) p. 8 it was reported that middle age is associated with the feeling of impending nervous breakdown and also shows a positive relation with general nervousness and headaches. Blumenthal's (1959) research with peptic ulcers found that in most studies peptic ulcer has its highest incidence in the 40-50 age group, with those in the 30-40 age group showing the next highest rate. Another study by HEW (1964-66) dealing

with psychosomatic disorders found that hypertension and heart disease showed an increased incidence in middle age as compared with young adulthood.

The onset of middle age was indicated to be a time of crisis in the areas of physical, social and emotional life. Psychologists and psychoanalysts also view middle age as a time of crisis.

Levi et al. (1972) reported that few men openly confront disturbing issues in their lives associated with middle age. Those who do face total reopening of assumptions about self and society. This is brought on by dissatisfaction with one's life, commitments, and values. Most men find this stressful and react by repression and denial. This results in reaction formations in behavior and attitudes. The strength and consistency of denial make reaction to the crisis more damaging and has implications for interpersonal and intrapersonal relationships. Bergler (1954), Pearce and Newton (1963), and Jacques (1965) viewed the middle age crisis as universal. As a youth the male develops an image of himself which is usually somewhat conforming to societies concept of maleness. Problems occur psychologically when middle aged males attempt to live by the image of the strong male. Lowenthal and Chiriboga (1972) stated:

The cost of this effort to live up to a strong male image may be great . . . it is the men who have serious difficulties in mid-life, as reflected by . . . alcoholism rates, admission to mental hospitals, suicide rates and serious physical illness [p. 14].

The psychoanalytic view of middle age sees a variety of symptoms occurring at this stage of development. Pasamanick (1968) conducted a study on psychoses of middle aged men in Baltimore. He found a sharp increase in the rate of psychoses in the middle aged as opposed to the young. How psychoanalysts view mid-life was summed up by Rosenberg and Farrell (1976):

. . . psychoanalysts do not assert that they see overt, conscious confrontation with this issue, but rather a myriad set of pathological reactions to it. Denial of the crisis and subsequent attempts at escape (e.g., frantic activity or sexual adventures which prove burdensome) are often noted, along with more general forms of decompensation such as anxiety states, depression and diffuse rage [p. 155].

Middle age brings with it a change in the way one looks at his career. One's productivity begins to decline, expectations for success and advancement are downplayed, and a reassessment of major commitments in life are highly probable. Peak earnings and highest position may come after middle age but indications of how far one goes tend to appear earlier. Those slated for top management are separated from middle-managers and there are very few academics or scientists who make major contributions after middle age. Expectations are reduced with age. This is also true of working class members who have a loss of physical vigor and agility (Fried, 1967).

In a paper which described the follow-up in a long term longitudinal study at the Institute of Human Development at Berkeley using 248 infants born in Berkeley in 1928, Clausen (1976) found that at age 38 over half the men expected occupational advancement. However at age 48-50 only one-fifth expected advancement and by age 50 little advancement was expected. Not only did aspirations subside but men at 50 seemed to have come to terms with their vocation.

Neugarten (1968) wrote of the forces which make assessment of one's career and of one's major commitments in life highly probable:

Men perceive a close relationship between life-line and career-line. Middle age is the time to take stock. Any disparity noted between career-expectations and career-achievements - that is, whether one is 'on time' or 'late' in reaching career goals - adds to the heightened awareness of age. One 47-year-old lawyer said, 'I moved at age forty-five from a large corporation to a law firm. I got out at the last possible moment, because

after forty-five it is too difficult to find the job you want. If you haven't made it by then, you had better make it fast, or you are stuck' [p. 98].

The change in expectations and in one's major commitments in life are not limited to men during middle age. Women, career-oriented or home-oriented, also face the middle life crisis. In relation to the rise of the divorce rate and general state of marital discord noted at middle age, Lowenthal and Chiriboga (1972) found that women report a decline in both the frequency and satisfaction with sex in marriage. Cuber (1965) in a study of 437 upper middle class Americans between the ages of 38 and 50, found disillusionment and cynicism among his respondents. His interviews demonstrated a strong tendency on the part of the subjects to rationalize away the disturbing aspects of their existences, both in terms of living with themselves and maintaining a front for others. Many continue in marriage arrangements which are described as 'conflict-habituated', 'devitalized', or 'passive-congenital'. Husbands tended to describe such arrangements as workable or convenient while some wives tended to be more vocal in describing these patterns as a disappointing and deadening mode of existence.

Livson (1976) studied two groups of women at age 50 and reported significant self-growth at mid-life. Her groups consisted of (1) Independents who were more assertive, ambitious, and intelligent and (2) Traditionals who were gregarious and nurturant (more conventional).

The key factor seems to be the fit between a woman's life style and her personality. . . . Middle age can loosen the boundaries of one's life style and call forth suppressed parts of the self [p. 114].

Research on mid-life change in men by Lakin and Eisdorfer (1962) found that aging men seem to progress from active involvement in the

world to a more introversive, passive position. Gutmann (1964) also saw the intrapsychic change in the second half to be a developmental process. As a member of the Chicago researchers, Gutmann found that younger men used active mastery while older men used a passive mastery in which the self, not the world, was revised to meet the requirements of social situations.

Rosenberg and Farrell (1976) made the following summary statement about the male and middle-age:

Several major precipitants converge at around the age of forty which predispose the man in contemporary culture to redefine his self; his life undergoes a qualitative shift. The simultaneous encroachment of these major changes creates a condition of vulnerability. Past modes of personal organization and relating to the social environment become less appropriate and useful. In the context of cultural values, many of the changes undergone are negative ones. Furthermore, the individual has an opportunity previously unavailable to him. He can, particularly if he has been successful by external criteria, gauge the extent to which his commitments to career and/or family have been worthwhile in the sense of providing the sense of gratification he had expected.

