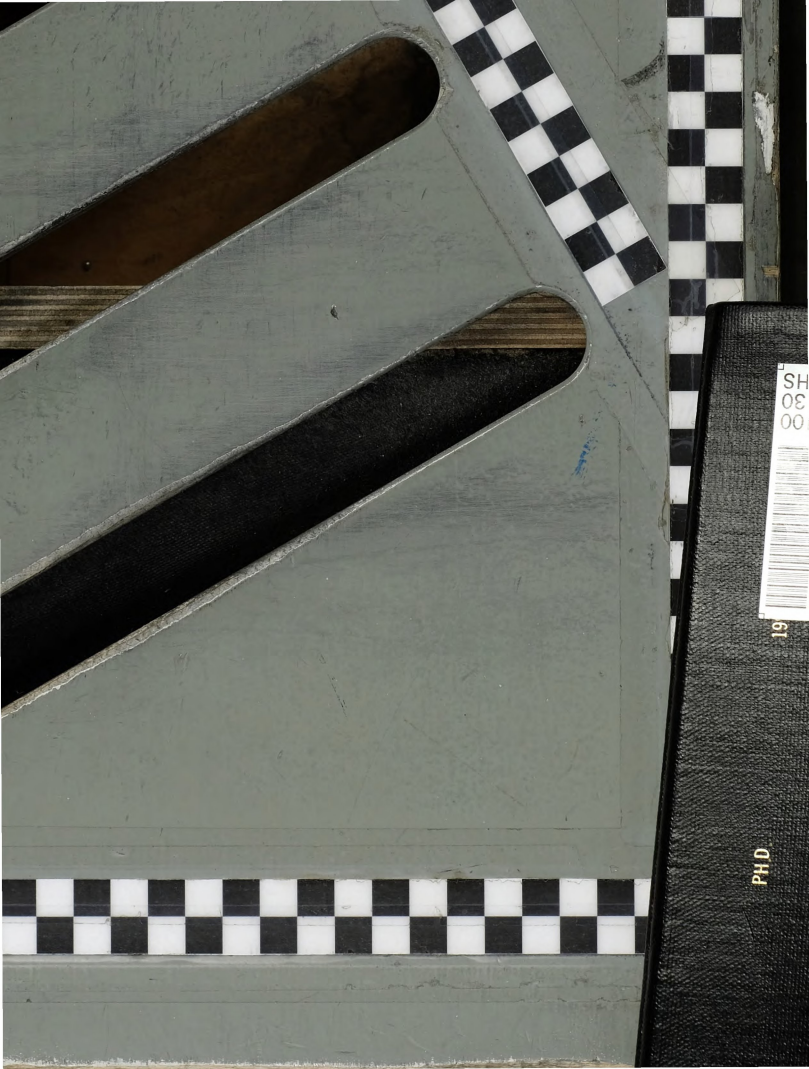


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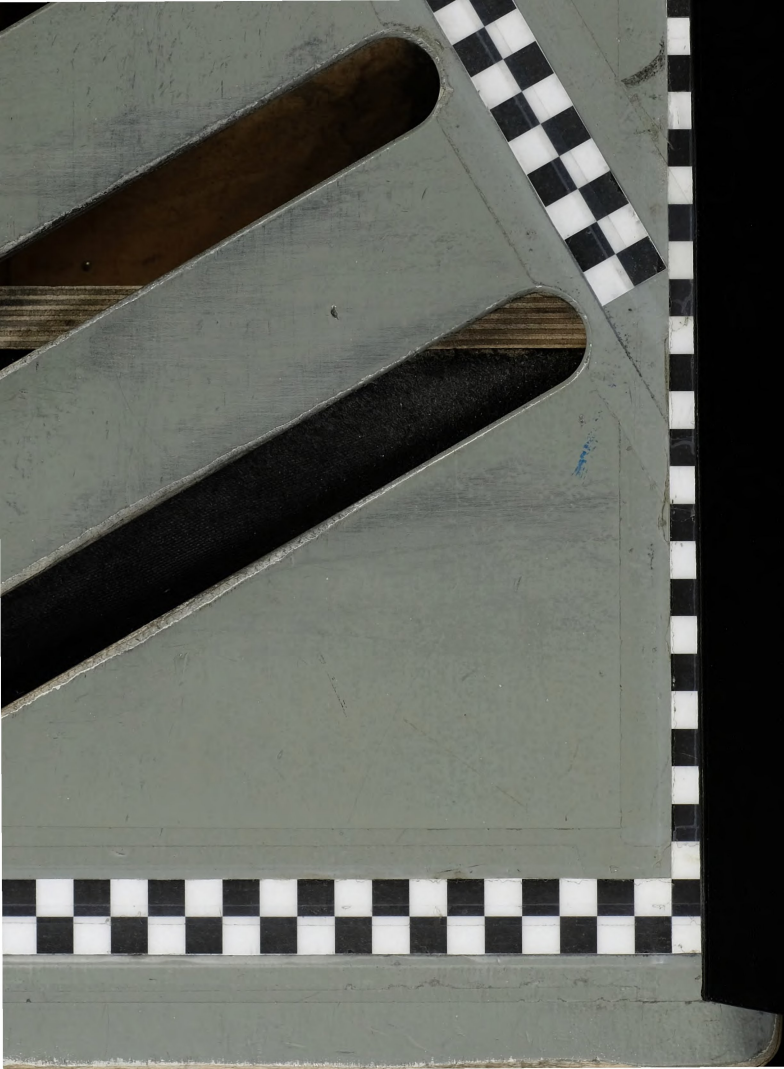
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AN EXPANSION OF GILLIGAN'S THEORETICAL CONCEPTS AND  
SELF-IN-RELATION THEORY INTO THE VOCATIONAL DOMAIN: THE  
RELATIONSHIP BETWEEN CONNECTED IDENTITY, SEPARATE IDENTITY  
AND PEOPLE'S ENDORSEMENTS OF WORK VALUES  
AND VOCATIONAL RESOURCES  
presented by

Loren Jo Adams

has been accepted towards fulfillment  
of the requirements for

Ph.D degree in Counseling Psychology

Linde Forrest

Major professor

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AN EXPANSION OF GILLIGAN'S THEORETICAL CONCEPTS AND  
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RELATIONSHIP BETWEEN CONNECTED IDENTITY, SEPARATE IDENTITY  
AND PEOPLE'S ENDORSEMENTS OF WORK VALUES  
AND VOCATIONAL RESOURCES

By

Loren Jo Adams

A DISSERTATION

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

DOCTOR OF PHILOSOPHY

Department of Counseling, Educational Psychology  
and Special Education

1992



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ABSTRACT

AN EXPANSION OF GILLIGAN'S THEORETICAL CONCEPTS AND  
SELF-IN-RELATION THEORY INTO THE VOCATIONAL DOMAIN: THE  
RELATIONSHIP BETWEEN CONNECTED IDENTITY, SEPARATE IDENTITY  
AND PEOPLE'S ENDORSEMENTS OF WORK VALUES  
AND VOCATIONAL RESOURCES

By

Loren Jo Adams

Human development theorists have described development primarily through a separation/individuation process. Contemporary theorists (Gilligan, 1982; Miller, 1991) have argued that the focus on separation occurred because men have more often been the subjects of their studies. Focusing on women's development, Gilligan (1982) and Miller (1991) have postulated that people may also follow a connected path of development. Through the two paths of development, people may form Separate and/or Connected Identities.

This study investigated whether the degree to which people possess Separate and Connected Identities predicts (1) the importance they assign to specific sets of work values, and (2) their endorsements of specific sets of vocational resources. Vocational resources were defined as aids students might use to help them accomplish vocational tasks.

One hundred eighty-three male and 103 female senior undergraduate students responded to a mail survey. Subjects' scores on Separate Identity and Connected Identity as measured by the Relationship Self Inventory (Strommen et al., 1987) and their sex were included in multiple regression

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analyses to predict work values, measured by the Work Values Inventory (Super, 1970), and vocational resource preferences measured by the Vocational Resource Options Questionnaire, an instrument developed by the author.

Generally, results supported hypotheses. Connected Identity scores positively predicted subjects' ratings "connected" work values, "connected" vocational resources, and a composite of "connected" and "separate" work values. Separate Identity scores positively predicted ratings of "separate" work values, "separate" vocational resources and a composite of "separate and connected" work values. Surprisingly, Separate Identity scores also negatively contributed to predicting ratings of "connected" vocational resources. A moderate amount of variance was explained by these independent variables. Sex of the Subject, contributed to predicting subjects' ratings of "connected" vocational resources and a composite of "separate" and "connected" vocational resources, but explained relatively little variance in vocational resource scores. Results of analysis of variance indicated that demographic variables did not show a relationship to primary variables in the study.

The extent that subjects possess Separate and Connected Identities was more important than their sex in explaining the degree they endorsed "separate" and "connected" work values and vocational resources.





This dissertation is dedicated to my fiancée, Peter Burton,  
and my parents, Courtney and Jerry Adams.

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I do not have the words to fully express my appreciation to the many people who provided me with encouragement and assistance while writing this dissertation. But, I can certainly try.

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As a final note of appreciation, I would like to thank the Riverside Publishing Company for giving me permission to adapt Donald Super's (1968) Work Values Inventory for the present research. As requested, I have included the copyright notice from the Work Values Inventory (Super, 1968):

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## Chapter 1

### STATEMENT OF PURPOSE

#### Need for Study

##### Human Developmental Theories and Women's "Inferior" Development

According to contemporary theorists on women's development (Gilligan, 1982; Jordan, 1991; Miller, 1991), past theories have inadequately described women's process of development. Many theories of human development have been derived from observations about men (eg., Erikson, 1968; Levinson, 1978; Perry, 1970) without consideration for women's differences. These theories, in describing people's stages of development, focus primarily on describing how people separate emotionally and physically from people important to them (eg., Erikson, 1968). The underlying assumption is that development results from the process of differentiating oneself from other people. In contrast to these theories, Miller (1991) and Surrey (1991) argue that although men's developmental growth tends to occur through the process of separating oneself from emotional involvement, women's developmental growth typically occurs through the process of being emotionally involved in relationships with others. Because women's process of development deviates from men's process of development, and because men's experience is taken as standard, theories of human development judge women's development as being an inferior mode of adjustment. Similarly, female values, evolving from

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women's developmental processes, have been devalued in comparison to male values derived from men's process of development.

An example of how women's typical mode of development is considered deviant can be found in Kohlberg's model of moral development. According to Gilligan (1982), women's developmental growth results from their connected relationships with others. Through these relationships women come to experience concern for others, and in doing so, they learn to evaluate moral situations from an interpersonal perspective. According to Kohlberg's model of moral development, people who evaluate moral issues from an interpersonal level are at the third level of moral development. On the other hand, through men's typical process of development men attain greater emotional separation from others, and as a result they learn to evaluate situations from an abstract level that maintains their emotional distance from others. According to Kohlberg's model, people who evaluate moral issues at an abstract level are at higher levels of development than those who evaluate issues from an interpersonal level. Because Kohlberg's research on moral development was derived from observations of males, moral development stages of all people have been assumed to follow male stages of development.

Values associated with "separate" development, males' typical form of development, are considered important. On



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the other hand, values associated with "connected" development, women's typical mode of development, are judged unimportant. Miller (1976) says "autonomy", "self-actualization" and "independence", characteristics associated with separate development, are highly valued by our culture, but traits and activities assigned to women generally are devalued (Miller, 1976). A significant research study carried out by Broverman, Vogel, Broverman, Clarkson and Rosenkrantz (1972) supports Miller's statement. Results of this study indicated that traits associated with males are more often considered socially desirable than traits associated with females. Also, traits associated with being a "healthy male" corresponded with traits associated with being a "healthy adult", whereas traits associated with being a "healthy woman" differed significantly from traits associated with being a "healthy adult". Broverman et al. (1972) concluded that traits corresponding to women's development are not considered to be as healthy as those corresponding to men's development.

Gilligan (1982) suggested that developmental theories based on people's separation process have failed to recognize the importance of forming emotional connections with others. She says that there is:

...a failure to describe the progression of relationships toward maturity of interdependence. Though the truth of separation is recognized in most developmental texts, the reality of continuing connection is relegated to the background where women appear (Gilligan, 1982, p.155).

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Because the process of connected development tends to be overlooked by researchers, women's behavior has often been misunderstood. Psychoanalytic theory, for instance, assumes that people develop out of an "undifferentiated mass". When a woman develops in the context of a relationship, her connected interactions may be judged as taking a step backwards. It is assumed that she has returned to an undifferentiated state (Jordan, 1991). Similarly, women's desire to be in relationships has often been misunderstood. Often it is assumed that this desire means that women are looking for someone to be dependent on, rather than having a wish to connect with others.

In summary, women have been 1) judged inferior to men in their development, and 2) judged as deviant in their behaviors and values when they are evaluated on criteria used to measure the healthiness of adults. These conclusions have been based on false assumptions that developmental growth occurs in the same way for males and females.

#### The Absence of Research Applying Self-In-Relation Theory to the Vocational Domain

Current theories of women's development have led to an enhanced understanding of women's development and have helped to explain differences noted between males and females generally. According to Miller's (1991) and Surrey's (1991) Self-In-Relation theory, instead of separating from others during development as men typically

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do, women continue to remain within relationships as they grow. Being in an emotionally interactive relationship is a very significant aspect of women's lives (Miller, 1976).

Gilligan's (1982) research on people with Connected and Separate Identities has shown that most males and females have different orientations toward the world. Her findings indicate that males, more often than females, tend to have predominantly Separate Identities. Some females though do have primarily Separate Identities. Also, females, more often than males, tend to have predominantly Connected Identities. Some males, however, do have primarily Connected Identities (Gilligan 1982; Lyons, 1983). To understand differences between separate and connected development, it is best to compare people with Connected versus Separate Identities, rather than compare males and females applying the mistaken assumption that all males have Separate Identities and all females have Connected Identities.

Researchers have explored the impact of separate and connected development in many domains. These domains include areas such as empathy development (Jordon, 1991; Surrey, 1991), self-definition (Gilligan, 1982; Lyons, 1983), moral reasoning (Gilligan, 1982; Lyons, 1983), and theories relating to women's work issues (Forrest and Mikolaitis, 1986; Stiver, 1991b). However, little empirical research has been conducted to determine whether differences in people with Connected and Separate Identities are

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reflected in the manner in which people deal with career issues.

In conclusion, research indicates that connected and separate development is related to the manner in which people think about and deal with a variety of issues. Research, however, is needed to determine 1) if people with Connected and Separate Identities consider and deal with vocational issues in different ways, and 2) if differences are found, what is the nature of these differences?

### **Purpose**

This descriptive study will determine whether people's divergent Separate and Connected Identities are reflected in 1) their career values, and in 2) the extent that people endorse separate and connected vocational resources to accomplish vocational tasks. The following measures will be utilized in this study:

- 1) The Relationship Self Inventory (RSI) will be used as an independent measure to assess the degree that people have Connected and/or Separate Identities.
- 2) The Work Values Inventory (WVI) will be used as a dependent measure to assess the importance that people assign to various work values.
- 3) The Vocational Resource Options Questionnaire (VROQ) will be used as a dependent measure to determine the degree to which people endorse vocational resource options that emphasize connected and/or separate styles of interaction.

### **Definitions**

1. Identity--This concept is defined as the "distinguishing characteristic or personality of an individual", according



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to Webster's New Collegiate Dictionary (1975). In the present context, the characteristic focused on is the manner in which people are oriented towards relationships with others.

a. Connected Identity<sup>1</sup>--Persons with this identity are characterized as:

- 1) focusing on their relationships with others,
- 2) having a moral concern for the well-being of others,
- 3) having a desire to understand others' emotions and cognitions as these individuals attempt to identify how other people view things from their own perspective.

The Connected Self (CRSI) Scale of the RSI is used to measure the extent people possess a Connected Identity.

b. Separate Identity<sup>2</sup>--Persons with this identity are characterized as:

- 1) focusing on their individual accomplishments,
- 2) having a concern for individuals' right to ensure that these rights are not interfered with,
- 3) having a desire to be objective as these individuals attempt to "step back" and observe a situation at a distance without becoming emotionally involved.

The Separate Self (SRSI) Scale of the RSI is used to measure the extent people possess a Separate Identity.

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<sup>1</sup>The terms Relational/Connected Identity and Relational Identity are used interchangeably with Connected Identity.

<sup>2</sup>The term Separate/Objective Identity is used interchangeably with Separate Identity.

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2. Work Values--Work values are defined as being rewards that people obtain through working. These rewards may come from the act of working (eg., doing intellectually stimulating work), may be a consequence of working (eg., getting paid wages), or may be indirectly associated with work (eg., making friends at work).

a. "Connected" Work Values--These are specific work values that have been judged by experts to be connected in nature. Values may be defined as connected for one or more of the following reasons:

- 1) the value indicates a concern about helping other people,
- 2) the value indicates a desire to interact in a cooperative manner with other people,
- 3) the value indicates an awareness of one's interpersonal relationships.

The Connected Work Values (CWVI) Subscale of the WVI is used to measure people's ratings of the importance of "connected" work values.

b. "Separate" Work Values--These are specific work values that have been judged by experts to be separate in nature. Values may be defined as separate for one or more of the following reasons:

- 1) the value indicates a competitive orientation as people desire to be in unequal relationships with others,
- 2) the value indicates that persons are concerned about their individual achievements or success,
- 3) the value indicates that people want to ensure that their individual rights are not interfered with.

The Separate Work Values (SWVI) Subscale of the WVI is used to measure people's ratings of the importance of "separate" work values.

- c. Total Work Values--These specific sets of work values are a composite of work values that have been judged by experts to be "separate" work values or "connected" work values. The Total Work Values (TWVI) Subscale of the WVI is used to measure people's rating of the importance of both sets of work values together.

3. Vocational Resources--These are resources that aid people in accomplishing a vocational task, such as determining what career path to follow. Examples of vocational resources that people use are vocational guidance counselors, computerized vocational guidance systems, vocational interest inventories, etc.

- a. "Connected" Vocational Resource Option--In the Vocational Resource Option Section of the Questionnaire, this vocational resource option emphasizes a more connected style of interaction than the alternative vocational resource option presented within the same scenario (See Appendix B, Section III of Questionnaire). The Connected Options (CVRO) Scale of the VROQ is used to measure the degree that people endorse "connected" vocational resource options.

- b. "Separate" Vocational Resource Option--In the Vocational Resource Option Section of the



Questionnaire, this vocational resource option emphasizes a more separate style of interaction than the alternative vocational resource option presented within the same scenario (See Appendix B, Section III of Questionnaire). The Separate Options (SVRO) Scale of the VROQ is used to measure the degree that people endorse "separate" vocational resource options.

- c. Total Vocational Resource Options--In the Vocational Resource Option Section of the Questionnaire, this is a composite of vocational resource options that have been judged by experts to be "connected" or "separate" vocational resource options. The Total Options (TVRO) Scale of the VROQ is used to measure the degree that people endorse both sets of vocational resource options together.

### General Hypotheses

Hypotheses tested in this study are:

- Hypothesis 1: The extent that people possess a Connected Identity will positively predict the degree of importance people assign to "connected" work values, whereas the extent that people possess a Separate Identity, and their sex, will not contribute further to the prediction of the importance people assign to "connected" work values.
- Hypothesis 2: The extent that people possess a Separate Identity will positively predict the degree of importance people assign to "separate" work values, whereas the extent that people possess a Connected Identity, and their sex, will not contribute further to the prediction of the importance people assign to "separate" work values.

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- Hypothesis 3: The extent to which people possess a Connected Identity and the extent to which people possess a Separate Identity will each positively predict the degree of importance people assign to a composite of "connected" and "separate" work values. However, sex of the subject will not contribute further to the prediction of the importance people assign to a composite of "connected" and "separate" work values.
- Hypothesis 4: The extent that people possess a Connected Identity will positively predict the degree that people endorse "connected" vocational resource options, whereas the extent that people possess a Separate Identity, and their sex, will not contribute further to the prediction of people's endorsement of "connected" vocational resource options.
- Hypothesis 5: The extent that people possess a Separate Identity will positively predict the degree that people endorse "separate" vocational resource options, whereas the extent that people possess a Connected Identity, and their sex, will not contribute further to the prediction of people's endorsement of "separate" vocational resource options.
- Hypothesis 6: The extent that people possess a Connected Identity and the extent that people possess a Separate Identity will each positively predict the degree that people endorse a composite of "connected" and "separate" vocational resource options. However, sex of the subject, will not contribute further to the prediction of people's endorsement of a composite of "connected" and "separate" vocational resource options.