These potentially crisis inducing elements in the life space of the middle aged male are made even more difficult to manage by the matrix of social demands in which he is generally embedded. He is often in the position of having to be a role model and socializing force vis-a-vis his maturing children. Witnessing their adolescent struggles may reawaken or threaten his own identity conflicts, yet he is not nearly so free as the adolescent to work through or express his problems. While his physical strength may be declining, he is just approaching the height of his symbolic and social power. In work, community and family social structure, he is expected to provide strength and commitment commensurate with his status. Thus, expression of the doubts and conflicts inherent in reaching middle age would be mitigated against by both the need for internal integration and by cultural expectation [p. 164].

#### Summary

A wide variety of disciplines have utilized varied methods of study in their approach to personality development and changes from youth and young adulthood to middle age. Many indices of change have been set

forth e.g., career expectations, psychological disorders, physical problems, marital discord, and a changing from an outer-world orientation to an inner-world orientation.

The few studies noted in respect to the Study of Values, based on Spranger's value typology, have indicated change from young adulthood to middle age in one's personality. Studies involving Jung's extraversion and introversion have mainly been done with college age and high school students. However, studies have found personality changes toward introversive values with aging. No studies were found which utilized Jung's concepts directly in relating extraversion and introversion with aging.

If there are, in fact, age-related changes in personality, then, obviously, the adult needs to deal with them. The professionals dealing with this area and these individuals would seem to have a dual role to play in this situation: (1) to educate society and (2) to educate the older adult. This would be a partial answer to Jung's call for colleges for those approaching middle age.



## CHAPTER III

### METHOD

#### Subjects and Procedure

A letter (Appendix A) inviting participation was sent to all eligible families (N = 57) which belonged to St. Paul's Lutheran Church, Gilby, North Dakota. The subjects attended a meeting for the purpose of completing the Myers-Briggs Type Indicator (Myers, 1962); the Study of Values (Allport et al., 1960); and a personal data sheet (Appendix B). The data were compiled for this study.

The research sample of 27 rural families were volunteers drawn from St. Paul's Lutheran Church, Gilby, North Dakota. Each family consisted of parents 40 years of age and older with siblings 39 years old and younger. The sample consisted of those subjects who completed the Myers-Briggs Type Indicator and the Study of Values during November and December, 1977.

#### Sources of Data

1. Scores on the extraversion-introversion index on the Myers-Briggs Type Indicator, Form F.
2. Scores on the six values: theoretical; economic; aesthetic; social; political; and religious on the Study of Values.
3. The number of family units was compiled from the personal data sheet.

### Instrumentation

The Myers-Briggs Type Indicator measures four basic preferences which, according to Jung, structure an individual's personality. These basic preferences are extraversion-introversion; thinking-feeling; sensing-intuition; and perception-judgment. Perception is the process of becoming aware of things, people, occurrences, or ideas. Judgment is the process of coming to conclusions about what has been perceived. The extraversion-introversion index reflects whether an individual directs perception and judgment upon the environment or the world of ideas. The extraverted individual is concerned primarily with external events, such as social relationships. The introverted individual's main interests lie in internal events, such as one's thoughts, and with introspection.

The indices ascertain an individual's basic preferences by forcing choices between opposites on 166 test items. Scores are based on the difference between the number of points for extraversion (E) and points for introversion (I). If there are more points for E than I the individual is classified as an extravert, or if there are more points for I than E the individual is classified as an introvert. An individual may be either E or I but not both.

During 1942-1944 the original items were written based upon Jungian type theory and the author's observation. Each item was analyzed on every index and those items with comparable relationship to more than one index were dropped as were items which were not answered according to type classification at least 60% of the time. From 1956-1958 over 200 new items including word pairs were submitted to individuals of known type and who were familiar with the Indicator. The weakest of the old items were dropped and simpler wording of old items, with similar correlations,

were accepted. The lower limit of goodness of fit was set at .63. Approximately 130 of the new items were accepted. Tetrachoric item-test correlations were computed and used to check item selection. Form F is the result of those procedures. The most recent norms were developed during 1957-1961.

Reliability studies, in the manual, were limited to internal consistency (split-half) measures which generally showed correlations in the .70 and .80 range. In a 14 month test-retest study by Strickner and Ross (1964a) a correlation of .70 was obtained for the extraversion-introversion index.

Validity was established with concurrent studies. A .79 correlation was found on the extraversion-introversion index with the Gray-Wheelwright Psychological Type Questionnaire's (Myers, 1962) extraversion-introversion index.

Mendelsohn (Buros, 1965) wrote that the E-I index of the M-BTI is closer to the popular understanding than the Jungian concept of extraversion and introversion. The E-I factors deal with one's liking of interpersonal contact and don't represent interests in the inner world of ideas. The E-I index is more related to such variables as social introversion, talkativeness, and gregariousness than to variables such as thinking introversion and a theoretical orientation. Mendelsohn concluded that the Jungian concepts are not represented by the Myers-Briggs Type Indicator. Sundberg (Buros, 1965) stated that the validity for the Myers-Briggs Type Indicator rests on concurrent studies. Furthermore the studies which dealt with validity, such as those by Stricker and Ross (1963; 1964a; 1964b) utilized samples from college populations. It was suggested that distinctions between types would be found in studies

utilizing older people rather than those using adolescents and young adults. A need for evidence that differentiates and individualizes persons was stated.

The Study of Values measures six values which, according to Spranger, structure an individual's personality. These values are the theoretical; economic; social; aesthetic; political; and religious.