### Overview

In interpreting the results of studies on men's and women's development, many researchers have concluded that women are deviant from normal human development. Theorists describing women's development, however, argue that people

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follow two different paths in their development rather than one. One path, separate development, is more commonly followed by males. The other path, connected development, is more commonly followed by females. Through the two paths of development, people form divergent Identities. These differences are exhibited in the way that people are oriented toward relationships with others. Although researchers have examined how the characteristics of Connected and Separate individuals are expressed within a variety of areas, no researchers have investigated whether differences between people with Separate and Connected Identities are reflected in their processing of vocational issues.

This research has been conducted to explore the hypothesis that people who differ in the extent that they possess Connected and Separate Identities also differ in the degree of importance they assign to various work values and in the extent to which they endorse vocational resources that emphasize connected or separate styles of interaction. If research findings indicate that people who differ in the extent they possess Connected and Separate Identities also differ in the importance that they assign to various work values, it will be important for counselors to acknowledge differences in the importance these individuals assign to work values, but also recognize potential changes may occur in people's work values as people continue to progress along each developmental path. Also, if people differ in

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the extent they endorse vocational resources, counselors will need to consider whether they should design specific vocational interventions that will be most effective in aiding the groups that differ. In particular, counselors will need to identify vocational resources that these specific groups are willing to use as well as benefit from.

In Chapter II, the relevant theoretical literature is discussed. In Chapter III, empirical research is presented. In Chapter IV, methodology is described. In Chapter V, the analyses of data are presented. Chapter VI includes the summary, discussion, limitations, and implications of the findings.

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## Chapter 2

### REVIEW OF THE THEORETICAL LITERATURE

#### Historical Perspective on Male and Female Traits

Theory on separate and connected development evolved out of earlier theoretical conceptualizations of traits associated with males and females. Bakan (1966) noted two ways of existing within the world, agentic and communal modes. He stated that he sought to:

...characterize two fundamental modalities in the existence of living forms, agency for the existence of an organism as an individual, and communion for the participation of the individual in some larger organism of which the individual is a part. Agency manifests itself in self-protection, self-assertion, and self-expansion; communion manifests itself in the sense of being at one with other organisms. Agency manifests itself in the formation of separations; communion in the lack of separations....Agency manifests itself in the urge to master; communion in noncontractual cooperation (Bakan, 1966, p.14-15).

Bakan (1966) suggested that agency corresponds more closely with masculine behavior, and communion corresponds more closely with feminine behavior.

Bakan's (1966) theory paralleled the current theory of Self-in-Relation. Both theories described traits observed more often within one sex than another. Both theories described two orientations toward the world, one orientation in which people seek connection with others, and one orientation in which people focus on themselves maintaining separateness from others. One major difference noted between the two theories is that Bakan suggested that agency

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is present within only one of the two identities, whereas Miller (1991) stated that agency can be present in both of the identities described in Self-in-Relation theory. Agency is defined as actively doing something. Whereas Bakan (1966) described agency in connection to self-assertion and mastery, Miller (1991) suggested that agency can take the form of actively using resources in the environment, or actively doing an action for the sake of others. In these examples, people are cooperating with others.

**Self-In-Relation Theory and Current Conceptualizations  
about the Characteristics Associated with Males and Females**

Gilligan (1982) has conceptualized separate and connected development, and the identities that results from these developmental processes. Additionally, the Stone Center Self-in-Relation theorists (Miller, 1976, 1991; Surrey, 1991) have described connected development in great detail. Since the 1970's, research has been conducted to comprehend the characteristics of people who possess Connected and Separate Identities.

In describing people who possess Connected and Separate Identities, Lyons (1983) said that there are two styles that people use in relating to other people. The styles are "a self separate or objective in its relation to others and a self connected or interdependent in its relationships to others" (Lyons, 1983, p.127). Gilligan (1977) has called people who are separate from others "separate/objective", and people who behave in a connected manner towards others

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Miller (1976) stated that people with Connected Identities differ in their development from people with Separate Identities. Connected people develop in the context of relationships. These individuals are interested in being involved in relationships, and during their development they remain connected in relationships (Surrey, 1991). People with Connected Identities form a goal to develop "mutually empathic relationships" (Surrey, 1991). The formation of the Separate Identity conforms to theories of male development (Miller, 1991). According to these theories (eg., Erikson, 1950; Freud, 1905/1975), males separate from people who are significant in their lives to form their own individuated identity. Through this developmental process, males come to value "autonomy, self-reliance, independence..." (Surrey, 1991, p.52). One of their goals is to attain "individual achievements" (Gilligan, 1982).

One might wonder how the two different developmental paths form. Miller (1991) theorized that, early on in development, all infants have a connected relationship with their caretaker, as they are aware of and oriented toward their caretaker's inner mental state and feelings. Miller suggested that beliefs about masculinity and femininity influence parents' responses to the male and female child, so that males are no longer reinforced for expressing a connected orientation toward others.

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Girls are encouraged to augment their abilities, to "feel as the other feels", and to practice "learning about" the other(s). Boy infants are systematically diverted from it... (Miller, 1991, p.14).

Chodorow (1978) further delineated the significance of males' and females' divergent forms of development. In their interactions with each other, mothers and daughters are aware that they are both females. The daughter sees herself as being similar to her mother and identifies with her, and the mother experiences her daughter as a continuation of herself. Their continuing attachment supports the daughter's development of a feminine identity. On the other hand, the mother perceives her son as being a male, opposite from her own sex. The boy also recognizes that his identity as a male differs from his mother (Chodorow, 1978). It is assumed that to develop a masculine gender identity, the boy must separate from his mother (Gilligan, 1982). The boy tries to cut off his attachment to his mother to form an identity separate from her. In an effort to defend against feeling attachment towards her, the boy forms strong ego boundaries (Chodorow, 1978). As he develops, the male emotionally disconnects himself from others to maintain his identity as a male (Surrey, 1991). The importance of the male's remaining emotionally separated from others is apparent as the "...male gender identity is threatened by intimacy" (Gilligan, 1982).

Surrey (1991) described the development of the Connected Identity as it forms within the mother-daughter

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relationship. Through the mother-daughter relationship, the young girl is reinforced for showing an interest in and exploring her mother's feelings (Surrey, 1991). The mother responds to the daughter's interest in her feelings, and she shares these feeling with her daughter. The girl and her mother form a relationship in which a "mutual sharing process fosters a sense of mutual understanding and connectedness" (Surrey, 1991, p.56). Through this interaction, the girl becomes more adept at listening to her mother and other people's feeling states. Surrey (1991) explained that this connected relationship is the "origin of the capacity for empathy and the beginning practice of relational development" (Surrey, 1991, p.55).

Empathy forms a core aspect of people's relational development (Jordan, 1991; Surrey, 1991). Empathy is defined as being "the ability to experience, comprehend and respond to the inner state of another person" (Surrey, 1991, p.54). This complex skill consists of many steps (Jordan, 1991). First, people pay attention to cues that indicate what another person is feeling. They allow their self-boundaries, which are the boundaries between themselves and others, to loosen as they identify with the individual and experience their own emotions rising to the surface. As their emotions subside, they regain their self-boundaries, and they cognitively evaluate what the other person affectively experienced. They then use their cognitive assessment of the experience to respond to the other person which

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in turn helps the other person better comprehend his or her inner emotions (Jordan, 1991).

To provide empathy to others, people need to feel comfortable loosening their self-boundaries as they identify with the other person to form a connection to that person (Jordan, 1991). It makes sense that boys, whose developmental goals are to separate from others, experience awareness of their mothers' feelings as threatening. They are probably not comfortable identifying with their mother because it requires them to decrease their separation from her, which may indicate to them that they are not developing adequately as "separate", independent beings.

On the other hand, the daughter in applying empathy with her mother is validated for her ability to understand her mother and provide support to her. The girl feels that she is using her skills effectively and she gains satisfaction from this activity. Using her empathic skill then becomes a means for the girl to gain self-esteem. Both the girl and her mother use empathy in interacting with each other to understand each other better. Over time, they progressively become more responsive to each others' inner feelings (Surrey, 1991).

Despite many theorists' emphasis on identity development that results from individuation processes (eg., Erikson, 1950; Freud, 1905/1975; Mahler, Pine & Bergman, 1975), Miller (1991) and Surrey (1991) explained how people's identity development can occur within a relational mode of

interaction. Specifically, within the mother-daughter relationship, through mutually empathic interactions, both the mother and daughter grow and develop. At times the child and her mother switch roles and take turns being caring for one another. Through this relationship, the child becomes more flexible in her interactions. Also, each person in the relationship comes to know herself and the other person better. During the course of development, the child and the mother's needs change, so the relationship between them has to adjust. Consequently, developmental growth occurs within the relationship between them as well as within the mother and daughter as individuals (Surrey, 1991). The mother and daughter do not separate from others to grow developmentally, but instead develop "a more complex sense of self in more complex relations to other selves" (Miller, 1991, p.17).

While Surrey (1991) portrayed relational development through the mother and daughter's interaction, she has stated that it is not necessary to be in a mother-daughter relationship to develop a Connected Identity. The type of interaction that is typical in mother-daughter relationships, though, is likely to promote connected development (Surrey, 1991).

Through separate and connected styles of development, people form specific characteristics. Thus, women who typically form a Connected Identity and men who typically form a Separate Identity tend to differ in their specific

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traits. In her qualitative research, Gilligan (1982) found differences in the way men and women described themselves and in the types of reasoning they applied in making moral decisions. Men's self-descriptions contained statements such as, I am "honest", "intelligent", "arrogant" (Gilligan, 1982, p.161). As they described their qualities as individuals, they did not appear to be aware of their interrelationships with others. Instead, they focused on their individual characteristics and achievements in describing themselves. Men typically evaluate themselves on the basis of their individual abilities or accomplishments, Gilligan (1982) and Lyons (1983) concluded. In Gilligan's (1982) research study, females typically described themselves in terms of their relationships to others. For example, women often described their role as a mother or a wife (Gilligan, 1982). Lyons (1983) stated that these individuals evaluate themselves on the basis of whether they help others or maintain interdependent relationships.

In their moral reasoning, people with Separate Identities generally have a "justice" orientation, and people with Connected Identities generally have a "care" orientation in attempting to resolve moral issues. Gilligan (1982) reported that "justice" oriented individuals, in judging moral issues, attempt to promote equality among individuals. They use principles to protect people's personal freedom (Gilligan, 1982). In seeking to be fair, "rights" oriented individuals try to avoid letting their emotions

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guide their decisions, and they may follow abstract rules to judge an issue objectively (Lyons, 1983). These individuals use reciprocity in evaluating a moral issues. In other words, they assume that people should act in a way that they would like others to act toward themselves. Although they consider how they would like to be treated by others, they do not recognize that others may not want to be treated in the same manner (Lyons, 1983).

People who possess a Connected Identity show a "care" oriented perspective in that they make moral decisions based on a value of not hurting people. Rather than adhere to a general principle in making decisions, they take into account the context of a moral situation to decide how to handle a moral issue (Gilligan, 1982). Specifically they try to recognize another person's needs as that person perceives these needs (Lyons, 1983). They consider the specific context of the situation in making moral decisions because they realize that they may inflict harm on others based on how they decide to act in the situation. People with Connected Identities sense their interconnectedness with others and feel a need to respond to others (Lyons, 1983).

Individuals have the capacity to use both separate and connected perspectives (Gilligan & Wiggins, 1988). Gilligan and Wiggins (1988) stated that children experience both attachment and inequality in their relationships during childhood. Through experiencing attachment within

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relationships, individuals may form a "care" orientation. This perspective is a component of "connected" development. Through experiencing unequal relationships, individuals may become oriented towards maintaining equality among people. This orientation is a component of separate development. Thus, through their experiences, individuals form the capacity for both connected and separate perspectives. The relative strength of connected and separate perspectives within individuals varies based on their experiences during development (Gilligan & Wiggins, 1988). Since some individuals' experiences of attachment and inequality converge (Gilligan & Wiggins, 1988), it is likely that these individuals form, to a greater degree than others, both a Connected and Separate Identity.

Consistent with the theoretical propositions stated above, research findings have shown that people can have both Connected and Separate Identities (Lyons, 1983; Stiller, 1988/1989). For instance, Lyons (1983) found that in their moral reasoning, although they might generally demonstrate a "justice" form of morality, people with predominantly Separate Identities can show a "care" response. Likewise, although they generally demonstrate a "care" form of morality, people with predominantly Connected Identities can show a "rights" perspective (Lyons, 1983).

In summarizing this section, based on Gilligan's (1982) and Lyons' (1983) findings, certain values appear to be important to people who possess Connected Identities.



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They are:

- 1) the importance of relationships
- 2) being responsive to others' needs

Likewise, certain values appear important to people who possess Separate Identities. They are:

- 1) the protection of independent action
- 2) individual achievement

Although these values can be assumed from research on people's moral reasoning and their self-descriptions, it is not known whether these values are also expressed in the way that people think and deal with career issues. The next section will describe research and theories on men's and women's vocational development. The potential contribution of Self-In-Relation theory to understanding men's and women's vocational behavior and development will be discussed.

#### **Theories of Women's Vocational Development in Contrast to Men's Vocational Development**

##### The Absence of a Theory that Adequately Describes Women's Vocational Development

Thus far, vocational theories created to describe women's vocational development have been inadequate. Many researchers focus on men's vocational behavior and development without acknowledging women's vocational behavior and development. Tyler (1967) and Stonewater (1987) have pointed out that vocational development theories have often been based on studies of middle class males. Osipow (1975) stated that most theories derived on males have not aided

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researchers in understanding women's vocational development. Even when researchers have identified ways that females' and males' vocational behaviors differ, these findings are often not discussed in other research articles (Forrest & Mikolaitis, 1986). Thus, information, that may be valuable to consider in formulating a theory on women's vocational development, is not utilized.

Although researchers have agreed that women's vocational development needs to be better understood (Pitzgerald & Crites, 1980; Forrest, and Mikolaitis, 1986; Perun and Bielby, 1981), opinions differ concerning what is the best way to formulate a framework for understanding women's vocational development. Super (1957) slightly modified traditional vocational theories in an attempt to describe females' vocational development and behaviors. Other theorists (eg., Psathsas, 1968; Zytowski, 1969) have created separate theories of vocational development to explain variations in female and male vocational development and behaviors. Finally, Astin (1984) developed a comprehensive theory to explain both male and female vocational development.

One difficulty in designing an adequate vocational theory for women is eliminating gender biases. For instance, Psathsas (1968) and Zytowski (1969), in creating a separate vocational theory for women, described women's role as a homemaker, wife and mother as primary, while her role in the workforce was assumed to be secondary. They assumed

that caring for the family is the women's foremost concern. By defining women's roles in this manner, their position as caregivers in the home was reinforced, and thus, stereotyped conceptions of women were maintained (Forrest & Mikolaitis, 1986). On the other hand, Astin's (1984) vocational theory was criticized because Astin assigned primary importance to women's career role and secondary importance to their social and family relationships (Kahn, 1984). Self-In-Relation theory's description of people with Connected and Separate Identities is likely to help explain the degree of impact family and social factors have on people's vocational behavior and development as well as explain the impact of other factors on people's career behavior and career development.

Self-In-Relation Theory's Utility in Explaining Male and Female Vocational Development and Vocational Behavior

Forrest and Mikolaitis (1986) and Stonewater (1987) recommend the application of Self-in-Relation theory as an important framework for understanding women's vocational development as well as differences in male and female vocational behavior. However, with the exception of Forrest & Mikolaitis (1986) and Stonewater (1987), researchers have not addressed specifically how Self-In-Relation theory may contribute to understanding men's and women's vocational behaviors and development. These authors have discussed how Self-In-Relation theory can be applied to understand men's and women's vocational self-concepts (Forrest &

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Mikolaitis, 1986; Stonewater, 1987), their Vocational Personality Types associated with making career choices (Stonewater, 1987), and their career decisionmaking style (Stonewater, 1987).

In considering Self-In-Relation theory's impact on vocational self-concepts, Stonewater (1987) says that women

...may see themselves as wanting to help others, enjoying environments where relationships are valued, and having good interpersonal skills. These traits certainly affect the careers that are seen as being appropriate or desirable (Stonewater, 1987, p.18).

Thus, people's possession of a Connected self-concept is likely to influence their career preferences.

Research findings have indicated that women more often have Social Personality types and Conventional Personality types as opposed to other Personality types on Holland's Personality measure. These results may be due to women's tendency to possess Connected Identities (Stonewater, 1987). Holland (1973) has theorized that people who have Social Personality Types will be satisfied in jobs that are consistent with this personality type. They like social interaction, and perceive themselves as understanding other people and wanting to help others (Holland, 1973). In possessing Connected Identities, women feel a responsibility towards others, feel a connection to others and feel that relationships are important (Stonewater, 1987). They are likely to seek jobs that satisfy these needs, and therefore it is not surprising that women, because of their Connected Identities, are more often classified as Social Personality

Types (Stonewater, 1987). Stonewater (1987) suggested that women tend to also get high scores on Holland Conventional Personality types because they typically choose clerical jobs. In this employment position, women can form a relationship with and identify with their boss (Kanter, 1977).

Differences between males' and females' career decision-making styles may be accounted for by Self-in-Relation Theory. Johnson (1978) and Stonewater (1987) evaluated two aspects of people's decision-making styles, people's manner of gathering information and their manner of analyzing information. In analyzing information, two styles are possible, an External style and an Internal style of analysis. People who have an External style prefer to talk about an issue as opposed to thinking about a problem on their own as a means to resolve it (Johnson, 1978). External people are not certain of their feelings until they talk about their ideas aloud. They need to hear their words to make sense of them (Johnson, 1978). On the other hand, people who use an Internal style of analyzing information prefer to think about issues before discussing them (Johnson, 1978). Only after they have resolved the issue, will they talk about it (Stonewater, 1987). Stonewater (1987) pointed out that people who have a dominant Internal or External style can use the alternate style. However, they comprehend best when they apply their dominant style.

Research findings indicated women more often are



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External than Internal and males more often are Internal than External in their style of analyzing information (Stonewater, 1987). Stonewater (1987) explained that women's tendency toward having an External style may be due to their having developed a Connected Identity. People who have an External Style use talking to understand their ideas. Stonewater (1987) suggested that this activity may be an acceptable way for women to maintain involvement with others.

If women have a greater need than men to affirm relationships with others, and to reassure themselves of those relationships, then "talking through" ideas, concerns, and feeling may seem a more viable way of reaffirming those connections than to deal with those thoughts and feeling internally... (Stonewater, 1987, p.24).

Further research may show that women who are dealing with career decisions, may "...need to involve others in the process" (Stonewater, 1987, p.18). So, a connected form of development, in which people grow and develop in the context of relationships, may account for women's developing an External style of decisionmaking.

Men, who more often applied an Internal style of analyzing information in Stonewater's (1987) research, are acting in a manner consistent with the development of a Separate Identity. As Surrey (1991) and Lyons (1983) have explained, men with Separate Identities, defend against experiencing others' feelings, and they strive to make objective decisions based on principles. The use of an Internal style allows people to remain unaware of others'

needs and desires while people are in the process of resolving issues. By resolving problems internally, and talking only after he resolves problems, the man who has an Internal style can be independent of others and remain objective in his decisions.

A final point needs to be considered in using Self-In-Relation theory to understand women's and men's vocational development. According to Self-In-Relation theory, as people mature they begin to recognize the identity that they had not utilized previously. They come to accept and integrate this other identity within themselves (Gilligan, 1982). For example, the girl who has grown up with a Connected Identity reaches a point where she begins to recognize the legitimacy of the Separate Identity.

Recognizing that developmental changes occur within people, it is important for the vocational counselor to help individuals anticipate changes within themselves (Stonewater, 1987). Hotelling and Forrest (1985) suggested that the counselor needs to help people perceive their primary identity as being legitimate, but people also need to learn about their alternate identity, and acknowledge its legitimacy. They need to understand the strengths and weakness of each identity (Hotelling & Forrest, 1985). Through these activities, the counselor can then help students prepare for future developmental changes (Stonewater, 1987). As people recognize the alternate self within themselves, they will begin to expand the career options that they consider are

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acceptable to themselves. For example, a female who has a high Social Score might limit herself to stereotypic feminine careers, but if she anticipates that she will integrate a Separate Identity into her self-concept, she may keep future career options open to her that she might not have otherwise considered (Stonewater, 1987).

In addition to the vocational domains that Stonewater and Forrest discussed, Self-In-Relation theory may be applied to comprehend differences in people's rating of the importance of various work values and differences in their endorsements of various vocational resources. People's work values and attitudes towards vocational resources are examined in the present research study, and they are described in detail below.

#### **Vocational Topics Examined in the Present Research Study-- Work Values and Vocational Resources**

##### Description of Work Values

Work values have been defined in a variety of ways. Kilmann stated that values need to be discriminated from other concepts such as "needs, motives, preferences, desires..." (1981, p.940). Work values, though, are not easily differentiated from these terms. Locke (1969) said that the needs people have within their jobs are consistent with their work values. Super (1970) stated that work values are "satisfactions" people seek through carrying out work tasks or that they obtain as a result of performing work tasks. Ginzberg, Ginsburg, Axelrad and Herma (1951)

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and Brown (1976) suggested that work values motivate people. Based on their work values people will be motivated to seek out specific types of goals. By knowing people's work values, their resulting vocational behavior will be understandable (Brown, 1976). Pryor (1979) claimed that the term "work value" incorrectly describes what Super and other vocational researchers were trying to measure. Instead of assessing people's "work values", they are measuring people's preferences for aspects of work. Despite differences in opinions about what "work value" theorists are measuring, it is of interest to note that work value inventories do appear to be measuring similar constructs (See Chapter 4, Methodology--Work Value Inventory, for a description of Super's Work Values Inventory in comparison to other work value inventories).

#### Classification of Work Values into Intrinsic and Extrinsic Categories

Many researchers (eg., Centers & Bugental, 1966; Golding, Resnick & Crosby, 1983; Kaufman & Fetzters, 1980, Lindsay & Knox, 1984; Lyson, 1984), have divided work value items into two categories, Extrinsic work values and Intrinsic work values. Intrinsic work values are achievements that people feel directly from performing work tasks (Gomez-Mejia, 1986; Thomas & Shields, 1987; Walker, Tausky & Oliver, 1982). Examples of these values are doing work that is "important" or "interesting", and "allows people to work on their own" (Thomas & Shields, 1987). Extrinsic work

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values are important aspects of work that people do not derive from the work activity itself. Examples of these work values are "obtaining pay" (Thomas and Shields, 1987), "employment security" (Thomas & Shields, 1987), and "being looked up to by others" (Lyson, 1984).

A comparison of people's overall rating of Intrinsic and Extrinsic work values is not likely to be a useful dimension to examine to locate differences in males' and females' work values. First, on a methodological level, there is disagreement about whether Intrinsic versus Extrinsic values are truly separate components of values (Elizur, 1984). Second, Manhardt (1972) argues that merely comparing the degree that men and women differ on the importance they assign to Intrinsic and Extrinsic values, will not uncover differences between males' and females' work values unrelated to the Intrinsic-Extrinsic value dimension. This same argument can be applied as a rationale for deciding against using Intrinsic and Extrinsic work value categories in studying the work values of people who have Connected and Separate Identities. Instead in the present study, work values are categorized into a set of "separate" work values and "connected" work values. Because these sets of work values appear to be theoretically consistent with values generally held by people who have Separate and Connected Identities, significant findings are expected.

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### Description of Vocational Resources

Vocational resources are defined as any person that individuals talk with, or any instrument or tool that individuals use to help them resolve a vocational issue. Many types of vocational resources are available to students. They can talk to family members, friends, teachers, acquaintances, vocational counselors or business representatives about a vocational concern. They can use vocational resources, such as computerized vocational guidance programs, written vocational assessment tools (eg., Holland's Self-Directed Search, the Kuder Occupational Interest Survey), career guidance library material, or lectures about specific vocations or specific vocational issues.

A vocational resource can be utilized in a formal or informal manner. For example, students may talk with their parents about their concerns as they attempt to decide on a career direction, or they may schedule an appointment with a vocational counselor to talk about career concerns. Because they are used to aid students in working on vocational issues, vocational interventions described in program evaluation studies are considered forms of vocational resources.

### Personality Characteristics' Impact on the Effectiveness of Vocational Interventions

A number of researchers believe that clients, based on their traits, will react to specific career interventions differently (Kiesler, 1966; Kivlighan, Hageseth, Tipton &

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McGovern, 1981; Krumboltz, 1966; Takai & Holland, 1979). Holland (1973) and Bruch (1978) stated that clients should be given specific treatment interventions based on the traits they possess. For instance, Holland (1973) claimed that the Holland Personality types can be used to indicate the types of environments that people will learn in best. Similarly to Holland (1973), Clinchy, Belenky, Goldberger and Tarule (1985) have stated that different people may learn more effectively through different means. They have suggested that traditional education institutions conform to masculine styles of learning. Based on interviews with women, Clinchy et al. (1985) theorized that women may benefit from a connected form of education.

#### Measuring the Effectiveness of Vocational Resources or Vocational Interventions

In evaluation studies, numerous outcome measures have been applied to determine the effectiveness of vocational interventions. However, considering students' use of vocational resources within a natural context as opposed to experimental conditions, one important outcome to measure would be students' decisions to use a vocational resource to aid them in the first place as opposed to measuring outcomes such as the number of information-seeking behaviors they have carried out in the past week as a result of having used a vocational resource. Utz (1983) recognized the importance of measuring whether subjects make use of an vocational service. He compared the characteristics of students who

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wanted vocational help, but did not seek help, with students who entered a class on career planning to obtain vocational assistance and with students who sought vocational assistance from counselors.

For the senior students included in the present research study, it has been hypothesized that students are likely to endorse vocational resources to different degrees based on the degree that the resources allows them to utilize connected or separate capacities. The level at which they endorse a vocational resource is one indication of how likely they are to use that resource within a natural setting. According to Fishbein and Ajzen (1975) factors, such as intentions, attitudes, and beliefs, are important in predicting whether people will carry out a specific behavior.

### **Summary**

Literature on Gilligan's theoretical concepts and Self-In-Relation theory were reviewed in this chapter. Self-In-Relation theory postulated that people differ in how important being in a relationship with others is to them. Lyons distinguished individuals in terms of being "a self separate or objective in its relation to others and a self connected or interdependent in its relationships to others" (Lyons, 1983, p.127). According to Self-In-Relation theorists, differences arise through people's following different paths of development. People who develop along a connected path form a Connected Identity. In their

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relationships to others, these individuals perceive an interdependency between themselves and others. People who develop along a separate path form a Separate Identity. They maintain an emotional and physical separation from others.

Women commonly form a Connected Identity, and males commonly form a Separate Identity. There are some men however who develop a Connected Identity and there are some women who develop a Separate Identity. Despite their primary identity, people can express both connected and separate traits. Therefore, a more precise method to evaluate people's possession of Connected and Separate Identities, by measuring the degree to which people possess each of the identities, is recommended.

Characteristics associated with people's possession of a Connected or Separate Identity has been observed in the way that people resolve moral issues, in their descriptions of themselves, and within a variety of other areas. It is believed that these characteristics may also be expressed in people's behaviors and values in the vocational domain. Research on differences in males' and females' vocational self-concepts, career decision-making styles, and vocational personality typologies, is consistent with expectations based on Self-In-Relation theory.

Self-In-Relation theory may explain differences between males and females in the vocational field, and may have great potential to enhance our understand of women's

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vocational development and refine our understanding of men's vocational development. However, Self-In-Relation theory has not been adequately tested within the vocational domain. Researchers have not directly measured people's possession of Connected and Separate Identities in predicting their vocational behaviors and attitudes. The extent that people possess a Separate Identity and a Connected Identity needs to be directly measured in comparison to rating of subjects' values and behaviors in the vocational domain in investigating whether connected and separate traits of individuals are expressed in the vocational domain.

Because they were of significance to the present research study, two vocational concepts, "work values" and "vocational resources", were described in this chapter. To examine whether the extent people have connected and separate traits is related to the importance people assign to work values, studies are needed in which work values are categorized into a set of "connected" work values and "separate" work values. This measurement procedure is important for investigating whether values generally held by Connected and Separate individuals are reflected in their work values.

Vocational resources were defined as aids that people use to help them accomplish vocational tasks. In a natural setting, such as a college campus, people must first choose to use a vocational resource to have an opportunity to

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It has been argued that people should be given specific vocational interventions based on their traits (Bruch, 1978). Research may show that Connected and Separate individuals value different types of vocational resources. It is expected that people with Connected and Separate Identities will endorse vocational resources that allow them to utilize their connected and separate capacities. Research needs to be conducted to support this claim.

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### Chapter 3

#### REVIEW OF EMPIRICAL LITERATURE

A review of literature on connected and separate development, described in Chapter 2, indicated that people's possession of a Connected or a Separate Identity was likely to be related to differences in males' and females' career development and career behaviors. Specifically, researchers discussed separate and connected development's potential to explain differences in males and females' Vocational Personality Type, career decision-making style, and self-concept. This researcher hypothesized that traits of people who have Connected and Separate Identities would be reflected in their work values, and in their endorsements of specific vocational resources.

In this chapter, background pertaining to the importance of conducting research on males and females within the vocational domain, is presented first. This section is followed by a review of empirical literature on male and female students' work values. The relevance of Separate and Connected Identity development for comprehending male and female differences is discussed. Next, studies which indicate that Separate and Connected Identity development may account for people's endorsements of vocational resources are presented. In the final section, instruments used to measure Connected and Separate Identities, Work Values and Vocational Resources, are discussed.

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### **The Significance of Research on Differences Between Males and Females in the Vocational Domain**

In the last twenty years, there has been an increasing concern about women's vocational issues. In 1956, 36.9% of women were employed in the labor force, but in 1989 over 57% of women were employed (Taeuber, 1991). Despite women's increased participation in the work force, women are disadvantaged as employees in comparison to men. Women typically have been paid less than men (Fitzgerald & Crites, 1980). For instance, in 1990 the median wage of salaried workers was \$25,676 for men and \$16,336 for women (Taeuber, 1991). Nieva and Gutek (1979) have found women had lower pay rates even among men and women carrying out the same work role. Studies have also shown that few women reach top levels in their careers. For example, according to a U.S. Department of Labor study, only 5% to 7% of middle-level to upper-level corporate managers were women in 1985 (Hammer-Higgins & Atwood, 1989). Questions arise as to how this inequality has been maintained within the workforce.

Although more women are entering traditionally male dominated careers than previously, the number of women entering these fields remains small, Hollingsworth and Mastroberti (1983) reported. Most women continue to enter traditionally feminine fields as the ten occupations most dominated by women continue to be positions such as secretary, non-college teachers, cashiers, typists, and food service workers (Crowley, Lord & Whitman, 1976).

A variety of factors have been described as maintaining

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inequalities between men and women in the workforce. Among them, criticism has been targeted toward sex stereotyping on the part of vocational counselors and test instruments (Brooks, 1984).

For instance, Holland's Self-Directed Search (SDS), a vocational instrument, has been the subject of major debate because it was argued that this instrument promotes women's decision to enter stereotypical feminine careers (Weinrach, 1984). The SDS, a measure of vocational personality, has been used to determine occupations that people will be most satisfied with. Women have tended to obtain specific personality scores that direct them toward traditional female dominated fields (Weinrach, 1984). Prediger (1981) argued that normed scores rather than raw scores ought to be used on the SDS so that women are directed to other options as well as female dominated fields. Holland (1974), however, pointed out that his instrument is designed to reflect people's actual preferences, and it would be misleading to alter their scores. In other words, women tend to have traditional feminine interests.

In the midst of this controversy, researchers have sought to determine whether men and women do differ in the work values they consider important. The question that follows is, if they differ, and if their work values are consistent with traditional sex differences, as the SDS suggested, how should these findings be dealt with in providing vocational counseling to male and female clients?

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Additionally, with an aim toward helping women overcome disadvantages in the work place, an important concern has been how develop vocational resources that specifically meet women's needs.

Because it was theorized that the possession of a Connected or Separate Identity is more important than Sex of the Subject in identifying variations in people's values and actions, the empirical literature review is directed towards explaining how variations detected in work values and endorsements of vocational resources may relate to people's possession of a Connected or Separate Identity.

#### **Empirical Research on Male and Female Students' Work Values**

The sample in the present study consisted of senior college students who had not interrupted their college education for more than one year. Since these seniors were not likely to have a career history, studies discussed in this section are limited generally to articles on people who were not employed within the work force. The reason that studies on employees are not reviewed is because the socialization within the workplace may influence employee's work values (Mortimer & Lorence, 1979). Therefore, work values of employees are not likely to be consistent with college students' work values. Additionally, because Ginzberg et al. (1951) suggested that people begin to clarify their work values during later adolescence, most of the studies reviewed include subjects who are high school ages or older.

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In reviewing the literature, no studies were found that measured the relationship between the extent people have a Connected or Separate Identity and the importance they assign to work values. However, numerous studies compared males' and females' ratings of work values. These findings indirectly provided support for the hypothesis that the possession of a Connected or Separate Identity is reflected in the degree of importance people assign to "connected" and "separate" work values.

Representative studies, that measured differences in work values associated with sex differences or other pertinent variables, have been reported by Beutell and Brenner (1986), Feather (1982), Lyson (1984), Post-Kammer (1987), Pryor (1983), Staats (1981), and Thomas and Shields (1987). The results of these seven studies and conclusions are presented below.

In three studies, Sex of the Subject was discussed as the primary variable associated with work value variations. Post-Kammer (1987) evaluated the work values of 402 male and 483 female 9th and 11th graders attending a public suburban high school in the Midwest United States. Students rated from 1 to 5 the importance of 45 work value statements that correspond to 15 work value subscales on the Work Values Inventory. Post-Kammer (1987) reported that girls and boys adhered to traditional sex roles in their ratings of the importance of many work values. Specifically, Post-Kammer (1987) reported that the girls followed traditional feminine

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sex roles valuing "Altruism" and "Way of Life" significantly more than the boys did. Boys in the sample fit traditional masculine sex roles by valuing "Management", "Economic Returns", and "Independence" significantly more than girls did. However Post-Kammer (1987) stated that the girls deviated from traditional female sex roles because they valued "Achievement" and "Variety" to a greater extent than the boys did. Also, the boys were not consistent with traditional masculine sex roles because they valued "Security" to a greater degree than the girls.

Two limitations in Post-Kammer's (1987) research need to be addressed. First, although she used a large sample of students in her study, Post-Kammer's (1987) findings have limited generalizability because she collected data from only one high school. Secondly, Post-Kammer (1987) did not refer to other studies in stating how her sample's work values were consistent with traditional sex roles. Thus, researchers reviewing her study do not know what criteria Post-Kammer applied to determine that work values were representative of a traditional masculine or feminine sex role. Additionally, Post-Kammer (1987) did not describe how her findings on male and female variations in work values compared with other numerous studies conducted on this topic.

Staats (1981) examined whether males' and females' work values varied depending on the year they graduated from high school. The Work Values Inventory (WVI) was administered to

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freshmen who graduated in the years 1970, 1976, 1978 and 1980. Individuals' scores on all 15 work values were totalled together. Women who graduated in the years 1970 and 1976 obtained a lower score in their rating of the importance of the total set of work values on the WVI than men who had graduated in those years. However, women who graduated in the years 1978 and 1980 obtained a higher score on this measure than the men who graduated in those years. Because women had obtained higher scores on the work values than men, Staats (1981) suggested that women in the later 1970's valued working more than women from previous years. Findings also indicated that ratings of the importance of altruism were lower among women who graduated in 1980 in comparison to women who graduated in 1970. Staats (1981) concluded that among women, altruism has appeared to decrease in importance across the years. Still, women's altruism scores remained higher than the men's scores for each of those years (Staats, 1981).

One major problem in evaluating Staats' (1981) research study was that the sample sizes applied in this study were extremely small. For instance, only 19 males and 19 females were sampled in the year 1976 (Staats, 1981). Differences noted in males and females over time may have been due to specific differences among the small samples, rather than occurring because of a trend signifying changes in males' and females' values over time. By grouping the samples from each year together so that adequate sample sizes are used to

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compare males' and females' work values, one can measure with greater accuracy whether women rate altruism as more important than men do. Also, the results of this study would have had greater generalizability.

Rather than compare males' and females' mean rating of work values as Staats' (1981) had done, Pryor (1983) applied sophisticated analyses to detect variations between males' and females' work values. Five hundred and two female and 579 male 11th and 12th graders in Australia completed the Work Aspect Preference Scale. They rated the importance of various work values on a scale of 1 to 5. This instrument consisted of 13 subscales.

Using a complete-link cluster analysis, in which two subscales were grouped together at each level of analysis to create a new grouping, Pryor (1983) observed how males and females clustered different sets of subscales together. Pryor (1983) reported that males' and females' general work value patterns were similar. However, in studying males' and females' complete-link cluster analyses, subtle variations in males' and females' work values were detected. Among males, the Altruism and Management subscales were linked together at an early stage in the analysis forming a cluster that Pryor (1983) named Helping Control. Among females, the Altruism subscale formed a cluster with the Self-Development subscale early in the analysis, creating a grouping that Pryor (1983) called Helping/Growth. For males, these two subscales were linked at a much later stage

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in the analysis indicating the two subscales were not closely related for males. Pryor (1983) stated that "Females appeared more likely to associate helping others with personal achievement whereas males tend to see helping people in terms of controlling and organizing them" (p. 233). Pryor (1983) stated that Hendrix and Super's (1968) findings were consistent with his own findings and he concluded that women linked achievement and helping others together, while men did not.

Pryor's (1983) research was conducted on Australian 11th and 12th graders. Because of the different socio-cultural experiences of people who live in Australia and the United States, one cannot readily assume that his findings would be consistent with research findings on 11th and 12th graders in the United States. However, Pryor did describe similarities between his study results and findings presented by numerous researchers who had conducted work value studies in the United States. It is therefore important to consider the implications of Pryor's research. In particular, it is of interest that his findings did correspond to expected male and female differences based on applying Self-In-Relation theory.

Some difficulties are apparent in applying Pryor's (1983) method of analysis. In factor analysis, many items typically load onto a factor and one can often form a clear idea of how the factors may relate to each other. In contrast, when complete cluster link analyses are applied,

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only two items are grouped together at a time. The relationship between the two items is less clearly defined, and therefore, the significance of the relationship between work value items is more easily subject to misinterpretation. For example, for males, Self-Development and Co-workers subscales were linked together early in the analysis, and Pryor named this grouping Growth and Support, but other interpretations (eg., Competition and Growth) might have been applied to define the relationship between these items.

In the studies that follow, researchers investigated whether subjects' chosen college major was more important than the sex of the subject in accounting for the importance subjects assigned to work values. According to the occupational-selection theory of vocational choice, people will choose to enter a field that meets their values (Lindsay & Knox, 1984). Therefore, based on this theory, people within the same field should have similar values.

Lyson (1984) examined the work values of males and females who were in traditional or nontraditional college majors. Specifically, Lyson (1984) evaluated whether males who had entered female college majors had work values that were more similar to females in female dominated college majors, or males in male dominated majors. Also, Lyson (1984) evaluated whether females who had entered male dominated college majors had work values that were more similar to males in male dominated majors, or other females

in female dominated majors. Students were selected for this study if they chose college majors in which over 75% of the people who graduated in that field were male, or if they had chosen college majors in which over 75% of the people who graduated in that field were female. Data were collected nationally from college students who had graduated from high school in 1972. One thousand five hundred fifty-six male and 1350 female students rated the importance of ten work values on a scale of 1 to 3.