The economic man is concerned with what is useful; what serves commercial ends; what brings luxury; in surpassing others; and sees God as the giver of tangible blessings. The social person's highest value is love of people; love which is altruistic or philanthropic; which sees people as ends and not a means to an end; and in a purer form is a selfless individual. People who are political are interested in manifesting power; they value competition and struggle; and want to directly express their personal power. These three values, which structure personality, are extraverted in nature as reflected in the M-BTI's definition of extraversion: "The extravert is oriented primarily to the outer world, and thus tends to focus his perception and judgment upon people and things [p. 1]."

The theoretical individual is interested in the truth; through use of the cognitive; attempting to reason; is an intellectual who is often a scientist or philosopher; and who wants to order and systematize his knowledge. An aesthetic person values form and harmony; is concerned with experience; and tends to be individualistic and self sufficient. The religious man's highest value is unity; is mystical; and desires relatedness to the totality of the universe through active participation or withdrawal from life. These three values are introverted in nature as reflected by the M-BTI's definition of introversion: "The introvert

is oriented primarily to the inner world . . . and thus tends to focus his perception and judgment upon concepts and ideas [p. 1]."

The Study of Values test questions are based upon familiar situations to which two alternative answers in Part I and four alternative answers in Part II are provided. There are 120 answers, 20 of which refer to each of the six values. Answers are recorded numerically by the side of each alternative answer. Scores are added and plotted on a profile to show one's value preferences. The six values are interdependent with a high score on one value requiring offsetting low scores on others. The most recent norms were developed in 1968.

Reliability studies, in the manual, consisted of split-half measures resulting in the following correlations: theoretical .84; economic .93; aesthetic .89; social .90; political .87; and religious .95. In a two month test-retest the following correlations were obtained: theoretical .87 and .85; economic .92 and .84; aesthetic .90 and .87; social .77 and .88; political .90 and .88; and religious .91 and .93.

Validity was established by examining the scores of groups whose characteristics are known. Common experience was used in leading the authors to expect that women will, on the average, be more religious, social, and aesthetic. Students of engineering scored relatively high on the theoretical and economic values. A table which illustrated occupational differences on the six scales was presented which contained 29 groups and their representative norms. In nearly all cases the scores corresponded well with prior expectations.

Hogan (Buros, 1972) stated that the manual was still lacking information on validation but that SV taps something significant. It is this 'something' that needs validation. A reference was made to Gage (Buros,

1959) who felt the SV confounds interests and values. Hogan addressed this problem when he wrote of two points on ideal types. First, the type concepts do not exist in reality, rather they are theoretical inferences or constructs which have uncertain validity. Secondly, Spranger's types are abstract, formal concepts that transcend conclusions based on empirical observations. In light of the facts that the values are poorly defined and the scoring is ipsative the SV will be, concluded Hogan, most valuable in individual cases with cooperative subjects.

#### Statistical Procedures

The means and standard deviations for the E-I index, on the Myers-Briggs Type Indicator, and for the theoretical, economic, aesthetic, social, political, and religious indices, on the Study of Values, were computed. The Analysis of Variance and Scheffé's test for multiple comparisons were employed for hypotheses one through seven since they were a posteriori. Hypotheses eight through fifteen were a priori and Dunn's 'C' Procedure was applied. The .05 level of significance was established in rejecting the null hypotheses.

The remainder of this study is organized in the following manner: Chapter IV presents the analysis of the data and the results; the summary, discussion and conclusions, and recommendations are presented in Chapter V.

## CHAPTER IV

### RESULTS

The primary purpose of this study was to examine to what extent the personality types of individuals, as measured by the Myers-Briggs Type Indicator (M-BTI) and utilizing the extraversion-introversion (E-I) index, vary in relation to age, sex, and familial status. This study also examined the relationship between extraversion and introversion to Spranger's personality values, as measured by the Study of Values (SV), in relation to sex and age.

The analysis and results of this study are presented according to the testable hypotheses stated in the null form in chapter one. Data relating to the Myers-Briggs Type Indicator's extraversion-introversion index, and the six values on the Study of Values will be analysed. Tables summarizing the data concerning the specific hypotheses are included in this discussion.

The characteristics of the sample are found in Table 1. On the E-I index shown in Table 1, it can be noted that the means of all group totals lie on the introversion side of the E-I continuum of scores. It can also be noted that the subgroup and total group SV mean scores for daughters and mothers fell within the range of 50% of all female scores. Furthermore, all sons' mean scores fell within the range of 50% of all male scores. However, all fathers scored in the lowest quartile on the theoretical scale and scored in the highest quartile on the religious