Findings from Lyson's (1984) study indicated four work values were most important in discriminating between males and females who were in traditional and nontraditional majors. These values were "People", "Freedom", "Help" and "Leadership". Women in the female dominated majors particularly valued "Helping Others" and "Working with People". Males who were in male dominated majors specifically valued "Making a Lot of Money", "Being Free from Close Supervision", "Being a Leader", and "Having a Job that is Looked up to by Others". Results showed that males in female dominated majors had work values that were more similar to males in male dominated majors than to females who were in female dominated majors. Also, females in male dominated majors held work values that corresponded more closely with the work values of females in female dominated majors as opposed to males in male dominated majors. Lyson (1984) concluded that women who enter a male dominated major are attempting to satisfy work values that are different from men who enter

male dominated majors. Similarly, men who enter a female dominated major are attempting to fulfill work values that are different from women who enter female dominated majors. Consequently, men and women who are in the same major do not necessarily have the same values. Lyson's conclusion would have been more compelling if he had compared males and females who were in the same major to determine if they actually did differ in their work values.

Although his findings are of interest, one issue needs to be considered in conducting future research. Lyson (1984) used only 10 work value items, with each item measuring one work value concept, to evaluate students' endorsement of work value concepts. To understand whether men and women value a work value concept to a similar degree, it is worthwhile to use more than one item to measure individuals' endorsement of that work value concept. Individuals' scores on work value statements measuring a specific work value concept should be somewhat correlated if the statements are adequately measuring that concept.

Whereas Lyson (1984) compared the work values of males and females who chose female dominated majors or male dominated majors, Beutell and Brenner (1986) and Feather (1982) examined the values of male and female students who were in the same field. If it is assumed that people choose to enter a particular field to fulfill specific values, then one would expect that people who are in the same field will

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have the same or similar values. Thus, males' and females' work values should differ minimally in these studies.

In Beutell and Brenner's (1986) study, Manhardt's (1972) work value measure was administered to 110 male and 118 female advanced undergraduates majors in Business who were attending a private university in New York. Students rated on a scale of 1 to 5 the importance of 25 work values.

Beutell and Brenner (1986) found that females adhered to traditionally feminine values by rating "Comfortable Work Environment" and "Congenial Co-workers" as more important than males did. However, unlike traditional women, the females also valued "Independence", "Accomplishment", "Use of One's Knowledge and Skills", "Use of Education" and "Social Contributions" more than the males.

In Beutell and Brenner's (1986) study, males rated "Income", "Advancement", "Responsibility" and "Working on Problems of Central Importance to the Organization" more important than females did. These work values are forms of rewards that people are given because of their individual accomplishments in the work place. Many other studies have also identified significant differences in the work values of males and females who were in the same field. For instance, significant differences in the importance assigned to various work values by males and females have been identified among men and women graduating from business school (Brenner & Tomkiewicz, 1979), among men and women who had been recently hired into an insurance company (Manhardt,

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1972) and among male and female medical students (Feather, 1982; Quirk, Style & Lasser, 1985).

Beutell and Brenner's (1986) research is useful in that their results may be compared against many research studies in which similar samples were administered the Manhardt work value instrument (eg., Manhardt, 1972; Brenner & Tomkiewicz, 1979; Bartol & Manhardt, 1979). Evaluation of these studies indicated that although expected traditional sex differences in the work values of males and females were continually present, the specific work values that males and females significantly differed on varied from study to study. A difficulty arises in comparing Beutell and Brenner's (1986) findings with other studies that applied Manhardt's work value measure. Different forms of analyses had been applied by researchers who use Manhardt's measure. Thus, specific findings which varied across studies may be due to the form of analysis applied or variations within the samples studied. Again, a problem noted in Lyson's (1984) study, occurred in the present study. Because the Manhardt scale used one item to measure each work value concept, students' ratings of the one work value statement may not accurately measure the importance the work value concept has to them.

Feather (1982) analyzed the values of 1st, 3rd and 5th year medical students in South Australia. Eighty-seven male and 52 female students were given Form D of the Rokeach Value Survey to complete along with other instruments. Using this survey, students rank ordered the importance of

two separate sets of values. Each set contained 18 values. Subjects also rated along a 5 point scale their reasons for entering medical school. A list of 18 possible reasons were provided.

In ranking their reason for entering medical school, the sample of medical students most often rated social and altruistic reasons as their most important reason for entering medical school. Feather (1982) noted that in other studies, researchers have also found that medical school students provided altruistic explanations in deciding to attend medical school. Since more males ( $n=87$ ) than females ( $n=52$ ) were in Feather's (1982) sample of medical students, one might wonder whether the males in this sample had more of a connected orientation than males from other fields, since altruism (a "connected" value) was rated as a primary reason for entering medical school. Feather (1982) still found that "...As predicted...the male students assigned higher ratings to agentic, instrumental types of reasons (achieving high social status, making lots of money) when compared with the female students....In contrast, the female students as predicted, assigned higher rating to communal, interpersonal reasons (working with people, improving society) than did males" (Feather, 1982, p.123). In addition, females rated "Expressing Values/Interests" and "Being Involved in a Challenging Occupation" as more important than males did (Feather, 1982). Feather (1982) concluded that females are concerned with being caring



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towards others and being able to express what they value, whereas male students show a self-focus and are concerned with having an effect on things. Support for Feather's belief that women in medicine tend to be more communal than men was found in Bergquist, Duchac, Schalin, Zastrow, Barr, and Borowiecki's (1985) research on freshman medical students. The researchers found that females rated "having patient contact" at the highest level of importance significantly more often than males did (61.7% versus 28.3%, respectively). Additionally, females, more often than males, planned to go into a primary care specialty (70.4% versus 44.4%, respectively) (Bergquist et al., 1985).

Feather (1982) factor analyzed the data on students' reasons for entering medical school. Six factors were found to be most important in explaining the variation in students' responses. Among the six factors, the Altruism factor negatively correlated with values that indicated that the respondents were focusing on themselves. The Independent Contribution factor "...emphasized personal values and de-emphasized interpersonal values of a moral kind" (p.126). Values related to the Independent Contribution Factor included "Sense of Accomplishment", "Freedom", "Being Courageous", "Being Independent" (Feather, 1982).

In scanning students' rating of the Form D of the Rokeach Value Survey, some items, that were rated at significantly different levels of importance by males and females, did not appear to be communal or agentic in

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nature. Other significant items appeared to characterize communal or agentic orientations. For instance, females rated "Forgiving", "Loving", "Honest", "Mature love", and "Family security" more important than males did, indicating that the females exhibited an awareness of the interpersonal relationships. Males, on the other hand, rated the values "Logical" and "Capable" more important than females did, which suggests that the males are exhibiting a self-focus in their responses. Males' values, which were more self-centered and agentic, and females' values, which showed a greater concern with interpersonal relationships and expressing themselves, were consistent with their ratings of their reasons for entering medical school, Feather (1982) concluded.

Feather (1982) pointed out that the results on work values only provide information about male and female students' self-perceptions of their values. Although a medical school student might state that he or she values "Altruism", his or her actual behavior may not correspond with this stated value. Most work value measure are limited by the fact that they do not measure behavior. Like Pryor's research sample, Feather's respondents were Australians whose work values may differ from students in the United States. Caution needs to be taken in generalizing findings to students within the United States. As Pryor (1983) did, Feather (1982) reported examples showing his results were similar to findings based on studies conducted in the

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Race in addition to sex of the subject as been reported to be a significant variable associated with variations in people's work values. Thomas and Shields (1987) examined the work value variations among black male and black female high school students from a northern urban area. One hundred forty-five black male (33.6%) and female (66.2%) 10th, 11th and 12th graders participated in Thomas and Shields' (1987) study. Thomas and Shields (1987) provided the students with work values based on Steinberg, Greenberger, Vaux and Ruggiero's (1981) work outcome measure. The measure consists of five items that assess people's extrinsic work values and five items that assess people's intrinsic work values. (See Chapter 2, Work Value Classification into Intrinsic and Extrinsic Work Values, for a description of intrinsic and extrinsic dimensions). The students rated, on a scale of one to three, the degree of importance each item had in their making a decision about the type of job that they wanted. Although black males and females did not differ significantly on the importance they assigned to intrinsic values, significant differences were identified in the importance that they attributed to specific extrinsic values. The girls more often endorsed extrinsic values to a greater extent than the boys did. In particular, they rated "Making Lots of Money" as more important than the boys did. Thomas and Shields' (1987) findings that black girls valued money more than black boys

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is inconsistent with other studies that compare male and female work values (Feather, 1982; Lyson, 1984; Post-Kammer, 1987; Post-Kammer & Perrone, 1987; Quirk, Style & Lasser, 1985) in which males were found to value money more than females. Also, Thomas and Shields (1987) found that boys ranked "Doing Important Things" as important significantly more often than girls did.

Some of the items in Thomas and Shields' (1987) study did not distinguish males from females along connected versus separate dimensions. Some of these items were: "Having Authority over Others", "Helping Others", and "Making Friendships". It is not apparent why these differences in values were not exhibited between the sexes. Perhaps, the limited range of ratings (from one to three) possible on their measure of work values was too small to elicit expected differences in the work values of people who have Connected and Separate Identities.

Some unexpected findings in this study may be associated with the researchers' use of a black sample. Unfortunately, researchers whose results had contrasted with Thomas and Shields' (1987) study did not list demographic information describing the racial composition of their samples, with the exception of Post-Kammer, whose sample was primarily white (93%). Other researchers, however, have reported work value variations associated with race, and race and sex interaction in examining the work values of black and white business students (Brenner & Tomkiewicz, 1982) and black and white



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### **Study Findings Considered in the Context of Self-In-Relation Theory**

Within the last 20 years, approximately 40 studies have been conducted with high school or college student samples in which variations in males' and females' work values were evaluated. Only a few studies (eg., Burke, 1966; Bartol, 1974) identified minimal differences between males' and females' work values. In reviewing work value studies conducted on employees as well as student populations, Manhardt (1972) stated that the use of global work value dimensions as opposed to more specific work values concepts accounts for the lack of significant differences between male and female ratings of the importance of work values. Also, Pryor (1983) and Siegfried, MacFarlane, Graham, Moore, and Young (1981) concluded that the absence of significant results may be related to the type of analysis that was applied to the work value data. For example, in replicating an earlier study conducted in the 1960's, Siegfried et al. (1981) reported that a rank ordering technique, in which work values were rated relative to each other, failed to detect significant differences in the importance individuals attributed to specific work value concepts. Instead, using a measure that evaluated the importance of each work value independently of other work values, significant differences in males' and females' ratings were identified (Siegfried et al., 1981).

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In general, results indicated that women value connected forms of work values to a greater extent than men, and men value separate forms of work values to a greater degree than females.

Specifically, females rated the following work values more important than males did:

- 1) Altruism or Helping Others (eg., Lueptow, 1980; Lyson, 1984; Post-Kammer, 1987; Staats, 1981; Steinberg, Greenberger, Vaux & Ruggiero, 1981).
- 2) Working with Others, which may include supervisors, fellow employees or clients (eg., Beutell & Brenner, 1986; Brenner & Tomkiewicz, 1979; Lueptow, 1980; Lyson, 1984; Manhardt, 1972).

Women's endorsement of altruism was consistent with Gilligan's findings that women typically express a concern for others in resolving moral issues. Additionally, the work value, "Working with Others" corresponds to the general values of Connected individuals' as Miller (1976) has pointed out women, in developing in a connected manner, consider their relationships with others very important and organize themselves around maintaining relationships (Miller, 1976).

Males rated the following work values more important than females did:

- 1) Money (eg., Beutell & Brenner, 1986; Brenner & Tomkiewicz, 1979; Feather, 1982; Lueptow, 1980; Lyson, 1984; Manhardt, 1972; Post-Kammer, 1987; Steinberg et al., 1981).
- 2) Responsibility, Being in a Management Position or Being a Leader at Work, Working on Problems Central to the Company (eg., Beutell & Brenner, 1986; Brenner & Tomkiewicz, 1979; Lueptow, 1980; Lyson, 1984; Manhardt, 1972; Post-Kammer, 1987).

- 3) Advancement (eg., Beutell & Brenner, 1986; Brenner & Tomkiewicz, 1979; Manhardt, 1972; Siegfried, MacFarlane, Graham, Moore, & Young, 1981).
- 4) Independence or Freedom from Supervision (Lyson, 1984; Post-Kammer, 1987).

Also in isolated studies, men were found to endorse the following work values more than women: Social Status (Feather, 1982; Zedeck, Middlestadt & Hayes, 1981), and Being Looked Up to by Others (Lyson, 1984).

Half of the work values listed above, Money, Being in a Management Position, Being a Leader, Advancement, Responsibility and Working on Problems Important to the Company, are rewards people attain for their individual achievements in the workplace. The work values, Social Status and Being Looked Up to By Others at Work, mark people's individual success. Other work values that men considered important, Independence and Freedom from Supervision, are values that may help to limit interference from others. Finally the values, Being a Leader and Being in a Management Position, places people at a superior level to others, which can allow them to maintain separateness and emotional distance from others. Individual achievement and success, limited interference from others, and maintaining emotional distance, are all values and characteristics of people who have developed in a Separate manner (Gilligan, 1982; Surrey, 1984).

Interestingly, in looking over research findings, it is apparent that the connected forms of work values that women assigned greater importance to than men varied from study to study, and the separate forms work values that men valued

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more highly than women, varied from study to study. Recognizing that these variations typically occurred, a measure of people's ratings of a set of "separate" work values and people's rating of a set of "connected" work values is important to use to evaluate whether the extent to which people possess Connected or Separate Identities is related to the importance they assign to "connected" or "separate" work values.

Despite findings suggesting that work values endorsed more by males corresponded to values of people who have Separate Identities, and work values endorsed more by females corresponded to values of people who have Connected Identities, some study findings deviated from expectations. Various explanations, that may account for these unexpected findings, are described below.

First, the findings may be explained by incorrect assumptions on the part of researchers. The assumption that a work value was representative of only one style of development may be incorrect. For instance, in her study of high school students, Post-Kammer (1987) was surprised to find that females rated Achievement more important than males did. Post-Kammer considered achievement to be a traditionally masculine goal. However, Achievement might have been perceived in a different manner by women, who have a Connected Identity, in comparison to men, who have a Separate Identity.

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may perceive work values is suggested by Pryor's (1983) findings in which males and females linked different values together. Females more often linked Altruism and Self-Development together. Pryor (1983) interpreted this to mean that females feel that they grow developmentally through the process of helping others. Among males, Altruism and Management were linked together, and this was interpreted to mean that males want to maintain control of others while they help them. Quite possibly, these different linkages may be related to females' connected form of development and males' separate form of development.

Second, unexpected findings might result from the characteristics of the specific samples used within research studies. For example, unlike most of the studies conducted to assess males' and females' work values, Thomas and Shields (1987) found in using a sample of black students, that females valued money more than males did. Thomas and Shields (1987) suggested that racial differences may account for unexpected findings. According to a U.S. Census and Bureau of Labor report, about 36% of black women between the ages 25 to 54 were reported to be the head of their household (Jenkins, 1985). It is possible that their developmental experiences differ from white women, leading black women to develop Connected and Separate Identities to a different extent than white women. Further information about the relationship between the development of Connected and/or Separate Identities, and race is needed. Income level might

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also account for differences in work values, as blacks have tended to have lower income levels than whites (Harris, 1982).

The results of some studies indicated that specific samples of women might have Separate Identities and specific samples of men may have Connected Identities. For instance, although the students he sampled consisted of more men than women, Feather (1982) found that his sample of medical students most often gave altruistic and social reasons for entering the medical profession. It is probable that men, as well as women in this group, had connected traits. Feather (1982) noted that altruistic values have also been reported among medical students in other studies. It is likely that males who choose to go into the medical field have more connected traits than the average male. In Beutell and Brenner's (1986) research study, female business students valued independence and accomplishment to a greater degree than male business students. Because these women appeared to endorse "separate" values, and they chose to go to business school, an area that is not associated with "helping others", it is possible that these women have a Separate Identity to a greater extent than other women. Thus, it is important to measure the extent that people have Connected or Separate Identities rather than assume all females possess Connected Identities and all males possess Separate Identities.

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other variables in addition to Sex of Subject. Variables that are significantly related to work value differences are listed below.

### **Variables Associated With Work Value Differences**

Although many variables were found to be related to work value variations, only those variables that could potentially influence the work values of the sample in the present study are listed here. Work value studies have identified work value variations in connection with the following variables<sup>3</sup>:

- 1) Race and/or race and sex interactions (eg., Brenner, Blazini, & Greenhaus, 1988; Brenner & Tomkiewicz, 1979; Lindsay & Knox, 1984; Thomas and Shields, 1987).
- 2) Major or field specialization (eg., Bartol & Manhardt, 1979; Quirk, Style & Lasser 1985).
- 3) Socioeconomic status (eg., Lindsay & Knox, 1984; Walker, Tausky, & Oliver, 1982).
- 4) Age and/or cohort variations (eg., Jurgensen, 1978; Keith & Glass, 1977; Staats, 1981; Walker, Tausky, & Oliver, 1982; Wijting, Arnold & Conrad, 1978).

It was not known whether the variables listed here are related to work value variations apart from Connected and Separate Identity variables, or in conjunction with these two variables. Therefore, it was important to consider how these other variables may relate to the variables, Connected Identity, Separate Identity, and work values.

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<sup>3</sup>Because some variables associated with work value variations were only evaluated in studies on employees, in conducting studies on students, they were assumed to be variables that could potentially be related to students' variations in work values as well.

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### **Empirical Studies Relating to Students' Endorsements of Vocational Resources**

In a review of literature on people's endorsement of vocational resources or vocational interventions, no research was found that evaluated the relationship between people's possession of a Connected or Separate Identity, and their endorsement of vocational resources. Studies have been conducted measuring males' and females' endorsements of vocational interventions. These studies might have been informative concerning whether people with Connected Identities endorse "connected" vocational resources, and whether people who have Separate Identities endorse "separate" vocational resources more than others. However, the research designs used in these studies did not allow for greater clarity on this issue, and consequently, they are not reviewed. There are two reasons why these studies were not helpful. First, in some studies vocational resources could not be easily categorized into either a "connected" vocational resource or a "separate" vocational resource. Second, in some studies, males and females were compared in their endorsements of only one vocational tool. It was impossible to assess if variations in males' and females' ratings were due to the degree the vocational resource emphasized connected or separate interactions, or some other factor. If two resources that clearly varied on connected or separate dimensions had been utilized, there would be greater support for attributing differences in male and female ratings to variations in "connected" or "separate" dimensions.

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One study, in which females rated the helpfulness of vocational resources that emphasized either connected and separate forms of interaction, is discussed. A study that explored males' and females' modes of learning is also reviewed because it indicates forms of vocational resources that females may best learn from.

One study in the literature was useful in evaluating students' ratings of the helpfulness of vocational resources that emphasized connected and separate forms of interactions. Rohfeld (1977) studied high school students' satisfaction with the career planning resources at their high schools. Two hundred ninety women who were attending a Special Program for International Women's-Year Cleveland Congress were administered a questionnaire to rate career planning resources provided at their school. Respondents were primarily ages 16 and 17 (79%) or older (12%). The women rated their degree of satisfaction generally with career planning provided by the school. They also rated the availability and helpfulness of seven career planning resources. These resources included: talking with a counselor, small group peer discussions, class discussions led by teachers, talks by visiting workers, field trips, films, and files that included jobs descriptions, pamphlets or books (Rohfeld, 1977).

Sixty-three out of 290 students gave career resources at their school the highest possible rating as they acknowledged that their school gave them "a lot of help" with career

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planning. Over 80% of the "most satisfied" group rated 5 resources most helpful to them. All of these resources involved interpersonal contact with an expert. Among women in the total sample who had access to vocational resources, films and files that contained job descriptions, pamphlets and books, were least often rated as being "helpful" or "somewhat helpful". These resources are the only vocational resources that did not specifically include a form of interpersonal interaction. It is probable that women in this study valued "connected" vocational resources, as they more often rated resources that contained interpersonal interactions helpful.

A clear difference was noted between females "most satisfied" with services in comparison to the total sample of females. Among the total sample of females, counselors were rated as the most helpful vocational resource (Rohfeld, 1977). 56% of the group "most satisfied" with services reported that they could see a counselor when they wanted to or needed to, whereas only 43% of the total sample reported that they could see a counselor when they wanted or needed to (Rohfeld, 1977). One may hypothesize that the females' greater level of satisfaction in the "most satisfied group" was related to their perception that they could have access to a vocational resource [the counselor] that would satisfy their desire for a connected interaction as well as provide them with vocational assistance.