TABLE 1

GROUP AND SUBGROUP SAMPLE SIZE, MEAN AGE, AND MEANS AND STANDARD  
DEVIATIONS OF SCORES ON THE M-BTI AND SV SCALES

Familial Status	n	Age <u>M</u>	<u>M-BTI Scales</u>		Theoretical		Economic		<u>SV Scales</u>		Social		Political		Religious	
			<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Fathers-E	8	57.5	85.25	15.69	37.50	2.72	40.94	6.90	30.37	6.59	42.25	6.02	38.50	6.35	50.19	6.99
Fathers-I	19	58.6	122.05	13.27	37.74	6.11	45.68	7.06	33.29	8.46	40.89	6.07	37.68	5.69	44.76	6.83
Total	27	58.2	111.15	21.94	37.67	5.28	44.28	7.22	32.43	7.94	41.30	5.97	37.93	5.78	46.37	7.20
Mothers-E	12	58.0	85.33	8.56	34.67	4.56	39.62	7.64	38.83	4.11	41.46	6.41	34.67	5.94	30.83	7.45
Mothers-I	15	55.5	124.87	15.01	33.63	5.87	43.03	6.59	37.00	5.10	39.40	6.24	37.83	5.21	49.10	8.76
Total	27	56.5	107.30	23.52	34.09	5.26	41.52	7.15	37.81	4.69	40.31	6.28	36.43	5.57	49.87	8.10
Sons-E	10	28.4	81.60	13.37	39.50	4.14	43.10	10.52	36.90	8.16	34.30	7.62	42.70	8.29	43.50	10.65
Sons-I	19	28.4	122.63	12.19	40.87	6.28	44.50	11.20	33.50	9.68	37.92	6.25	41.13	4.93	42.50	6.64
Total	29	28.4	108.48	23.39	40.40	5.60	44.02	10.80	34.67	9.18	36.67	6.85	41.67	6.19	42.84	8.06
Daughters-E	15	29.5	78.47	13.62	33.40	6.22	40.27	7.98	39.03	8.38	43.03	6.55	35.77	4.13	48.23	5.92
Daughters-I	14	25.2	125.29	17.73	33.46	7.64	37.14	7.01	41.00	7.50	43.57	9.04	34.46	5.92	50.07	5.81
Total	29	27.4	101.01	28.38	33.43	6.82	38.76	7.57	39.98	7.89	43.29	7.71	35.14	5.02	49.12	5.84
Sum Total	112	42.6	106.92	24.44	36.41	6.39	42.12	8.55	36.26	8.08	40.38	7.10	37.81	6.13	47.01	7.76



scale. This table is included for general information about the sample for the reader. Also, see Appendix C for a frequency table for age of the sample.

M-BTI Data

Hypothesis 1

Fathers and mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons and daughters 39 years old and younger.

Table 2 presents the analysis of variance for the E-I index data of the M-BTI.

TABLE 2

ANALYSIS OF VARIANCE OF E-I SCORES FOR FATHERS AND MOTHERS  
COMPARED TO SONS AND DAUGHTERS

Source of Variation	df	<u>SS</u>	<u>MS</u>	<u>F</u>
Among	1	552.86	552.86	0.925
Within	110	65,767.12	597.88	
Total	111	66,319.94		

There was no significant difference among the groups in this analysis. On the basis of these findings, hypothesis 1 is retained.

Hypothesis 2

Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than mothers 40 years of age and older.

## Hypothesis 3

Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons 39 years old and younger.

## Hypothesis 4

Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

## Hypothesis 5

Mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons 39 years old and younger.

## Hypothesis 6

Mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

## Hypothesis 7

Sons 39 years old and younger are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

TABLE 3

ANALYSIS OF VARIANCE OF E-I SCORES FOR SONS, MOTHERS, AND DAUGHTERS COMPARED TO FATHERS

Source of Variation	df	<u>SS</u>	<u>MS</u>	<u>F</u>
Among	3	1,550.10	516.70	0.862
Within	108	64,769.90	599.72	
Total	111	66,320.00		

The analysis of variance for the E-I index data of the M-BTI in relation to hypotheses 2, 3, and 4 are presented in Table 3.

There were no significant differences among the groups in this analysis. On the basis of these findings hypotheses 2, 3, and 4 are retained.

The analysis of variance for the E-I index data of the M-BTI in relation to hypotheses 2, 5, and 6 appear in Table 4.

TABLE 4  
ANALYSIS OF VARIANCE OF E-I SCORES FOR FATHERS, SONS,  
AND DAUGHTERS COMPARED TO MOTHERS

Source of Variation	df	<u>SS</u>	<u>MS</u>	<u>F</u>
Among	3	1,550.11	516.70	0.862
Within	108	64,769.89	599.72	
Total	111	66,320.00		

It can be observed from the analysis in Table 4 that there were no significant differences among the groups and hypotheses 2, 5, and 6 are retained on the basis of these findings.

TABLE 5  
ANALYSIS OF VARIANCE OF E-I SCORES FOR FATHERS, MOTHERS  
AND DAUGHTERS COMPARED TO SONS

Source of Variation	df	<u>SS</u>	<u>MS</u>	<u>F</u>
Among	3	1,550.12	516.70	0.862
Within	108	64,769.88	599.72	
Total	111	66,320.00		

Data relating to hypotheses 3, 5, and 7 appears in Table 5 which presents the analysis of variance for the E-I index of the M-BTI.

The results show there were no significant differences among groups in this analysis. On the basis of these findings hypotheses 3, 5, and 7 are retained.

It can be noted, in Table 6, that there were no significant differences in the analysis of variance for the E-I index data of the M-BTI in relation to hypotheses 4, 6, and 7. Again, hypotheses 4, 6, and 7 are retained.

TABLE 6  
ANALYSIS OF VARIANCE OF E-I SCORES FOR FATHERS, SONS,  
AND MOTHERS COMPARED TO DAUGHTERS

Source of Variation	df	<u>SS</u>	<u>MS</u>	<u>F</u>
Among	3	1,550.12	516.71	0.862
Within	108	64,769.88	599.72	
Total	111	66,320.00		

From the data reported in Tables 3, 4, 5, and 6 it can be concluded that there are no significant differences among fathers 40 years of age and older, mothers 40 years of age and older, sons 39 years old and younger, and daughters 39 years old and younger on the E-I index of the M-BTI. On the basis of these analyses, hypotheses 2, 3, 4, 5, 6, and 7 are retained. Further, since no significant F ratios were found Scheffé's test for multiple comparisons was not employed.

M-BTI and SV Data

For hypotheses eight through fifteen the Dunn's 'C' Procedure was employed to test for significance. The Dunn's 'C' value at the .05 level of significance is 2.58 for the established degrees of freedom. None of the results of any of the tests on the hypotheses reached the significance level for Dunn's 'C' Procedure. These findings will be presented in numerical order of the hypotheses.

## Hypothesis 8

Fathers 40 years of age and older who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than fathers 40 years of age and older who are extraverted.

Table 7 presents the data of Dunn's 'C' Procedure for the theoretical, aesthetic, and religious scales of the SV.

TABLE 7

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR THE DIFFERENCES BETWEEN THE MEAN SCORES OF INTROVERTED FATHERS AND EXTRAVERTED FATHERS ON THE THEORETICAL, AESTHETIC, AND RELIGIOUS SCALES

SV Scales	Introverted Fathers		Extraverted Fathers		Dunn's 'C' Value
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Theoretical	37.74	6.11	37.50	2.72	0.096
Aesthetic	33.29	8.46	30.37	6.59	0.900
Religious	44.76	6.83	50.19	6.99	1.752

The results yielded non-significant ratios between the mean scores for the introverted and extraverted fathers. Hypothesis 8, therefore, is retained.

## Hypothesis 9

Fathers 40 years of age and older who are extraverted do not score significantly different on the economic, social, and political scales of the SV than fathers 40 years of age and older who are introverted.

The data of Dunn's 'C' Procedure for the economic, social, and political scales of the SV are presented in Table 8.

TABLE 8

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR THE DIFFERENCES BETWEEN THE MEAN SCORE OF EXTRAVERTED FATHERS AND INTROVERTED FATHERS ON THE ECONOMIC, SOCIAL, AND POLITICAL SCALES

SV Scales	Extraverted Fathers		Introverted Fathers		Dunn's 'C' Value
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Economic	40.94	6.90	45.68	7.06	1.347
Social	42.25	6.02	40.89	6.07	0.473
Political	38.50	6.35	37.68	5.69	0.339

No significant difference between extraverted and introverted fathers was indicated by the data on the economic, social, and political scales. On the basis of these findings, hypothesis 9 is retained.

## Hypothesis 10

Mothers 40 years of age and older who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than mothers 40 years of age and older who are introverted.

Table 9 presents the Dunn's 'C' Procedure data for the theoretical, aesthetic, and religious scales of the SV.

TABLE 9

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR THE DIFFERENCES BETWEEN THE MEAN SCORES OF INTROVERTED MOTHERS AND EXTRAVERTED MOTHERS ON THE THEORETICAL, AESTHETIC, AND RELIGIOUS SCALES

SV Scales	Introverted Mothers		Extraverted Mothers		Dunn's 'C' Values
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Theoretical	33.63	5.87	34.67	4.56	0.453
Aesthetic	37.00	5.10	38.83	4.11	0.616
Religious	49.10	8.76	50.83	7.45	0.609

There is no significant difference between introverted and extraverted mothers on the theoretical, aesthetic, and religious SV scales. Hypothesis 10 is, therefore, retained.

#### Hypothesis 11

Mothers 40 years of age and older who are extraverted do not score significantly different on the economic, social, and political scales of the SV than mothers 40 years of age and older who are introverted.

TABLE 10

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR THE DIFFERENCES BETWEEN MEAN SCORES OF EXTRAVERTED MOTHERS AND INTROVERTED MOTHERS ON THE ECONOMIC, SOCIAL, AND POLITICAL SCALES

SV Scales	Extraverted Mothers		Introverted Mothers		Dunn's 'C' Values
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Economic	39.62	7.64	43.03	6.59	1.053
Social	41.46	6.41	39.40	6.24	0.782
Political	34.67	5.94	37.83	5.21	1.434

There is no significant difference, as shown in Table 10, between extraverted and introverted mothers on the economic, social, and political scales of the SV. Hypothesis 11 thus is retained.

#### Hypothesis 12

Sons 39 years old and younger who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than sons 39 years old and younger who are extraverted.

The data for Dunn's 'C' Procedure for the theoretical, aesthetic, and religious scales of the SV is presented in Table 11.

TABLE 11

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR THE DIFFERENCES BETWEEN MEAN SCORES OF INTROVERTED SONS AND EXTRAVERTED SONS ON THE THEORETICAL, AESTHETIC, AND RELIGIOUS SCALES

SV Scales	Introverted Sons		Extraverted Sons		Dunn's 'C' Values
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Theoretical	40.87	6.28	39.50	4.14	0.595
Aesthetic	33.50	9.68	36.90	8.16	1.132
Religious	42.50	6.64	43.50	10.65	0.348

Since no significance was found between introverted and extraverted sons, hypothesis 12 is retained.

#### Hypothesis 13

Sons 39 years old and younger who are extraverted do not score significantly different on the economic, social, and political scales of the SV than sons 39 years old and younger who are introverted.

Table 12 presents the data of Dunn's 'C' Procedure for the economic, social, and political scales of the SV.



TABLE 12

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR THE DIFFERENCE BETWEEN MEAN SCORES OF EXTRAVERTED SONS AND INTROVERTED SONS ON THE ECONOMIC, SOCIAL, AND POLITICAL SCALES

Sv Scales	Extraverted Sons		Introverted Sons		Dunn's 'C' Values
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Economic	43.10	10.52	44.50	11.20	0.429
Social	34.30	7.62	37.92	6.25	1.364
Political	42.70	8.29	41.13	4.93	0.704

The results yielded non-significant ratios between the mean scores for the extraverted and introverted sons. Hypothesis 13, therefore, is retained.

#### Hypothesis 14

Daughters 39 years old and younger who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than daughters 39 years old and younger who are extraverted.

The data of Dunn's 'C' Procedure for the theoretical, aesthetic, and religious scales of the SV are reported in Table 13.