Rohfeld's (1977) research was useful in pointing out

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variations in subjects' evaluation of resources that involved interpersonal interactions and those that did not. The researcher considered how availability of career resource options might influence subjects' rating of the helpfulness of these options. In analyzing differences in subjects' endorsements, it would have been worthwhile if Rohfeld had compared students who were most satisfied with resources to those who were not satisfied. Instead she compared students who were most satisfied with services to the total sample of students. One cannot easily evaluate what factors were related to females' being dissatisfied with services because no data are presented on this specific groups' ratings of vocational resources.

Although Rohfeld's (1977) research indicated interpersonal contact was important, among the group most satisfied with services, small peer group discussion was among the options rated as "helpful" or "somewhat helpful" least often (74%). It is not clear why it was not rated helpful more often, but Rohfeld (1977) suggested that these students desired interpersonal interaction with experts. Perhaps these high school students were seeking more than interpersonal forms of interactions, and their need for information or guidance was not met within the small peer discussion groups. Further research may explain why this vocational resource was not as rated as helpful more often.

One issue that needs to be considered in Rohfeld's (1977) research is that students' rating of their school's

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helpfulness may not be related to the school's true helpfulness. The students who were most satisfied with resources, had rated all services higher in helpfulness than the total group as a whole did. It is possible that members of this particular group have a positive attitude in general, and therefore tend to endorse all items positively.

#### **Related Research on Differences in Males' and Females' Styles of Learning**

While Rohfeld's research focused on subjects' evaluations of the helpfulness of vocational resources, Clinchy, Belenky, Goldberger and Tarule's (1985) research dealt with understanding how women in general may best learn. Clinchy et al. (1985) interviewed 135 women from 3 private colleges, an urban high school, 2 adult education programs and 3 rural human service agencies. The researchers asked questions to assess women's perceptions about good and bad teachers, assignments, and courses they had taken. Additionally, respondents were asked to describe "powerful learning experiences" they had had, as well as any experience that helped them to perceive things in a different manner.

Consistent themes were identified by the researchers. First Clinchy et al. (1985) found that women did not want to learn information solely at an abstract level. Instead they typically desired to learn how an idea related to them personally as well as think about this idea at an abstract level. Women reported that they were less satisfied learning information solely at an abstract level. Secondly, women

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rarely reported that a significant learning experience had resulted from their being challenged in an adversarial manner by their teachers. One woman described a significant learning experience in which the professor and classmembers contributed to further developing an idea. Thus, women appear to value collaborative learning as opposed to competitive interaction in which people try to prove their ideas are better than other people's ideas. Third, the women reported that they did not merely want to be provided with information and knowledge from their professors. Many women stated that they wanted to have knowledge within them drawn out.

In relating these forms of learning to theories concerning connected development, it appears that women may prefer and best learn through a connected style of learning or instruction. The women in Clinchy's et al.'s (1985) study wanted to deal with information at a personal level. This style of learning corresponds to Gilligan's (1982) and Lyons' (1983) research findings in that males typically resolved issues on the basis of applying abstract rules, whereas women typically considered the context of a situation in resolving issues. Also, women in Clinchy et al.'s (1985) study did not desire an adversarial form of learning, but their statements indicated that they valued a cooperative environment. Again these women's interests were consistent with expectations, as Miller (1976) theorized that women, through their connected development, desire cooperative interactions and want to

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maintain affiliation with others. Finally, the sample of women preferred to have a professor draw knowledge from them as learners rather than merely tell them information. The act of eliciting information from the students, rather than merely giving students information, requires teachers to use their awareness of students at an interpersonal level to draw out students ideas (Clinchy et al., 1985). The women's desires for a learning situation which encompasses connected interactions again corresponds to the values of women who have developed in a connected manner.

One limitation is this study is that Clinchy et al. (1985) have used women's self-reports of their most profound learning experiences, and their preferences for learning. Research results describe women's perceptions of their learning environments, but it is not known whether women truly learn more effectively within a connected learning environment.

### Summary

The need for a better understanding of women's vocational development was discussed along with issues relating to measuring women's work values. Empirical studies on men and women's work values were reviewed. Findings were generally consistent with expectations based on Self-In-Relation theory. Males valued work values that appeared to be separate to a greater extent than women, and females valued work values that appeared to be connected to a greater extent than males. It was found however that the work values that

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men and women significantly differed on varied from study to study. Therefore, in investigating the importance that Connected and Separate individuals assign to work values, it is important to develop and then use scales that measure ratings of a set of "separate" work values and ratings of a set of "connected" work values. These scales are more likely to detect significant variations in scores.

Researchers have specified that differences between males and females have not been elicited using global measures of work values. However, global measures applied in prior studies were not based on connected and separate dimensions. Research studies utilizing work value scales based on these dimensions are needed.

Researchers have reported that rating work values independently of each other, as opposed to rank ordering work values, is more likely to elicit differences between male and female ratings. Because the possession of a Connected and Separate Identity is associated with sex differences in subjects, the independent rating format may also be a valuable technique to apply to elicit differences in ratings among people who possess Connected and Separate Identities.

Unexpected findings from prior work value studies are useful to consider in designing the work value scales. In one study, a researcher had assumed that a work value was "masculine" or "feminine" in nature. In developing scales to measure to subjects' ratings of "separate" and "connected" work values, a more empirical method of classifying work

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values is recommended. For example, experts can be asked to independently rate work values to determine which work values are classified as "connected" or "separate" in nature.

Findings that were inconsistent with theoretical expectations may also have been due to the unique characteristics of the individuals sampled in various studies. For example, a sample of female business students may not be representative of all women. Similarly, a sample of male medical students may not be representative of all men. These results might account for unexpected work value findings. The degree that people possess Separate Identities and Connected Identities needs to be directly measured to test Self-In-Relation's theory applicability in predicting the importance people assign to work values.

In past work value studies, the following demographic variables showed a relationship to people's ratings of work values: race, or race and sex interactions, major or field specialization, socioeconomic status, age and/or cohort variations. In future studies on work values, it is important to consider measuring these variables to explore how they may impact research findings.

Most research on vocational resource preferences did not provide information that was useful in evaluating how the possession of Separate and Connected Identities might relate to people's endorsements of vocational resources as aids to accomplish vocational tasks. A research study did investigate females' preferences for learning environments.

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Findings suggested that females may prefer "connected" interactions as they learn. Also, based on results from a study on women's preferences for vocational resources, it appears that females value vocational resources that emphasize connected styles interactions more highly than options that do not allow for connected interactions. In both studies, the females' preference for "connected" learning environments may have occurred because the women possessed a Connected Identity. However, the extent that these females possessed a Connected Identity was not measured. To investigate whether people's possession of Connected and/or Separate Identity accounts for the degree that they endorse "connected" and/or "separate" vocational resources, rather than rely on indirect support measured through sex differences, new research studies need to be conducted. These studies need to measure the extent to which people possess Separate and Connected Identities to provide direct support for Self-In-Relation's theory applicability in explaining people's endorsements of vocational resources that emphasize separate or connected interactions.

Further exploration of the relationship between Connected Identity, Separate Identity, and people's endorsements of work values and vocational resources is needed to better understand whether Self-In-Relation theory has utility in the career development and counseling area.

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## Chapter 4

### METHODOLOGY AND DESIGN OF THE STUDY

This chapter includes a description of (1) the sample, (2) data collection procedures, (3) instruments utilized, (4) testable hypotheses, (5) analyses conducted, and (6) summary.

#### Sample

The subjects in this study consisted of 186 senior undergraduates at Michigan State University. This sample was drawn from a population of approximately 9000 seniors.

Respondents were surveyed based on a random list, provided by the Registrar's Office, containing 150 male and 150 female senior undergraduates. Seniors were chosen as the population to study because they were college students most likely to have made career decisions recently or were presently considering career options. Also, seniors were likely to have used or have considered using vocational resources as aids to accomplish their vocational tasks. Persons who had dealt with major vocational decisions long ago were to be omitted from the research study. Therefore, students who had interrupted their education for one year or more were excluded from the study, as it is possible that many of these students had returned to school after having resolved major career problems and decisions. The rationale for using primarily students who had been recently or were currently involved in making vocational decisions was based on Gilligan's (1982) argument that it is important to use

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current real life issues to elicit connected and separate characteristics within people. Her argument is supported by research findings (Friedman, Robinson & Friedman, 1987; Gilligan, 1982; Lyons, 1983). Gilligan (1982) and Lyons (1983) have identified separate and connected characteristics in people when they have been asked to describe moral dilemmas that they have actually experienced. On the other hand, in using hypothetical moral dilemmas, Friedman, Robinson and Friedman (1987) found no significant differences between individuals with masculine and feminine identities.

#### Data Collection Procedures

Data were gathered from a questionnaire using procedures recommended by Dillman (1978). A packet was mailed to the residence of all senior undergraduates on the random mailing list provided by the Administration Office. The packet contained:

- 1) a cover letter (Appendix A) that provided a general description of the study and requested students' participation, and
- 2) the research questionnaire (Appendix B) along with a stamped return envelope to mail back to the researcher should they agree to participate in the study.

One week after the questionnaire had been mailed to the students, a follow-up letter (Appendix C) was sent to encourage subjects who had not mailed back questionnaires to do so immediately, and to thank those persons who had returned questionnaires. Students were also informed that if they had lost or misplaced their questionnaire, they could call the researcher to obtain a new copy of the

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questionnaire. Additionally, two weeks after the first follow-up letter had been mailed, a second follow-up letter (Appendix D) along with another copy of the questionnaire was sent to people who had not returned their questionnaires. Among students who filled out and returned their questionnaires, four subjects selected at random won cash awards. A letter along with the cash award was sent to the four students who had won (Appendix E).

To ensure confidentiality of responses, questionnaires were filled out anonymously. Staff at the Registrar's Office of Michigan State University matched random names of senior undergraduates to numbers. The researcher had access to the numbers used, but not the names and addresses of students who were contacted. Return envelopes and questionnaires were numbered. From the numbers written on the return envelopes and questionnaires, staff at the Administration Office distinguished respondents who had answered the questionnaire from those who had not yet done so. Subjects who had not returned their questionnaires were then sent letters to encourage them to mail back their completed questionnaires. Because respondents' anonymity was maintained, the likelihood that students answered honestly in responding to the survey, was enhanced.

The researcher obtained permission from the University Committee on Research Involving Human Subjects (UCRIHS) to carry out this study.

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## **Background on Instrumentation and Methodological Issues**

A variety of assessment instruments have been used in past research studies to measure the variables of interest in the proposed study: Connected and Separate Identity, work values and endorsement of vocational resources. Those instruments and measurement techniques are reviewed in this section.

### Instruments Measuring Connected and Separate Identities

A background on methods used to measure people's sex role identity is helpful to understand the methodology and instruments chosen for use in the present study.

Previously, instruments that have measured characteristics associated with masculinity and femininity were created on the basis of empirical procedures. In developing these instruments, people were asked to rate the degree to which the typical male and typical female, or the ideal male and ideal female, possess specific traits. If ratings of the degree that males and females possessed a trait significantly differed, that trait was judged as being useful in determining the extent to which people have masculine or feminine qualities. Additionally, on a sex role inventory called the Personality Attributes Questionnaire (PAQ), the direction of subjects' self-rating and their stereotyped rating of their own sex had to correspond for that item to be included on the sex role inventory (Spence & Helmreich, 1978).

Instruments that measures people's degree of masculinity or femininity (eg., the Personal Attributes Questionnaire and

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the Bem Sex Role Inventory) show a relationship to current measures that evaluate the extent to which people have a Connected or Separate Identity. (Correlations between the Relationship Self Inventory (RSI) which measures the extent people possess Connected and Separate Identities, and measures of sex role identities are described later in this chapter). However, instruments used to evaluate Separate and Connected Identities, in contrast to Sex Role Inventories, are based on a theory that pertains to typical variations in males' and females' style of relating to others.

Current research that has identified differences in people's orientation towards others has primarily relied on interview formats to measure people's possession of a Separate or Connected Identity. These interviews used specific criteria to determine people's identities. Only one inventory has been designed to identify Connected and Separate characteristics within men and women. This inventory has been selected for use in the present research study.

Spence and Helmreich (1978) have stated that either a median split method or multiple regression could be applied to identify significant findings in sex role research using the PAQ. As this researcher opted to measure the extent to which Connected Identity and Separate Identity contribute to the prediction of work variables, and the extent that sex of the subject further contributes to this prediction, regression analysis was deemed the most useful method to apply.

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### Instruments Measuring Work Values

Numerous types of measures have been used to assess the importance people assign to work values. Some instruments have primarily evaluated the work values of specific groups. For instance, Manhardt's (1972) work value instrument has been primarily applied to business students and employees. The Work Values Inventory (WVI), which has been used repeatedly in work value studies, has been selected for use in the proposed study. Typically, this instrument has been administered to high school students and college students. Results of these studies have usually identified sex differences on work values that appear to characterize people who possess Connected and Separate Identities.

### Instruments Measuring Endorsements of Vocational Resources

In studies conducted to assess subjects' endorsement of vocational resources or vocational interventions, no vocational resource measures were identified that adequately differentiated vocational resources that emphasized a "connected" style of interaction from those that emphasized a "separate" style of interaction. Thus, this researcher designed a questionnaire to measure the extent to which people with Connected and Separate Identities endorse vocational options that differ significantly on Connected and Separate components.

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### **Instruments Administered in the Present Study**

The questionnaire consisted of four sections. First, the Work Values Inventory (WVI), which measures one's perceptions of the importance of a variety of work values, was administered. Second, the respondents were given the Relationship Self Inventory (RSI), which measures the extent to which people possess Connected and/or Separate Identities. Third, the Vocational Resource Options Questionnaire was administered. This questionnaire assessed the degree that people endorse vocational resource options as aids to accomplish various vocational tasks. Fourth, demographic information was collected. A description of the various measures is presented in the following section.

#### **The Work Values Inventory (WVI)**

The WVI, as shown in Appendix F, measured the importance respondents assigned to "connected" and "separate" work values. Respondents rated along a 5 point rating scale, from (1) "unimportant" to (5) "very important", the importance of statements such as "work in which you...have authority over others". The WVI consists of 45 statements with 15 scales. Three statements from the inventory correspond to each scale in the inventory.

The WVI had been revised numerous times (Super, 1970). Super developed 15 original work value items of the WVI based on Spranger's theory on the ideal types of man, values included in the Allport-Vernon-Lindzey Study of Values, and from Hoppoch's (1935) and Centers' (1948) research on job

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satisfaction and job morale (Gable, 1972; Super, 1970; Super, 1973). When the current version of the WVI was created, these original 15 work values were retained for use. Thirty items were added to the WVI based on their similarity to the 15 original work values. Also, in revising the WVI to its current form, the WVI was altered from a forced choice format into a Likert rating format (Super, 1970). Validation studies have compared the WVI to vocational interest inventories (Breme & Cockriel, 1975; Ivey, 1963; Kinnane & Suziedelis, 1962), personality measures (Super, 1962), and general value or work value inventories (Kinnane & Gaubinger, 1963; MacNab and Fitzsimmons, 1987) to determine the extent to which the WVI correlated with other instruments designed to measure the same or related traits. French (1971), Ivey (1963) and Super (1970) reported small but significant correlations between some scales of the WVI and scales of the Strong Vocational Interest Blank, the Kuder Preference Record-Vocational and the Allport-Vernon-Lindzey Study of Values. For instance, Ivey (1963) found in correlating the scales of the Kuder Preference Record-Vocational with scales from an earlier form of the WVI, out of 150 correlations, 12 correlations were significantly positive ( $p < .05$ ), and two of these correlations were greater than .40. These correlations did not appear to have occurred by chance (French, 1971). French (1971) suggested that the correlations seem to be valid because the scales look related to each other. Because small correlations were found, it may be concluded that the

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two instruments are measuring constructs that are somewhat related.

The construct validity of the WVI has been demonstrated through correlation coefficients calculated between the WVI and three other instruments designed to measure work values and preferences for work. MacNab and Fitzsimmons (1987) administered the Work Values Inventory, the Minnesota Importance Questionnaire, the Values Survey and the Work Aspect Preference Scale to 342 female and 96 male undergraduates at two Canadian Universities. From each instrument, eight scales that corresponded to eight work value concepts were analyzed by the researchers. Across the four instruments, the correlation between similar scales was fairly high (average  $r=.59$ ) providing support for convergent validity of the WVI. Across instruments, correlations for dissimilar scales only exceeded the correlation for the similar scales (average  $r=.59$ ) in four out of 1344 comparisons. Also, dissimilar traits within each instrument formed significantly lower correlations (average  $r=.26$ ) than similar traits across instruments (average  $r=.59$ ). Correlations for dissimilar traits within each instrument were lower than the correlations for similar traits across instruments in 96% of the comparisons. These findings provide support for discriminant validity of the WVI. In summary, results suggested the 8 matched scales seem to be measuring very similar constructs (MacNab and Fitzsimmons, 1987).

Concurrent validity research, applying the current WVI

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to assess differences in occupational groups' work values, has not been conducted. However, Neumann and Neumann (1983) using the current WVI form, have shown that work value variations were able to discriminate people in a Liberal Arts Program from people in an Engineering program. As yet, no predictive studies have been completed that determine whether persons with specific work values are more likely to enter specific college majors or career fields.

Although some criticisms (French, 1971; Gable, 1972) have been made about content validity procedures used in the development of the WVI, French (1972), and Halpin, Brogdon, and Taylor (1978) have stated that the WVI appears to have content validity based on information presented in the Work Values Inventory Manual. Super (1970, 1973) has described many precautions that he took to ensure that items were expressing values intended. Additionally, Super and Mowry (1962) examined whether content validity of the WVI was impaired as a result of persons' providing socially desirable answers rather than honest answers in rating their work values. Using an earlier form of the WVI, 23 counseling clients rated the social desirability of items in the WVI, and 23 counseling clients rated the personal desirability of items in the WVI. Applying a  $t$  statistic to determine whether differences were significant between the rating of social desirability and rating of personal desirability, Super and Mowry (1962) found that in comparison to personal desirability ratings, Altruism was rated higher in social

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desirability ( $p < .05$ ) whereas Independence was rated lower in social desirability ( $p < .01$ ). They report that other scores were free from effects of social desirability. Super (1970) suggested that in a vocational counseling context, people are likely to give truthful responses because they are trying to make good career decisions. Similarly, the present study was apt to limit subject's concerns about responding in a socially desirable manner because anonymity of responses was maintained. (See Data Collection Procedures in this chapter for a complete explanation of the methodology applied to ensure respondent anonymity).

Data supporting inter-item reliability of the WVI has varied greatly across studies. Based on a sample of 51 male and 48 female 10th graders from a suburban school, Hendrix and Super (1968) reported on correlations between new items added to the WVI and original items maintained within each scale of the WVI. The lowest correlation identified was .43, the median correlation was .65, and one-third of the correlations were greater or equal to .70 (Hendrix & Super, 1968). Halpin et al. (1978) reported much lower inter-item reliability (ranging from  $r = .18$  to  $r = .65$ ) in their research study evaluating the work values of 10th, 11th and 12th graders. Additionally, Gable and Purzek (1971) reported that some items in different scales were highly related to items in other scales. Gable (1972) and Hesketh (1982) have argued that some of the WVI scales should be combined because of the degree of their relationships to each other.

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In the present study, the 15 scales that Super developed for the WVI were not utilized. Instead, specific work values were formed into new scales to be used in hypothesis testing. Assessment of inter-item reliability of the new scales were of particular interest, as there appears to be questionable inter-item reliability on the 15 work value scales that Super formulated.

Using an another measurement of reliability, Super (1973) reported test-retest scores ranging from .74-.88 across a two week period for a sample of 51 males and 48 female 10th graders (Super, 1970; Super, 1973). Tiedeman (1972) said this level of reliability was good. Hendrix and Super (1968) provided further support for test-retest reliability based on a principal component analysis. Scales appeared to load onto similar factors for males and females separately in both the initial assessment of their work values and in the retest assessment of their work values using the same sample of 51 male and 48 female 10th graders. Results of the principal component analysis for 4 analyses, two initial tests and two retests, showed that 4 prominent factor loadings (eigenvalues>1) were present in 3 of the analyses and 5 factor loadings were present in one analysis (eigenvalues>1).

Super presented standardized WVI data separately for males and females, grade 7 to 12 (Super, 1970). His data are based on a national sample of 10,083 high school students (Super, 1970). Because no standardized normative data have

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been presented on college age students, the means for this research sample have been used to provide the norms for the current study.

In the present research study, this researcher developed a Connected Work Values (CWVI) Subscale, a Separate Work Values (SWVI) Subscale and a Total Work Values (TWVI) Subscale. Work value items that appeared consistent with the Separate Identity and work values that appeared consistent with the Connected Identity based on theoretical conceptualization, were considered for inclusion respectively in the SWVI Subscale and in the CWVI Subscale. This researcher identified 18 of the 45 WVI work values which looked as if they might be reflective of a separate or connected dimension. To support the classification of work values under the CWVI Subscale or under the SWVI Subscale, experts judged the 18 work values on the extent that they were representative of a "connected" and/or "separate" perspective. These experts consisted of researchers who had designed the RSI (Strommen et al., 1987). In designing the RSI, the researchers had created scales measuring the Connected Identity and Separate Identity. Thus, they would have developed a thorough understanding of how to conceptualize people with these identities.

The experts rated each work value on a scale of 1, not at all representative, to 5, very representative, in rating 1) the degree it was representative of a Connected Identity, and 2) the degree it was representative of a Separate

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Identity. The rating forms used by experts is found in Appendix I. When five out of six experts gave a rating of 4 or 5 in the degree that a work value was representative of a Connected orientation along with giving a rating of 1, 2 or 3 in the degree that it was representative of a Separate orientation, that work value was classified as a "connected" work value. The work value was then included in the CWVI Subscale. When five out of six experts gave a rating of 4 or 5 in the degree that a work value was representative of a Separate orientation along with giving a rating of 1, 2, or 3 in the degree that it was representative of a Connected orientation, the work value was classified as a "separate" work value. This work value was then included in the SWVI Subscale. On the basis of experts' ratings, six "connected" work values and five "separate" work values were identified. Possible scores on the CWVI or SWVI Subscales ranged from 5 to 25. The TWVI Subscale consisted of the composite of work values classified under the CWVI Subscale and the SWVI Subscale. Because an unequal number of connected and separate items were included within the TWVI Subscale, separate and connected scores were proportionately weighted to create an equal weighting of the two sets of items on the TWVI Subscale. Possible scores on this scale ranged from 10 to 50. Appendix J shows the work values items that are included in the CWVI Subscale, the SWVI Subscale and the TWVI Subscale.

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The Relationship Self Inventory (RSI)

The Relationship Self Inventory (RSI), shown in Appendix G, was used to measure the extent to which respondents possess Connected and Separate Identities (Strommen, Reinhart, Pearson, Donelson, Barnes, Blank, Cebollero, Cornwell, Kamptner, 1987). Respondents rate statements along a 5 point scale from (1) "not like me at all" to (5) "very much like me" to indicate "how much each statement describes you [the respondent]". The inventory consists of moral value and self-descriptive statements. Examples of items in this inventory are "I cannot choose to help someone else if it will hinder my self development," "In my every day life I am guided by the notion of "an eye for an eye and a tooth for a tooth."

The RSI contains four scales. Two scales, the Connected Self (CRSI) Scale and the Separate Self (SRSI) Scale, were utilized in the current research study. These scales are designed to measure the Connected Identity and the Separate Identity as conceptualized by Gilligan (1982). Items which make up the SRSI Scale and the CRSI Scale are listed in Appendix J. Two other scales, the Self and Other Care Chosen Freely (SOCCF) Scale and the Primacy of Other Care (POC) Scale, which measure subtypes of the Connected Identity, were not used in the present study. The CRSI Scale consists of 12 statements, and the SRSI Scale consists of 18 statements from the RSI. In calculating subjects' scores for each scale, item scores are totalled and then divided by the number of

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items in the specific scale. Thus, subjects obtain an averaged score for each scale. The range of scores possible for each scale is 1 to 5. If a subject obtains a score of 1 on an identity scale, it indicates that the subject lacks the identity being measured. A score of 5 on an identity scale signifies that the respondent possesses the identity being measured to a large degree. Note that it is possible for an individual to obtain a high score on the CRSI Scale and a high score on the SRSI Scale. These scores would indicate the individual possesses to a large degree both Connected and Separate Identities.

The RSI was revised from the original Relationship Self Inventory which measured the Connected Self and subcategories of the Connected Self, but did not have a scale that adequately measured the Separate Self. In its development, items were drawn or revised from the original Relationship Self Inventory, and new items created to measure the Separate Self were compiled into a pool of 97 items. The RSI has previously been administered to 930 women and 228 men including university undergraduates, high school students, and specific groups of adults. Over one half the sample consisted of undergraduate students. Sixty out of the 97 items were selected for continued use in the revised instrument.

In revising the RSI, the social desirability of items were considered. Pearson et al. (1991) stated that low variations in subjects' responses to specific statements on

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the RSI were likely to have resulted from these statements being judged as socially desirable or undesirable. The researchers stated that social desirability is an aspect of the concepts that they were measuring. Consequently, they did not choose to eliminate all the statements with ratings that were likely to have low variability because of social desirability. Instead items which had low variability were retained in the revised RSI if they described the major concepts of the scale being measured, and if they increased the reliability of the scale when they were included. The 60 items used on the revised RSI formed clusters onto the CRSI Scale, SRSI Scale and the two scales that make up the subcategories of the CRSI Scale. Internal reliability, measured by Cronbach's alpha on each scale for men and women separately, appears adequate ( $r > \text{or} = .65$ ) (Strommen et al., 1987).

The pattern of intercorrelations of the scales on the RSI is consistent with theoretical expectations. Specifically, the CRSI Scale had a small negative correlation with the SRSI Scale for women ( $r = -.23$ ) and for men ( $r = -.33$ ) (Strommen et al., 1987). This is logical because Gilligan indicated that Connected and Separate Identities are not polar opposites along a continuum. Rather, it is possible to possess both separate and connected traits (Gilligan, 1982). Among men, the CRSI Scale had a fairly high correlation with the POC Scale ( $r = .73$ ), and had a moderate correlation with the SOCCF scale ( $r = .58$ ). Among the women, the CRSI Scale was

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moderately correlated with both the POC scale ( $r=.56$ ) and the SOCCF scale ( $r=.52$ ) (Strommen et al., 1987). These moderate correlations again are consistent with theoretical assumptions. These findings were expected because the SOCCF and POC Scale had been designed to measure subcategories of the Connected Identity which was measured by the CRSI Scale.

Comparisons between scales on the RSI and two sex role inventories, the Bem Sex Role Inventory and the Personality Attributes Questionnaire (E. Strommen, personal communication, February 21, 1991), for a sample of 442 subjects showed support for the construct validity of the RSI. The femininity scales of the sex role inventories were expected to correlate with the CRSI Scale, which measures an identity more typical of women than men. Also, the masculinity scales of the sex role inventories were expected to correlate with the SRSI Scale of the RSI, which measures an identity that is more typical of men than women. As was expected, the CRSI Scale did have a moderate correlation with the femininity scales of the BSRI ( $r=.51$ ) and the PAQ ( $r=.52$ ). On the other hand, the SRSI Scale had a low correlation with the masculinity scales of the BSRI and PAQ ( $r=.25$  and  $r=.17$  respectively) (E. Strommen, personal communication, February 21, 1991). The low level correlations may be explained by the fact that the two sex role inventories measure people's stereotypes about the attributes of males, whereas the RSI measures developmental characteristics more typical of males than females. Specifically the RSI does not define the SRSI

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Scale along an agentic dimension, whereas key stereotypes used within the masculinity scales relate to agentic concepts.

Normative data were collected on a sample of 465 women and 139 men (Pearson et al., 1991). On the CRSI Scale, the average of women's scores (mean=4.1, standard deviation=.51) was slightly greater than the average of men's scores (mean=3.9, standard deviation=.49), although not significantly so. On the SRSI Scale, men's average score (mean=2.7, standard deviation=.58) was slightly higher than women's average score (mean=2.5, standard deviation=.51), but not to a significant degree (Pearson et al., 1991). Because normative data were not collected specifically on college age students, the mean and standard deviation based on data from the present study have been applied as norms for the current study.

#### The Vocational Resource Options Questionnaire (VROQ)

The degree to which respondents endorse "connected" or "separate" vocational resource options was measured by the VROQ, which is shown in Appendix H. Because of an inability to accurately measure the degree to which students behave in a separate and/or connected manner while using vocational resources, rather than measure students' actual behaviors, the researcher chose to measure students' evaluation of vocational resource options.

The VROQ consists of four scenarios associated with

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different vocational tasks. Each scenario contains descriptions of two vocational resource options. Within each scenario, one option emphasizes a connected style of interaction to a greater extent than the other option, and one option emphasizes a separate style of interaction to a greater extent than the other option.

Following the descriptions of the two vocational options, six questions are asked to obtain students' evaluations of the options. Three questions measure subjects' endorsement of the "connected" vocational resource option, and three questions measure subjects' endorsement of the "separate" vocational resource option. Respondents are asked to rate on a scale of (1) "very unlikely" to (5) "very likely", their responses to questions about the two options. Examples of questions are "How likely are you to feel comfortable using Option #1?" "To what extent would Option #2 be likely to help you...?" "How likely are you to use Option #2?" For each scenario, the six questions are repeated, sometimes in slightly varied forms.

The VROQ consists of 24 items and three scales. The Connected Options (CVRO) Scale measures students' responses to questions about "connected" vocational resource options. The Separate Options (SVRO) Scale measures students' responses to questions pertaining to "separate" vocational resource options. Scores are totalled for the twelve questions corresponding to each scale to calculate people's scores on the CVRO Scale and the SVRO Scale. For the two scales,

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possible scores ranged from 12 to 60. The third scale, the Total Options (TVRO) Scale, is a composite of the CVRO Scale and the SVRO Scale. This scale measures people's endorsements of both "connected" and "separate" vocational resource options. Scores on all questions on the VROQ are totalled to calculate people's scores on the Total Options Scale. Possible scores on the TVRO range from 24 to 120. Options that are measured on the CVRO Scale, the SVRO Scale, and the Total Scale are listed in Appendix J.

The researcher designed the "connected" and "separate" vocational resource options in the VROQ based on theoretical conceptualizations about the characteristics and values of persons with Connected or Separate Identities. To determine the construct validity of options, experts on Gilligan's theoretical constructs of Separate and Connected Identity judged the extent that each vocational resource option emphasized a separate style of interaction and the extent that each vocational resource option emphasized a connected style of interaction. These experts were the same researchers who had rated work values on the extent that they were representative of connected and separate dimensions. (See Chapter 4, Instruments Administered in the Present Study--WVI, for description of experts' qualifications). For each set of options presented within a scenario, experts rated each option on a scale of 1, not at all representative, to 5, very representative, in measuring the degree that the option emphasized a Connected perspective, and the degree

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that the option emphasized a Separate perspective (Appendix I). If five out of six experts gave a rating of 4 or 5 on the degree that a vocational resource was representative of a Connected perspective along with giving a rating of 1, 2 or 3 on the degree that it was representative of a Separate perspective, that vocational resource option was classified as a "connected" option. The vocational resource was then considered for inclusion in the CVRO Scale. If five out of six experts gave a rating of 4 or 5 in the degree that a vocational resource option was representative of a Separate perspective along with giving a rating of 1, 2, or 3 in the degree that it was representative of a Connected perspective, the vocational resource option was classified as a "separate" option. It was then considered for inclusion in the SVRO Scale. If one option within the set was classified as "separate" and the other option within the set was classified as "connected", the two vocational options were to be included on the VROQ instrument scales. Otherwise neither option would be included on CVRO and SVRO Scales, and the scenario for that set of options would be omitted from the questionnaire. Results from the experts' ratings, however, indicated that all options fit theoretical expectations. Thus, all options were included in the CVRO and SVRO Scales.

A pilot study was also conducted on the VROQ. Students in two undergraduate psychology class were asked to complete the VROQ. Twenty-nine out of approximately 70 students chose to participate in the pilot study. The students who

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participated in the study read an introductory statement about vocational resources (Appendix K) and then filled out the original VROQ, which consisted of five scenarios (Appendix L). In each scenario, students were asked to rate vocational resource options by responding to six question within each scenario, and then answer an open-ended question. In answering the question, they were to explain their ratings of the vocational resource options if they had consistently endorsed one option higher than the other.

The pilot study was conducted to assess whether subjects understood instructions on the VROQ and to assess whether they perceived vocational resource options in the manner intended. In general, instructions on the VROQ appeared to be understood. However, subjects did not consistently follow directions in responding to the open-ended questions. For instance, some subjects did not respond to the question when they were supposed to, and some subjects provided an answer that did not pertain to the question being asked. There were difficulties in categorizing responses even when subjects did follow instructions. Many subjects gave vague responses, such as explaining their higher rating of one option on the basis that "option 1 is better". There were far more vague or nonresponses given than responses that could be categorized as a "separate" response, a "connected" response, or a response that was based on different dimension. If there was a large proportion of vague or nonresponses on the full-scale study, statistical analysis of responses would provide little

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useful information. Consequently, the researcher decided not to include the open-ended questions in the full-scale study.

A review of the open-ended responses that could be categorized indicated that subjects typically gave separate reasons for their higher endorsements of separate vocational resource options over connected options. Similarly, they typically gave connected reasons for their higher endorsements of connected options over separate options. This finding added support to the validity of the scales being measured. An exception was found in one scenario. Subjects had explained their higher endorsement of a separate option consistently with an explanation that appeared to be based on connected reasoning. The subjects stated that individuals would be more honest with each other if they used the separate options. Concerns about harming others were implied in two cases. For example, one student stated that the separate vocational resource was preferred because "...an impartial view is better due to the fact prerequisites are set so people won't be afraid to hurt the other person". Because the students seemed to be using a connected form of response in endorsing the "separate" option, it is likely that the "connected" option was not perceived as allowing for a more connected form of interaction than the "separate" option in this scenario. Consequently, the second scenario from the original VROQ was eliminated in revising the VROQ.

Based on subjects' responses to the open-ended question, Scenario #1 was revised. Three subjects had stated that they

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had preferred the "separate" option in the scenario because of their discomfort in speaking in front of others. Because vocational options were designed to be contrasted along separate/connected dimensions as opposed to other dimensions, the researcher modified the description of the "connected" option in Scenario #1 so that subjects would be unlikely to rate to this option based on their degree of discomfort in speaking in front of others.

In addition to evaluating how vocational resource options were perceived by subjects, the researcher sought to determine whether three types of questions were more valuable than one question to assess subjects' endorsement of connected and separate options. When all three questions as opposed to two questions were asked, the range of individuals' responses was greater. In other words, in using three questions, scores fell across the full Likert Scale ranging from 1 to 5. Because of the variability in individuals' responses, it was decided that three questions would better hone in on people's endorsement of a connected or separate option than the use of one question to measure this concept. Consequently, the three forms of questions were maintained in the full-scale study.

#### Demographic Questions

The demographic assessment includes information about the characteristics of the research sample so that researchers may replicate this study or design new studies based on

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information provided about the sample. Variables included are age, sex, race, state of residency, marital status, parental status, and income level. Also, one variable in this section, Time Off From School, identifies subjects who were to be excluded from the main analyses in the study.

Some demographic variables may confound results, and might need to be controlled for in analyses. A review of the literature suggested that Sex of the Subject was related to people's possession of a Connected or Separate Identity. Also, Sex of the Subject was associated with the variations in the importance people assigned to specific work values. These work values appeared to reflect separate or connected dimensions. Thus, Sex of the Subject was included in the research hypotheses. Although race, parental status, and income level were also found to be related to differences in work values, either these differences were found specifically across "connected" and/or "separate" work values or these findings were not consistent across studies. Therefore, no explicit research hypotheses could be formulated. The relationship of demographic variables and the primary variables including Connected and Separate Identity, "connected" and "separate" work values, and endorsement of vocational resource options were to be explored.

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### Specific Hypotheses

Hypothesis 1: The degree of importance that people assign to "connected" work values as measured by the Connected Work Value (CWVI) Subscale of the Work Values Inventory (WVI), will be predicted by the extent that people possess a Connected Identity, the extent that people possess a Separate Identity, and their sex, in the following ways:

Hypothesis 1A: People's scores on the CRSI Scale of the RSI will positively predict people's scores on the CWVI Subscale of the WVI.

Hypothesis 1B: Beyond scores on the CRSI Scale, people's scores on the SRSI Scale of the RSI will not contribute significantly to the prediction of people's scores on the CWVI Subscale of the WVI.

Hypothesis 1C: Beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the CWVI Subscale of the WVI.

Hypothesis 2: The degree of importance that people assign to "separate" work values as measured by the Separate Work Value (SWVI) Subscale of the WVI, will be predicted by the extent people possess a Connected Identity, the extent people possess a Separate Identity, and their sex, in the following ways:

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Hypothesis 2A: People's scores on the SRSI Scale of the RSI will positively predict people's scores on the SWVI Subscale of the WVI.

Hypothesis 2B: Beyond scores on the SRSI Scale, people's scores on the CRSI Scale of the RSI will not contribute significantly to the prediction of people's scores on the SWVI Subscale of the WVI.

Hypothesis 2C: Beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the SWVI Subscale of the WVI.

Hypothesis 3: The degree of importance that people assign to a composite of "separate" and "connected" work values as measured by the Total Work Values (TWVI) Subscale of the WVI, will be predicted by the extent people possess a Connected Identity, the extent people possess a Separate Identity, and their sex, in the following ways:

Hypothesis 3A: People's scores on the CRSI and SRSI Scales of the RSI will each positively predict people's scores on the TWVI Subscale of the WVI.

Hypothesis 3B: Beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the TWVI Subscale of the WVI.

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Hypothesis 4: The degree that people endorse "connected" vocational resources as measured by the Connected Options Scale (CVRO) of the Vocational Resource Options Questionnaire (VROQ), will be predicted by the extent that people possess a Connected Identity, the extent that people possess a Separate Identity, and their sex, in the following ways:

Hypothesis 4A: People's scores on the CRSI Scale of the RSI will positively predict people's scores on the CVRO Scale of the VROQ.

Hypothesis 4B: Beyond scores on the CRSI Scale, people's scores on the SRSI Scale of the RSI will not contribute significantly to the prediction of people's scores on the CVRO Scale of the VROQ.

Hypothesis 4C: Beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the CVRO Scale of the VROQ.

Hypothesis 5: The degree that people endorse "separate" vocational resources as measured by the Separate Options (SVRO) Scale of the VROQ, will be predicted by the extent people possess a Connected Identity, the extent people possess a Separate Identity, and their sex, in the following ways:

Hypothesis 5A: People's scores on the SRSI Scale of the RSI will positively predict people's scores on the SVRO Scale of the VROQ.

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Hypothesis 5B: Beyond scores on the SRSI Scale, people's scores on the CRSI Scale of the RSI will not contribute significantly to the prediction of people's scores on the SVRO Scale of the VROQ.

Hypothesis 5C: Beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the SVRO Scale of the VROQ.

Hypothesis 6: The degree that people endorse a composite of "separate" and "connected" vocational resources, as measured by the Total Options Scale (TVRO) of the VROQ, will be predicted by the extent people possess a Connected Identity, the extent people possess a Separate Identity, and their sex, in the following ways:

Hypothesis 6A: People's scores on the CRSI and SRSI Scale of the RSI, will each positively predict people's scores on the TVRO Scale of the VROQ.

Hypothesis 6B: Beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject will not significantly contribute to the prediction of people's scores on the TVRO Scale of the VROQ.

### Statistical Procedures for Data Analysis

1. Hierarchical regression analyses were used to test Hypotheses 1 and 2, which described how people's scores on the CRSI and SRSI Scales, and their sex, were expected to contribute to predicting people's scores on the CWVI Subscale and the SWVI Subscale of the WVI. Predictor variables were entered into the hierarchical regression in three stages. For Hypothesis 1, predictor variables were entered in the following order: CRSI Scale, SRSI Scale, Sex of the Subject. For Hypothesis 2, predictor variables were entered in the following order: SRSI Scale, CRSI Scale, Sex of the

Subject. Scattergrams were plotted to determine whether a linear relationship occurred between predictor variables and the dependent variables.