Table 13 indicates that there is no significant difference between introverted and extraverted daughters on the SV's theoretical, aesthetic, and religious scales. Hypothesis 14 is retained.

TABLE 13

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR THE DIFFERENCES BETWEEN MEAN SCORES OF INTROVERTED DAUGHTERS AND EXTRAVERTED DAUGHTERS ON THE THEORETICAL, AESTHETIC, AND RELIGIOUS SCALES

Sv Scales	Introverted Daughters		Extraverted Daughters		Dunn's 'C' Values
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Theoretical	33.46	7.64	33.40	6.22	0.029
Aesthetic	41.00	7.50	39.03	8.38	0.688
Religious	50.07	5.81	48.23	5.92	0.673

## Hypothesis 15

Daughters 39 years old and younger who are extraverted do not score significantly different on the economic, social, and political scales of the SV than daughters 39 years old and younger who are introverted.

It can be seen from the Dunn's 'C' Procedure data shown in Table 14 that there was no significant difference between extraverted and introverted daughters on the economic, social, and political scales of the SV.

TABLE 14

MEANS, STANDARD DEVIATIONS, AND DUNN'S 'C' VALUES FOR DIFFERENCES BETWEEN MEAN SCORES OF EXTRAVERTED DAUGHTERS AND INTROVERTED DAUGHTERS ON THE ECONOMIC, SOCIAL, AND POLITICAL SCALES

SV Scales	Extraverted Daughters		Introverted Daughters		Dunn's 'C' Values
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Economic	40.27	7.98	37.14	7.01	1.010
Social	43.03	6.55	43.57	9.04	0.213
Political	35.77	4.13	34.46	5.92	0.614

The data reported in Table 14 shows that there is no significant difference between extraverted and introverted daughters and hypothesis 15 is, therefore, retained.

#### Summary

For the research population no significant differences were found on the E-I index of the M-BTI. Furthermore, there were no significant differences found within groups differentiated by their E-I index scores when compared on the six values of the SV.

Chapter V presents a summary, discussion of the findings and the conclusions emerging from the study, and appropriate recommendations.

## CHAPTER V

### DISCUSSION

#### Summary

The primary purpose of this study was to examine the relationship of Jung's developmental theory, involving extraverted and introverted personality types, to age, sex, familial status and values. Specifically, the problems examined in this study were: (1) to what extent does the personality type of an individual, as measured by the Myers-Briggs Type Indicator (M-BTI), utilizing the extraversion-introversion (E-I) index, vary in relation to age, sex, and familial status and, (2) what is the relationship between extraversion-introversion to Spranger's personality values, as measured by the Study of Values (SV), in relation to sex and age.

The specific null hypotheses tested were as follows:

1. Fathers and mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons and daughters 39 years old and younger.
2. Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than mothers 40 years of age and older.
3. Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons 39 years old and younger.

4. Fathers 40 years of age and older are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

5. Mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than sons 39 years old and younger.

6. Mothers 40 years of age and older are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

7. Sons 39 years old and younger are not significantly different on the E-I index of the M-BTI than daughters 39 years old and younger.

8. Fathers 40 years of age and older who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than fathers 40 years of age and older who are extraverted.

9. Fathers 40 years of age and older who are extraverted do not score significantly different on the economic, social, and political scales of the SV than fathers 40 years of age and older who are introverted.

10. Mothers 40 years of age and older who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than mothers 40 years of age and older who are extraverted.

11. Mothers 40 years of age and older who are extraverted do not score significantly different on the economic, social, and political scales of the SV than mothers 40 years of age and older who are introverted.

12. Sons 39 years old and younger who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than sons 39 years old and younger who are extraverted.

13. Sons 39 years old and younger who are extraverted do not score significantly different on the economic, social, and political scales of the SV than sons 39 years old and younger who are introverted.

14. Daughters 39 years old and younger who are introverted do not score significantly different on the theoretical, aesthetic, and religious scales of the SV than daughters 39 years old and younger who are extraverted.

15. Daughters 39 years old and younger who are extraverted do not score significantly different on the economic, social, and political scales of the SV than daughters 39 years old and younger who are introverted.

The research population consisted of 27 volunteer families who were members of St. Paul's Lutheran Church, Gilby, North Dakota during 1977. Each family consisted of a father and a mother 40 years of age or older, and their children, 39 years old or younger. No children under the age of 16 participated in this study. The research population consisted of 27 fathers, 27 mothers, 29 sons, and 29 daughters with the total number of subjects being 112.

The subjects were administered the Myers-Briggs Type Indicator, Form F, the Study of Values, and completed a personal data sheet. Groups were formed by dividing the subjects on the basis of age, sex, and familial status. The Analysis of Variance and Scheffé's test for multiple comparisons were to be employed for hypotheses one through seven since they were a posteriori established. However, since no significant F ratios were

found in the Analysis of Variance, Scheffé's test was not appropriate to be utilized. Hypotheses eight through fifteen were a priori established and Dunn's 'C' Procedure was applied.

The fifteen null hypotheses were tested. Hypotheses testing was conducted at the .05 level of significance. The results of the hypotheses testing are as follows:

1. No significant difference was found between fathers and mothers, 40 years of age and older, and sons and daughters, 39 years old and younger, on the E-I index of the M-BTI.

2. No significant difference was found between fathers, 40 years of age and older and mothers, 40 years of age and older, on the E-I index of the M-BTI.

3. No significant difference was found between fathers, 40 years of age and older and sons, 39 years old and younger, on the E-I index of the M-BTI.

4. No significant difference was found between fathers, 40 years of age and older, and daughters, 39 years old and younger, on the E-I index of the M-BTI.

5. No significant difference was found between mothers, 40 years of age and older, and sons, 39 years old and younger, on the E-I index of the M-BTI.

6. No significant difference was found between mothers, 40 years of age and older, and daughters, 49 years old and younger, on the E-I index of the M-BTI.

7. No significant difference was found between sons, 39 years old and younger, and daughters, 39 years old and younger, on the E-I index of the M-BTI.

8. No significant differences were found between introverted and extraverted fathers, 40 years of age and older, on the theoretical, aesthetic, and religious scales of the SV.

9. No significant differences were found between extraverted and introverted fathers, 40 years of age and older, on the economic, social, and political scales of the SV.

10. No significant differences were found between introverted and extraverted mothers, 40 years of age and older, on the theoretical, aesthetic, and religious scales of the SV.

11. No significant differences were found between extraverted and introverted mothers, 40 years of age and older, on the economic, social, and political scales of the SV.

12. No significant differences were found between introverted and extraverted sons, 39 years old and younger, on the theoretical, aesthetic, and religious scales of the SV.

13. No significant differences were found between extraverted and introverted sons, 39 years old and younger, on the economic, social, and political scales of the SV.

14. No significant differences were found between introverted and extraverted daughters, 39 years old and younger, on the theoretical, aesthetic, and religious scales of the SV.

15. No significant differences were found between extraverted and introverted daughters, 39 years old and younger, on the economic, social, and political scales of the SV.

#### Discussion and Conclusions

This study examined whether there are significant differences among personality types of the members of a sample of families utilizing the



scores from the extraversion-introversion index of the Myers-Briggs Type Indicator and the theoretical, economic, aesthetic, social, political, and religious scales of the Study of Values. It was found that no significant differences existed among the groups of family members on the E-I index of the M-BTI. Also, within the groups of fathers, mothers, sons, and daughters no significant differences were found in relation to the sex scales of the SV.

When the 27 families were divided into two groups consisting of (1) fathers and mothers and (2) sons and daughters, the relationship between group one and two was examined on the E-I index of the M-BTI (hypothesis 1). No significance was found and these findings suggest the scores varied by chance factors alone between these two groups.

With the family members divided into four groups consisting of fathers, mothers, sons, and daughters six possible relationships between these groups were examined (hypotheses 2-7). Out of the six possible differences no significance was found between the four groups on the E-I index of the M-BTI.

These results seem contrary to Jung's (1966) theory of personality development which hypothesizes that those within the youth and young adulthood stage tend to be extraverted while those within the middle age stage tend to be introverted. It would seem logical then, that a significant relationship would exist between the E-I scales for comparisons between fathers and mothers to sons and daughters; fathers to sons; fathers to daughters; mothers to sons; and mothers to daughters, but no significant differences were found.

Furthermore, the results of sons and daughters groups were not consistent with the theory of Jung since both sons and daughters were

introverted. It would have been expected that they would be extraverted. However, the results are consistent with Jung's theory when fathers are compared with mothers since both are introverted. In this relationship no significant difference was expected and none was found from the data.

The four groups of fathers, mothers, sons, and daughters were divided into subgroups according to their extraverted-introverted scores and comparisons within groups on the six scales of the SV were made (hypotheses 8-15). In this manner, then, twenty-four possible relationships were compared. Out of the twenty-four possible differences no significant differences were found.

These results indicate that the measured personal values and personality types of fathers, mothers, sons, and daughters show no significant differences between extraverts and introverts on the six values of the SV. It would have seemed logical, according to Jung's (1953) theory, that a significant relationship should exist between the M-BTI extraversion index and the economic, social, and political scales of the SV. Jung (1953) postulated that extraverts were primarily object-oriented, that what is most valued are events which are external. Spranger (1928) conceptualized the economic valuing individual as one who utilizes his environment for his own good; the social individual as one striving to serve his fellow man; and the political man as desiring power over others. Also, it would have seemed logical from the theory that a significant relationship should exist between the M-BTI introversion index and the theoretical, aesthetic, and religious scales of the SV. Introverts were postulated by Jung (1953) as subject-oriented and what is most valued are events which are internal. Spranger (1928) conceptualized theoretical individuals as pursuing truth through the cognitive enterprise; aesthetic

types seek form and harmony which comes from within; and religious valuing individuals seek the meaning of life through personal experience.

The two developmental periods in life upon which this study was based were Jung's (1966) stages of youth and young adulthood, with an age range of 16 to 39, and middle age, with an age range of 40 to extreme old age. No significant differences were found between these two stages. Theoretically, it would have been consistent to expect significance when Jung's theory is viewed with respect to studies by Myers (1962), Ashbrook (1967), and Nauss (1968) who found seminary students to be extraverted and Van Zelst & Kerr's (1951) research which found men forty and over concerned with peace of mind, religion, and philosophy. Furthermore, according to Hall & Nordby (1973) the loss or change in one's values creates a vacuum in one's personality and this change comes at mid-life (35-40) when one moves from extraverted to introverted values. The differences stated by Hall & Nordby were not supported by this study. Since no significant differences were found between the youth and young adulthood stage and the middle age stage, and additionally since it was found that all groups were introverted, this present study seems more consistent with James' (1950) theory than with Jung's (1966). It might be inferred that one's habitual personality traits are acquired by the age of thirty, as James postulated, and remain unchanged throughout the remainder of life.

The lack of statistical significance in this present study might be a function of the instruments utilized. The M-BTI and the SV are forced choice instruments. The concurrent validity of the M-BTI has been questioned by Stricker and Ross (1964b), Mendelsohn (Buros, 1965), and Sundberg (Buros, 1965). The lack of construct validity on the SV was

mentioned by Hogan (Buros, 1972) and Gage (Buros, 1959). The scales are inferred constructs which do not exist in reality and they transcend conclusions based on empirical observations. Furthermore, the latest norms for the M-BTI were generated during 1957-1961 and for the SV during 1968.