2. Stepwise regression analysis was used to test Hypothesis 3A, which described how people's scores on the CRSI Scale and people's scores on the SRSI Scale were each expected to predict people's scores on the TWVI Subscale of the WVI. Based on stepwise procedures, the variable that contributes most to the prediction of the dependent is entered into the stepwise regression first, followed by the variable that contributes the next largest amount of variance. The variable that contributes the least amount of variance is entered last into the regression. A scattergram was plotted to determine whether a linear relationship occurred between predictor variables and the dependent variable.

3. Hierarchical regression analysis was to be used to test Hypothesis 3B which stated how Sex of the Subject was expected to contribute to the prediction of people's scores on the TWVI Subscale of the WVI, beyond what people's scores on the CRSI and SRSI Scales predicted. Identity variables were to be entered into the hierarchical regression first with Sex of the Subject added as the third step. The hierarchical regression equation, however, was not necessary. The ordering of variables in the stepwise regression used to test Hypothesis 3A was identical to the hierarchical regression that was to be used in testing Hypothesis 3B. Results from the hierarchical regression would have been the same as that found with the stepwise regression. Thus, findings from the stepwise regression were evaluated in testing Hypothesis 3B.

4. Hierarchical regression analyses were used to test Hypotheses 4 and 5, which described how people's scores on the CRSI and SRSI scales, and their sex, were expected to contribute to predicting people's scores on the CVRO Scale or the SVRO Scale of the VROQ. Predictor variables were entered into the hierarchical regression in three stages. For Hypothesis 4, predictor variables were entered in the following order: CRSI Scale, SRSI Scale, Sex of the Subject. For Hypothesis 5, predictor variables were entered in the following order: SRSI Scale, CRSI Scale, Sex of the Subject. A scattergram was plotted to determine whether a linear relationship occurred between the predictor variables and the dependent variables.

5. Stepwise regression analysis was used to test Hypothesis 6A which stated how people's scores on the CRSI Scale and people's scores on the SRSI Scale were each expected to predict people's scores on the TVRO Scale of the VROQ. Based on stepwise procedures, the variable that contributes most to the prediction of the dependent variable is entered into the stepwise regression first, followed by the variable that

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contributes the next largest amount of variance. The variable that contributes the least amount of variance is entered last into the regression. A scattergram was plotted to determine whether a linear relationship occurred between the predictor variables and the dependent variable. Hierarchical regressions which entered the identity variables first in the equation and entered Sex of the Subject third into the equation were used to further test Hypothesis 6A.

6. Hierarchical regressions were also used to test Hypothesis 6B which stated how Sex of the Subject was expected to contribute to the prediction of people's scores on the TVRO Scale of the VROQ, beyond what people's scores on the CRSI and SRSI Scale predicted. Identity variables were entered into the hierarchical equation first with Sex of the Subject was added as the third step. A scattergram was plotted to determine whether a linear relationship occurred between the predictor variables and the dependent variable.

The relationship of independent variables to each other and to dependent variables in this study was explored further. In Hypotheses 1, 2, 4, and 5, stepwise regression was conducted as a secondary analysis. Stepwise regression was used to evaluate if predictor variables would be entered in the same order the researcher specified in using hierarchical regression analysis as the primary method of analysis. When the stepwise method differed from hierarchical method, shared variance between independent variables was examined.

To explore the relationship of demographic variables to primary variables in the study, analysis of variance and correlation analysis were used. Variables that exhibited significant differences in means for specific dependent variables were to be included in regression analyses to explore relationships between the dependent variable and major independent variables.



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Assumptions of Regression Analysis

Regression analyses were used to test Hypotheses 1, 2, 3, 4, 5 and 6. These analyses are based on the following assumptions:

- 1) Residuals are normally distributed along all points of the regression line.
- 2) A linear relationship is formed so that residuals have a mean of zero along all points of the regression line.
- 3) Residuals have homoscedasticity meaning that they have the same variance for all points along the regression line.

Normality was tested by examination of a histogram. The frequency of cases falling between ranges on the Y axis would indicate whether cases are normally distributed. Kim and Kohout (1975) have stated that normality assumptions are not as stringent when sample sizes are large. Because the sample included in this study had an n of 186, strict adherence to normality assumptions was not required. Linearity was tested through use of a scattergram that plots residuals against their expected values. If residuals do not indicate a patterned deviation from expected Y values, the linearity assumption is met. Homoscedasticity was tested through the use of a scattergram of X and Y points. Y values should form relatively equal deviations for each of the X values. In addition to assessing whether regression assumptions have been met, it was important to evaluate whether multicollinearity could invalidate statistical findings.

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### Multicollinearity within Regression Analysis

Multicollinearity occurs when some of the independent variables applied within a regression equation are highly intercorrelated. As a result of extreme correlations, the partial regression coefficients become unreliable for these factors. To detect multicollinearity, a correlation matrix was computed between primary variables in the study as well as demographic variables that might be used in the regression analyses.

### Summary

The sample of students contacted for this research study were obtained from a random listing of male and female undergraduate seniors provided by the Michigan State Administration Office. Data were collected through a questionnaire mailed to the subjects. The questionnaire included the Work Values Inventory, the Relationship Self Inventory and the Vocational Resource Options Questionnaire. Confidentiality of responses was maintained as the names of respondents were not available to persons working with the data.

Six hypotheses were tested in this study. The first hypothesis described the manner in which Connected and Separate Identity scores predict the importance people assign to "connected" work values. The second hypothesis described the manner in which Separate and Connected Identity scores predict the importance people assign to "separate" work values. The third hypothesis described how Connected and Separate Identity scores predict the importance people assign

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to a composite of "connected" and "separate" work values. The fourth hypothesis described how Separate and Connected Identity scores predict the degree that people endorse "connected" vocational resource options. The fifth hypothesis described the manner in which Connected and Separate Identity scores predict the degree that people endorse "separate" vocational resource options. The sixth hypothesis described the manner in which Connected and Separate Identity scores predict the degree that people endorse a composite of "connected" and "separate" vocational resource options. Simple regression, hierarchical regression, and stepwise multiple regression were used to test these hypotheses.

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## Chapter 5

### RESULTS

Research findings are presented in two sections, Descriptive Analyses, and Statistical Analyses. Under Descriptive Analyses, first, subjects' response rate and demographic characteristics of the sample, are discussed. Second, descriptive information is presented as well as reliability data on the three instruments measuring primary variables in the research study. Third, preliminary findings on the relationship between demographic variables and primary variables are presented. Finally, findings from a correlation matrix and plotting of data are reviewed in evaluating the appropriateness of regression analyses used in hypotheses testing. Under Statistical Analyses, the results of the hypothesis testing are discussed. The chapter concludes with a summarization of the data analyses.

#### Descriptive Analyses

##### Response Rate From Surveys Mailed to Students

Out of 300 surveys initially mailed out to students, fourteen were not received by the students because they were incorrectly addressed. From the 286 surveys remaining, 208 surveys were returned by the respondents. Thus, the survey return rate was fairly high (72.8%). Six of the returned surveys had been left unanswered, however, and one was filled out incorrectly, leaving 201 (70.3%) surveys that were adequately completed for data analyses. From this set of



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surveys, fifteen more were excluded from primary analyses. The 15 subjects who had completed the surveys did not fit criteria of the study because they had taken off more than one year from schooling. Consequently, responses from 186 (65.0%) surveys were included in main analyses in the study.

#### Demographic Characteristics of the Sample

Demographic characteristics of the sample of students who remained in the study are described here. More female subjects (over 55%) than male subjects were included the sample (See Table 1).

Table 1  
Sex of the Subject

Gender	Number	Percent
Female	103	55.4
Male	83	44.6
No Response	0	0.0
Total	186	100.0

Subjects' ages ranged from 20 to 43. Only a small number of subjects ( $n=6$ ), however, were older than 23 years of age (See Table 2). Subjects most often reported that they were 21 years old.

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Table 2

## Age of the Subject

Age	Number	Percent
20	5	2.5
21	82	40.8
22	71	35.3
23	22	11.8
24 or older	6	3.1
No Response	0	0.0
Total	201	100.0

One hundred seventy-seven subjects reported their racial/ethnic background as white and a smaller number of subjects reported their racial ethnic backgrounds as being Black/African American (n=2), Hispanic/Chicano (n=3), Native American (n=2), and Asian (n=2) (See Table 3). Because there was only a small proportion of minorities in the sample, no further analyses were conducted.

Most subjects (96.2%) reported permanent residency in Michigan. One subject reported permanent residency in each of the following states: Alaska, Connecticut, Illinois, New Jersey, New York, Ohio, and Wisconsin. Because there was a minimal number of subjects (n=7) who resided outside of Michigan, no analyses are presented comparing this group with subjects whose permanent residency was in Michigan.

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Table 3

## Racial/Ethnic Background of the Subject

Racial/Ethnic Background	Number	Percent
White/Caucasian	177	95.2
Black/African American	2	1.1
Hispanic/Chicano	3	1.6
Native American	2	1.1
Asian	2	1.1
Other	0	0.0
No Response	0	0.0
Total	186	100.0

The marital status of sample was predominately single (95.7%), with a small percentage of subjects reporting that they are married (4.3%). Only one subject reported having children. Because there was only a small percentage of married subjects in the sample, no analyses have been presented comparing this group with single subjects. Also, no analyses have been conducted to compare subjects who have children with subjects who do not have children.

Subjects' socioeconomic status was evaluated through subjects' ratings of their parents' income level. Eight subjects did not fill in this section. Two of the eight subjects reported that they were independent from their parents. The rest of the eight subjects did not comment on why they did not respond to the question. Three subjects marked off two income categories rather than one, and they explained that they were not sure what their parents' income

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level was. Responses from the subjects who marked off two income categories were not included in analyses involving this demographic variable.

Among four possible income categories, the income range \$50,000-99,999 was most often given by subjects reporting their parents' income level (See Table 4). Other income categories were well represented. An exception was the income category \$0 - \$19,999 with only seven subjects reporting their parents' income within this range.

Table 4  
Parents' Combined Income Level

Income	Number	Percent
\$0 - \$19,999	7	4.8
\$20,000 - \$49,999	51	27.4
\$50,000 - \$99,999	82	44.1
\$100,000 or more	35	18.8
Incorrect Response	3	1.5
No Response	8	4.3
Total	186	100.0

This researcher had suggested that subjects were more likely to have previously considered and resolved their career issues and decisions if they had interrupted their schooling for a long period of time. If they had resolved their career issues, they would then be less actively involved in career decision-making and the use of vocational resource aids. Gilligan (1982) has argued that separate and



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connected responses are more likely to be elicited when people are dealing with real life issues. This researcher, therefore, chose to exclude subjects from primary analyses if they had interrupted their education for more than one year. To determine which students were to be excluded, subjects were asked if they had taken time off from school, and if so how much time they had taken off.

Among the sample who fit the inclusion criterion for the study, a fair proportion of subjects (14.5%) had taken at least a month off from school. Most of these subjects, 21 out of 27, had taken off 6 months or less from their schooling. For the variable, Time Off From School, it is useful to observe data describing the length of time taken off by subjects excluded from the study analyses as well as those included in the study. Thus, Table 5 presents data on the sample of "all respondents". "All respondents" included any subjects who had adequately filled out the survey regardless of whether they fit the criterion for the study.

Frequency distributions showed that a fairly large proportion of subjects (20.9%) had taken one month or more off from their schooling. Fifteen subjects (7.5%) had stayed out of school for more than one year, and as mentioned previously, their responses are not included in the main analyses.

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Table 5

## Time Taken Off From School

Time Taken Off From School	Number	Percent
No Time Taken Off	159	79.1
Month up to 6 Months	21	10.4
More than 6 Months Up to 1 Year	6	3.0
More than 1 Year up to 5 Years*	10	5.0
More than 5 years*	5	2.5
No Response	0	0.0
Total	201	100.0

\* Subjects whose responses were excluded from primary analyses.

Normative Data

In the present study, new scales were formulated for two instruments, the Work Values Inventory (WVI) and the Vocational Resource Options Questionnaire (VROQ). Consequently no prior normative data on the scales are available. Using the current sample, however, normative information on the WVI and VROQ scales will be considered in light of how normative findings correspond with theoretical expectations.

The scales of the Relationship Self Inventory (RSI) (Strommen et al., 1987) were not revised in the present study. Therefore, prior normative data on the RSI will be compared to findings on the current sample.

In reviewing normative data, differences in males' and females' mean scores were judged significant at the  $p=.05$  level. A description of normative data for each instrument follows.

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Work Values Inventory (WVI). The Connected Work Values

(CWVI) Subscale, the Separate Work Values (SWVI) Subscale, and the Total Work Values (TWVI) Subscale of the WVI were created for the purposes of the present study. Eight subjects' responses to the WVI seemed very unusual. Items that typically would be rated highly by subjects, such as "work in which you...can be the kind of person you would like to be, or ...work in which you...lead the kind of life you most enjoy" were rated at the lowest end of the Likert Scale as "unimportant". The response pattern given by these individuals suggested that they had rated the work values in the opposite direction on a Likert scale than what had been asked of them. Thus, these subjects' responses to the WVI were excluded from calculations involving all data analyses.

On the CWVI Subscale, females obtained a significantly higher mean score ( $m=19.95$ ,  $st. dev.=2.89$ ) than males ( $m=18.61$ ,  $st. dev.=3.49$ ) (See Table 6). However, on the SWVI Subscale, males and females did not significantly differ. Female's higher score on the CWVI Subscale is not surprising. This finding is consistent with the theoretical proposition held that females, more commonly than males, prefer "connected" values. On the other hand, the lack of a clear differentiation between males' and females' mean score on the SWVI Subscale is odd, because it was expected that males, more commonly than females, would prefer "separate" values. Results also showed that males and females did not differ significantly in their mean scores on the TWVI

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Subscale. This finding is logical since the TWVI Subscale is merely a combination of the SWVI and CWVI Subscales.

Table 6

Means and Standard Deviations on the WVI

WVI	Mean	Range of Scores	St. Dev.
<u>CWVI Subscale</u>			
Males (n=79)	18.60	10.0-25.0	3.49
Females (n=99)	19.96	10.0-25.0	2.90
Total	19.36	10.0-25.0	3.23
<u>SWVI Subscale</u>			
Males (n=79)	18.96	9.0-24.0	2.92
Females (n=99)	18.55	10.0-24.0	2.84
Total	18.73	9.0-24.0	2.87
<u>TWVI Subscale</u>			
Males (n=79)	37.57	20.0-47.2	5.33
Females (n=99)	38.51	26.0-48.0	4.29
Total	38.09	20.0-48.0	4.79

The Relationship Self Inventory (RSI). In the present study, females' mean score did not significantly differ from males' mean score on the Connected Self Scale (CRSI) of the RSI (See Table 7). However, males' and females' mean scores significantly differed on the Separate Self Scale (SRSI) of the RSI. Males tended to score slightly higher than females on the SRSI ( $m=2.73$ ,  $st. dev.=.52$  and  $m=2.52$ ,  $st. dev.=.51$  respectively). This was consistent with theoretical expectations as the Separate Identity is expected to be more typical of males (Gilligan, 1982).



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Table 7

Means and Standard Deviations on the RSI

RSI	Mean	Range of scores*	St. dev.
<u>CRSI Scale</u>			
Males	3.92	2.5-4.8	.47
Females	4.01	2.9-5.0	.46
Total	3.97	2.5-5.0	.47
<u>SRSI Scale</u>			
Males	2.73	1.3-4.2	.52
Females	2.52	2.5-4.0	.51
Total	2.61	1.3-4.2	.52

\* Scale Range that was possible for this instrument was a range from 1.0 - 5.0.

Results in the present study contrasted with Pearson et al.'s (1991) findings, even though both studies used the RSI to measure people's Separate and Connected Identities. Pearson et al. (1991) found that male and female mean scores did not differ significantly on either the SRSI Scale or the CRSI Scale. Findings in the present study also contrasted with Stiller and Forrest's (1990) findings although both studies were conducted on college students. Whereas this researcher found significant differences in males' and females' mean scores on a scale measuring Separate Identity, Stiller and Forrest (1990) did not find significant differences in males' and females' mean scores in measuring people's separate self-descriptions. However, they found significant differences in males' and females' mean scores in measuring people's connected self-descriptions. Females

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gave significantly more connected self-descriptions than males did. This finding was consistent with theoretical expectations. Additionally, they found significant variations in males' and females' moral reasoning. Males significantly more often than females used a justice/rights mode of reasoning. Females significantly more often than males used a care/response in their reasoning. Again, these findings were consistent with theoretical expectations.

The variations in findings across the two studies is interesting. The RSI used in the present study measures people's moral values and their self-descriptions. Likewise, Stiller and Forrest (1990) measured people's self-descriptions and people's moral values. Possibly, differences in findings are related the different methods used to measure people's moral values and self-perceptions. Stiller and Forrest (1990) asked subjects to write about their perceptions of themselves and write about a real-life moral dilemma that they had experienced to elicit connected or separate forms of responses. In the RSI (Strommen et al., 1987), subjects were asked to rate on a scale of 1 to 5 the extent that moral value statements and self-descriptive statements were representative of them.

The VROO Inventory. Again, consistent with theoretical expectations, males and females significantly differed in their endorsements of connected forms of vocational resource aids. The Connected Options (CVRO) Scale was endorsed at a significantly higher level by females ( $m=48.07$ ,

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st. dev.=6.95) than by males ( $m=44.57$ , st. dev.=8.18) (See Table 8). However, contrary to expectations, significant differences in males' and females' mean scores were not found on the Separate Options (SVRO) Scale. This finding was not consistent with the theoretical presumption that males more than females would prefer conditions that allow them to act in a separate manner. On the Total Options (TVRO) Scale, females obtained a significantly higher mean score ( $m=81.07$ , st. dev.=9.52) than males ( $m=84.71$ , st. dev.=8.22). Again, because the TVRO Scale is a combination of the SVRO and CVRO Scale, it is not surprising that females obtained a higher score.

Table 8

Means and Standard Deviations on the VROQ

VROQ	Mean	Range of Scores	St. dev.
<u>CVRO Scale</u>			
Males	44.57	17.0-60.0	8.18
Females	48.07	27.0-60.0	7.00
Total	46.52	17.0-60.0	7.72
<u>SVRO Scale</u>			
Males	36.51	17.0-55.0	7.49
Females	36.63	16.0-53.0	7.73
Total	36.58	16.0-55.0	7.61
<u>TVRO Scale</u>			
Males	81.07	62.0-107.0	9.52
Females	84.71	64.0-103.0	8.22
Total	83.09	62.0-107.0	8.98

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Reliability of the Primary Scales

Reliability of the WVI, the RSI and the VROQ scales were tested by two measures of internal consistency, Cronbach's alpha, and item to scale correlations. Reliability results for the WVI, the RSI and the VROQ are found in Appendix M. Among the total sample, Cronbach Alpha coefficients ranged from .65 to .85 on separate, connected and total scales of instruments used in the study. Thus, the scales showed fairly good internal consistency.

Item to scale correlations provide information about how each item within a specific scale correlates to that scale. Results are valuable to review, particularly since the scales from the WVI and VROQ have been newly created. Item to scale correlations are presented for separate and connected scales of all instruments. However, item to scale correlations are not given for the total scales because there is no expectation about how individual items will correlate with the total scale for each instrument.

On the CWVI Scale of the WVI, item to scale correlations ranged from .31 to .71. On the SWVI Scale, item to scale correlations were all in the .40s. Thus, items judged to be connected in nature showed a relationship to the connected scale and items designed to be separate in nature showed a relationship to the separate scale. On the RSI, item to scale correlations on the CRSI Scale again tended to be adequate, ranging from .34 to .65 generally. Two item to scale correlations, however, had weaker correlations at .25



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and .22. On the SRSI Scale, correlations were again adequate with item to scale correlations generally ranging from .28 to .61. One item to scale correlation was slightly lower at .26. On the CVRO Scale of the VROQ, correlations of item to scale were fairly high with all correlations between .40 and .63. On the SVRO Scale of the VROQ, correlations were also relatively good with correlations ranging from .34 to .50. The moderate strength of the item to scale correlations is logical since the items in the connected scale consisted of a range of connected traits within people's identities and the items in the separate scale consisted of a range of separate traits.