The present study was further limited by the sample. The population from which the sample was drawn might be highly homogenous in nature. Furthermore, the sample size was limited to 112 subjects which were further divided into age-familial groups corresponding to Jung's (1966) stages of youth and young adulthood and middle age.

The difference between the stage of youth and young adulthood to the stage of middle age, with their respective extraverted and introverted values, which Jung postulated, was not found in this research study. Therefore application of the developmental stages, as proposed in Jung's theory, should be cautiously followed in counseling assessment, application, and prediction. On the basis of this present study it would be tenuous to assume individuals hold the attitudes and values which Jung predicted in relation to age. In family counseling the counselor might look for similarities between parent and child in attitude and values. Finally, the counselor ought to view the client individually rather than drawing assumptions about the client from Jung's personality development theory.

In summary, the following major conclusions emerge from this study:

1. The finding between fathers and mothers compared to sons and daughters on the E-I index of the M-BTI is not consistent with Jung's personality development theory in which age should significantly affect one's extraverted or introverted values.

2. The findings among fathers, mothers, sons, and daughters compared on the E-I index of the M-BTI were inconsistent with Jung's personality development theory in which age should significantly affect one's extraverted or introverted values. Furthermore, there were no significant differences in relation to sex or familial status.

3. No significant relationships were found within familial E-I types and values as measured by the SV.

In summary, the overriding conclusion is that Jung's concept of developmental stages could not be supported by the orientation of extraversion-introversion or by a relationship of E-I type to Spranger's personality value types.

#### Recommendations

The following recommendations are presented in an effort to provide direction for further research on Jung's personality development theory involving extraversion and introversion and on Jung's developmental stages of life.

1. It is recommended that a similar study be undertaken utilizing a larger and more diverse research population. Subjects might be drawn from different ethnic backgrounds, regional areas, and other rural and urban settings.

2. It is recommended that a longitudinal study be conducted with the present research population to ascertain if change occurs on personality type and values using the instruments of this study.

3. It is recommended that research utilizing a sample population in the youth and young adulthood stage who are extraverted be studied over time to measure personality change. The same instruments, as used in this present study could be used to measure personality types.

4. It is recommended that a study be done to determine if personality change in extraversion-introversion develops earlier or later in life than that postulated by Jung. A longitudinal study in which the subjects would be administered the same instruments as used in this study at five year intervals might be conducted.

5. It is recommended that a similar study be undertaken to determine what differences in personality may occur between males and females irrespective of age.

6. It is recommended that a similar study be done with families in which the children live in different geographical settings than do the parents. This study might employ parents living in a rural setting with their children who reside in an urban setting.

7. It is recommended that research be conducted relating extraversion-introversion to values as measured by instruments other than the Study of Values, such as Gordon's (1963) Survey of Interpersonal Values or William's et al. (Robinson & Shaver, 1973) Analysis of Personal Values.

8. It is recommended that a similar study be undertaken which utilize other instruments to measure Jung's extraversion-introversion attitudes, such as the Gray-Wheelwright Psychological Type Questionnaire (Myers, 1962).

APPENDIX A

LETTER OF INVITATION TO SUBJECTS

Dear St. Paul's Member,

I am writing to you because I need your help in completing some work for my studies at the University of North Dakota. Your help would involve spending one evening at St. Paul's to answer two questionnaires. It will involve about two hours of your time and coffee will be served.

What I need are families to participate. If you have family members at home please encourage them to participate. If you have family members out of your home but living within driving distance please ask them to come also. Anyone 16 years old and over are welcome to participate. All information is held strictly confidential.

If you are willing to help me please come to St. Paul's on Thursday evening, October 13th or November 17th or December 14th. We will begin at 7:30 p.m.

I shall need approximately 140 people to complete the questionnaires. If you know of any families who are not members of St. Paul's but who would help out please invite them to come.

Thank you very much.

Sincerely,

Paul Hirdman



APPENDIX B  
PERSONAL DATA FORM

## PERSONAL DATA SHEET

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Sex: Male \_\_\_\_\_ Female \_\_\_\_\_

Check one of the following--if you are 40 years old or older check either Father or Mother--if you are 39 years old or younger check either Son or Daughter:

Father \_\_\_\_\_

Mother \_\_\_\_\_

Son \_\_\_\_\_

Daughter \_\_\_\_\_

Please list the names of family members who are participating in this study:

Parents names: (spouse's name goes here)

Childrens names:

APPENDIX C  
FREQUENCY TABLE FOR AGE

TABLE 15

## FREQUENCY TABLE FOR AGE OF SAMPLE

Age	Fathers	Mothers	Age	Sons	Daughters
76-77	1	0	38-39	2	2
74-75	0	0	36-37	2	2
72-73	1	2	34-35	4	2
70-71	0	1	32-33	4	4
68-69	1	1	30-31	3	3
66-67	4	1	28-29	2	2
64-65	2	0	26-27	3	1
62-63	1	2	24-25	0	3
60-61	6	3	22-23	2	3
58-59	1	3	20-21	3	2
56-57	1	5	18-19	1	3
54-55	0	1	16-17	3	2
52-53	1	0		N = 29	N = 29
50-51	1	0		<u>M</u> = 28.4	<u>M</u> = 27.4
48-49	2	4			
46-47	1	0			
44-45	1	1			
42-43	2	1			
40-41	1	2			
	N = 27	N = 27			
	<u>M</u> = 58.2	<u>M</u> = 56.5			

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