#### **Preliminary Assessment of the Relationship Between Demographic Variables and Primary Variables in the Study**

The relationship between demographic variables and primary variables of the study was explored. Analysis of variance was the primary method applied to determine if a relationship existed between demographic traits and people's scores on the scales of the primary variables. Demographic variables were to be tested with each primary variable in the study using analysis of variance. If significant differences in means were identified for a specific demographic variable, that variable would later be entered along with independent primary variables in a regression equation to predict the dependent variable. One demographic variable, Age of the Subject, consisted of continuous data. Its relationship to the primary variables was explored through correlation

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analyses. Correlations were computed between age and each primary variable in the study.

Rather than explore relationships that might lead to spurious findings, this researcher opted to use analysis of variance only with demographic variables that could be divided into categories which contained an adequate number of responses per cell. Borg and Gall (1983) recommend having at least 15 subjects per cell in experimental research analyses. Consequently, Income Level and Time Off From School were the demographic variables explored in relation to the primary variables through analysis of variance. Income Level showed no relationship to scores on the dependent variables. The two variables, Time Off From School and Age of the Subject, however, are discussed further in terms of their relationship to primary variables in the study.

#### Time Off From School

The demographic variable, Time Off from School, was split into two categories: individuals who had never taken time off from school ( $n=159$ ), and those who had taken time off ( $n=27$ ). Analysis of variance revealed that the two groups were not significantly different on their mean scores on the CWVI Subscale. However, the statistic approached significance ( $F=3.51$ ,  $p=.06$ ) (See Table 9).

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Table 9

ANOVA Effect on the CWVI Subscale with Time Off From School

		df	ms	F	p
Respondents	Time Off	1	36.13	3.51	.06
Who Fit	Residual	176	10.30		
Criterion					
Requirements	Total	177	10.45		

Age of the Subject

In data collection procedures, Age of the Subject was measured as a continuous variable. With continuous data, correlation analysis is a more precise measure of relationships than analysis of variance. Therefore, rather than using analysis of variance, the researcher opted to examine the correlation coefficient to explore the relationship between the variable, Age of the Subject and primary variables of the study. Results showed that correlation coefficients between Age of the Subject and most of the primary variables were low and were not significant. Again, although the Age of the Subject and the SWVI Subscale were not significantly correlated, this correlation coefficient did reach a level that was close to significance. However, because the relationship between the two variables was not significant, no further analyses were conducted using Age of the Subject.

Based on the nonsignificant findings, the demographic variables, Time Off From School and Age of the Subject, are

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not included in stepwise regression analyses to predict the dependent variable. Hypothesis testing will follow in the Statistical Analysis section. First, however, it is necessary to review the acceptability of regression techniques used in hypothesis testing.

#### **Evaluation of the Appropriateness of Regression Analysis Through Correlation Analyses and Plot Analyses of Data**

A correlation matrix, found in Table 10, presents correlation coefficients between primary variables and demographic variables. Correlations for the connected and separate scales of the three instruments were consistent with the researcher's expectations. Connected scales from the three instruments were significantly correlated with each other ( $p < .01$  or  $p = .01$ ). Also, Separate scales from the three instruments correlated with each other significantly ( $p < .01$  or  $p = .01$ ). Also, on the RSI, the correlation between the SRSI Scale and the CRSI Scale was significant and negative ( $r = -.21$ ). This correlation is similar to Pearson et al.'s (1991) findings using the RSI. They reported negative and low correlations for men and for women ( $r = -.33$  and  $r = -.23$  respectively). The low, negative correlations indicate that Separate and Connected Identities are not merely polar opposites along a continuum. The correlations found support researchers' use of two scales in measuring Connected and Separate Identity rather than one scale.

Multicollinearity among the primary independent variables used in testing hypotheses was particularly important





Table 10  
Correlation Coefficients; Zero Order Correlations  
Among Dependent and Independent Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	1.00	-.05	-.15	.09	.09	-.20**	.21**	.17	.10	.23**	.01	.20**
2. Age		1.00	.23**	-.13	.07	.03	.04	-.16	-.06	.05	-.04	.01
3. Length			1.00	-.03	-.04	-.04	-.14	-.00	-.03	-.07	.05	-.02
4. Income				1.00	.03	-.10	-.07	.20	.00	.08	-.04	.04
5. CRSI Scale					1.00	-.21**	.57**	.05	.42**	.27**	.11	.13
6. SRSI Scale						1.00	-.17	.28**	.05	-.35**	.26**	-.08
7. CWVI Scale							1.00	.23**	.81**	.38**	-.18*	.18*
8. SWVI Scale								1.00	.75**	.01	.20**	.18*
9. TWVI Scale									1.00	.26**	.00	.23
10. CVRO Scale										1.00	-.31**	.59
11. SVRO Scale											1.00	.56**
12. TVRO Scale												1.00

\* $p < .05$

\*\* $p < .01$

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to evaluate within the correlation matrix. Correlation coefficients were measured for the following primary independent variables: the CRSI Scale, the SRSI Scale and Sex of the Subject. Correlations only reached a moderate level ( $r < .22$  or  $r < -.22$ ) indicating that multicollinearity was absent.

For each regression equation in the study, predicted values for the dependent variable were plotted against actual values for the dependent variable to assess whether linear regression was the appropriate method to use in predicting scores on the dependent variables. Because a clearly patterned deviation was not observed in the plotted data sets for each predicted dependent variable, a linear regression model was deemed acceptable. Based on analyses previously discussed, the results of six research hypotheses are presented in the section that follows.

### **Statistical Analyses**

#### Analyses of Hypotheses

The six formal hypotheses, described in Chapter 4, are divided into two sets. The first three hypotheses predict the importance that students assign to work values. The second three hypotheses predict the extent to which students endorse different forms of vocational resource aids. Students' scores on the SRSI Scale of the RSI, the CRSI Scale of the RSI, and Sex of the Subject are entered into regression equations to predict subjects' scores on the vocational

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scales used to measure these areas. Additionally, each hypothesis is divided into two or three parts. Each part specifies how variables are entered into the regression equations. In testing each hypothesis below and its parts, findings that support or fail to support the hypothesis at the .05 significance level, are discussed.

Hypothesis 1: The degree of importance people assign to "connected" work values as measured by the Connected Work Values (CWVI) Subscale of the Work Values Inventory (WVI), will be predicted by people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and Sex of the Subject.

A hierarchical regression equation that included the three independent variables above was used as the primary method to explain subjects' scores on the CWVI Subscale of the WVI. CRSI scores were entered into the regression equation first, SRSI scores were entered second, and Sex of the Subject was entered third. Analyses indicated that the three variables together significantly predicted subjects' scores on the CWVI Subscale ( $F=31.20$ ,  $p=.00$ ) (See Table 11A). This finding supported Hypothesis 1. In Step 3 of Table 11A, the  $R^2$  shows that the three variables explained a fairly large proportion of variance in students' scores on the CWVI Subscale ( $R^2=.35$ ).

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Order of Entry

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Step 2...SRSI  
Step 3...SEX

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SRSI	-
SEX	-
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Hypothesis 1  
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Table 11A

Hierarchical Regression Effect on the CWVI Scale by the CRSI Scale, the SRSI Scale, and Sex of the Subject

Order of Entry	R <sup>2</sup>	df	ms	F	p
Step 1...CRSI	.33	1	607.39	86.05	.00
Step 2...SRSI	.33	2	306.56	43.38	.00
Step 3...SEX	.35	3	215.66	31.20	.00

To investigate the practical contribution of each of the three independent variables in predicting CWVI scores, the researcher calculated the regression coefficient for each independent variable. Table 11B shows the regression coefficient for each independent variable, and its significance level.

Table 11B

Regression Coefficients of Independent Variables and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
CRSI	3.80	.43	.55	8.80	.00
SRSI	-.18	.39	-.03	-.46	.64
SEX	.90	.41	.14	2.21	.03
constant	4.28	2.18			

Hypothesis 1 is divided into three sections. Each section further describes the contribution of each independent variable in predicting CWVI scores.



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Table 11A).

Hypothesis 1A: People's scores on the CRSI Scale of the RSI will positively predict people's scores on the CWVI Subscale of the WVI.

CRSI scores were entered as Step 1 in a hierarchical regression in predicting CWVI scores. On its own, the CRSI Scale predicted the dependent variable at a significant level ( $F=36.05$ ,  $p=.00$ ), and accounted for a large proportion ( $R^2=.33$ ) of the variance in the dependent variable (See Table 11A). In Table 11B, the  $t$  statistic for the CRSI Scale also shows that this variable made a significant contribution in predicting CWVI scores ( $t=8.80$ ,  $p=.00$ ). The regression coefficient for the CRSI Scale reveals that the CRSI Scale predicted scores on the CWVI Subscale in a positive direction (See Table 11B). Holding SRSI scores and Sex of the Subject constant, for each unit increase in the CRSI scores, CWVI scores were predicted to increase by 3.80 points. Because a positive relationship was identified between the two scales, and the CRSI Scale predicted the dependent variable at a significant level, Hypothesis 1A was supported.

Hypothesis 1B: Beyond scores on the CRSI Scale, people's scores on the SRSI Scale of the RSI will not significantly predict people's scores on the CWVI Subscale of the WVI.

SRSI scores were entered after CRSI scores as the second step in a hierarchical regression predicting the dependent variable. CRSI scores and SRSI scores together predicted CWVI Subscale scores significantly ( $F=43.38$ ,  $p=.00$ ) (See Table 11A). However, in testing the hypothesis above, it is

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necessary to analyze the unique contribution of the SRSI Scale beyond the CRSI Scale. Change in  $R^2$  from Step 1 to Step 2 revealed that, beyond CRSI scores, SRSI scores accounted for a negligible proportion of variance ( $R^2=.00$ ) in scores on the CWVI Subscale (See Table 11A). In Table 11B, the  $t$  statistic shows the degree that the SRSI Scale contributed to the prediction of the CWVI Subscale scores. Results indicated that the SRSI Scale's contribution was not significant ( $t=-.46$ ,  $p=.64$ ) beyond the variable entered before it in the equation. Therefore, Hypothesis 1B was supported.

Hypothesis 1C: Beyond people's scores on the CRSI Scale and the SRSI Scale of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the CWVI Subscale of the WVI.

After the CRSI and SRSI Scales, Sex of the Subject was added as the third step in the hierarchical regression equation. Together, the three independent variables significantly predicted CWVI scores ( $F=31.20$ ,  $p=.00$ ) (See Table 11A). In Table 11A, change in  $R^2$  from Step 2 to Step 3 shows that Sex of the Subject explained a moderate proportion of unique variance ( $R^2=.02$ ) in the dependent variable. Beyond people's scores on the CRSI and SRSI Scales, Sex of the Subject made a significant contribution in predicting scores on the CWVI Subscale ( $t=2.21$ ,  $p=.03$ ) (See Table 11B). Thus Hypothesis 1C was not supported. The regression coefficient for Sex of the Subject indicated that there was a positive relationship between Sex of the Subject and the CWVI Subscale. Holding other independent variables constant, when

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Sex of the Subject was female as opposed to male, scores on the CWVI Subscale were predicted to be .90 points higher (See Table 11B).

In summarizing the hierarchical regression findings above, the CRSI Scale and Sex of the Subject were found to be significant contributors in predicting CWVI scores, whereas the SRSI Scale was not a significant contributor. Using a hierarchical method of analysis, the CRSI Scale explained most of the variance in the dependent variable.

Stepwise regression was also conducted to evaluate the three variables' contribution to predicting CWVI scores. In a stepwise regression equation, the variable that accounts for the most variance in the dependent variable is entered into the equation first. The variable that accounts for the largest proportion of unique variance beyond the first variable is entered into the equation second. This process continues until the variables remaining do not significantly predict the dependent variable beyond those variables already entered into the stepwise regression.

The CRSI Scale, the SRSI Scale, and Sex of the Subject were entered into a stepwise regression equation to predict CWVI scores. The computer entered the CRSI Scale into the equation first and Sex of the Subject was entered second. These results indicate that the CRSI Scale accounted for the most variance in the CWVI scores and Sex of the Subject accounted for the largest proportion of variance after the CRSI Scale. Both variables significantly predicted scores on

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the CWVI Subscale. The SRSI Scale was the third variable entered into the equation by the stepwise method. The computer reported that the SRSI Scale did not reach the  $p=.05$  level of significance. This finding indicated that the SRSI Scale did not significantly contribute to predicting CWVI scores beyond the other variables. Results from the stepwise method reinforced hierarchical regression findings for Hypothesis 1.

Hypothesis 2: The degree of importance that people assign to "separate" work values, as measured by the Separate Work Values (SWVI) Subscale of the WVI, will be predicted by people's scores on the SRSI Scale of the RSI, people's scores on the CRSI Scale of the RSI, and Sex of the Subject.

A hierarchical regression, using the three independent variables above, was the primary method applied in predicting SWVI scores. SRSI scores were entered into the equation first, CRSI scores were entered second, and Sex of the Subject was entered third. Together, these variables significantly predicted subjects' scores on the dependent variable ( $F=5.97$ ,  $p=.00$ ) (See Table 12A). Hypothesis 2 was supported. In Step 3 of Table 12A,  $R^2$  indicated that the independent variables accounted for a moderate proportion of variance ( $R^2=.09$ ) in scores on the SWVI Subscale.



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Order of Entry

Step 1...SRSI  
Step 2...CRSI  
Step 3...SEX

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Table 12A

Hierarchical Regression Effect on the SWVI Scale by the SRSI Scale, the CRSI Scale, and Sex of the Subject

Order of Entry	R <sup>2</sup>	df	ms	F	p
Step 1...SRSI	.08	1	117.31	15.37	.00
Step 2...CRSI	.09	2	57.83	8.96	.00
Step 3...SEX	.09	3	45.41	5.97	.00

To evaluate the contribution of the three independent variables in predicting the dependent variable, regression coefficients were calculated for each variable and are presented in Table 12B.

Table 12B

Regression Coefficients of Independent Variables and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
SRSI	1.65	.41	.30	4.03	.00
CRSI	.71	.45	.12	1.57	.12
SEX	-.12	.43	-.02	-.27	.79
constant	11.66	2.29			

Below, Hypothesis 2 has been divided into three parts. Each of the three sections describes in detail the contribution each independent variable made in predicting scores on the SWVI Subscale.

Hypothesis 2A: People's scores on the SRSI Scale of the RSI will positively predict people's scores on the SWVI Subscale of the WVI.

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SRSI Scale scores were entered as the first step in a hierarchical regression to predict scores on the SWVI Subscale. As shown in Step 1 of Table 12A, the SRSI Scale significantly predicted SWVI scores ( $F=15.37$ ,  $p=.00$ ).  $R^2$  in Step 1 of Table 12A shows that the SRSI Scale explained a moderate proportion ( $R^2=.08$ ) of variance in SWVI scores. In Table 12B, the  $t$  statistic for the SRSI Scale also reveals that this variable made a significant contribution in predicting SWVI scores. The regression coefficient for the SRSI Scale shows that this scale had a positive relationship to the SWVI Subscale (See Table 12B). Holding the CRSI Scale and Sex of the Subject constant, for every unit increase in the SRSI Scale, scores on the SWVI Subscale were predicted to increase 1.65 points. Because the SRSI Scale predicted the SWVI Subscale significantly, and the relationship between the two scales was in a positive direction, Hypothesis 2A was supported.

Hypothesis 2B: Beyond scores on the SRSI Scale, people's scores on the CRSI Scale of the RSI will not contribute significantly to the prediction of people's scores on the SWVI Subscale of the WVI.

CRSI scores were entered after SRSI scores as a second step in a hierarchical regression predicting the dependent variable. Step 2 of the regression, shown in Table 12A, indicated that the CRSI and SRSI Scales together significantly predicted scores on the SWVI Subscale ( $F=8.96$ ,  $p=.00$ ). To test Hypothesis 2B, it is necessary to assess the unique contribution of the CRSI Scale beyond the SRSI Scale.

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Change in  $R^2$  from Step 1 to Step 2 of the regression showed that the CRSI Scale scores accounted for only a small portion ( $R^2=.01$ ) of unique variance in the dependent variable (See Table 12A). The  $t$  statistic for the CRSI Scale, found in Table 12B, shows the significance of the CRSI Scale's contribution to predicting SWVI scores. Results indicated that the CRSI Scale did not contribute significantly ( $t=1.57$ ,  $p=.12$ ) beyond the SRSI Scale in predicting scores on the SWVI Subscale. Therefore, Hypothesis 2B was supported.

Hypothesis 2C: Beyond people's scores on the CRSI Scale and the SRSI Scale of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the SWVI Subscale of the WVI.

Sex of the Subject was added after the SRSI and CRSI Scales as the third step in a hierarchical regression to predict SWVI scores. Although together the three variables significantly predicted scores on the SWVI Subscale ( $F=5.97$ ,  $p=.00$ ), change in  $R^2$  from Step 2 to Step 3 reveals that Sex of the Subject explained a negligible proportion of unique variance ( $R^2=.00$ ) in the dependent variable (See Table 12A). In Table 12B, the  $t$  statistic for Sex of the Subject shows that Sex of the Subject did not significantly predict SWVI scores beyond the variables entered into the regression before it ( $t=-.27$ ,  $p=.79$ ). Therefore, results supported Hypothesis 2C.

In summarizing findings for Hypothesis 2 based on hierarchical regression techniques, the SRSI Scale contributed significantly to predicting SWVI scores. The CRSI Scale and

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Sex of the Subject, however, did not contribute at a significant level.

Stepwise regression was a second method used to evaluate the contribution of the three independent variables in predicting SWVI scores. The computer entered the SRSI Scale into the stepwise equation first which indicated that the SRSI Scale significantly contributed to predicting SWVI scores. On the other hand, the computer reported that the CRSI Scale and Sex of the Subject did not reach the  $p=.05$  level of significance. This finding shows that the two variables did not contribute significantly to predicting scores on the dependent variable beyond the SRSI Scale already entered into the equation.

Again, results based on the stepwise technique were consistent with those found using the hierarchical regression method. Therefore, stepwise results confirmed hierarchical regression findings.

Hypothesis 3: The degree of importance that people assign to a composite of "separate" and "connected" work values as measured by the Total Work Values (TWVI) Subscale of the WVI, will be predicted by people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and by Sex of the Subject.

There was no theoretical basis for the assumption that either the CRSI Scale or the SRSI Scale would predominate over the other in predicting scores for an equally weighted composite of "separate" and "connected" work values measured by the TWVI Subscale. Therefore, rather than using a hierarchical regression which is based on theoretical



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expectations, a stepwise regression was the primary method used to predict the scores on the TWVI Scale. Stepwise regression uses an empirical method to determine independent variables' contributions in predicting scores on the dependent variable. The variable accounting for the most variance is entered into the regression equation first, and the variable that accounts for the next largest proportion of variance is entered second, and so on.

Using the stepwise method, results showed that the CRSI Scale, the SRSI Scale, and Sex of the Subject together significantly predicted subjects' scores on the TWVI Subscale ( $F=14.57$ ,  $p=.00$ ) (See Table 13A). Additionally, the  $R^2$  in Step 3 revealed that the three independent variables explained a moderate proportion of variance ( $R^2=.20$ ) in the dependent variable (See Table 13A). Thus results supported Hypothesis 3. To evaluate the independent contribution of each of the independent variables in predicting TWVI scores, the researcher calculated regression coefficients for each variable.

Table 13A

Stepwise Regression Effect on the TWVI Scale by  
the CRSI Scale, the SRSI Scale, and Sex of the Subject

Order of Entry	$R^2$	df	ms	F	p
Step 1...CRSI	.17	1	702.53	37.12	.00
Step 2...SRSI	.19	2	395.06	21.13	.00
Step 3...SEX*	.20	3	271.93	14.57	.00

\* This variable did not reach stepwise criteria of  $\alpha=.05$  recommended for inclusion into the equation.

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Table 13B shows the regression coefficient for each independent variable, and its significance level.

Table 13B

Regression Coefficients of Independent Variables  
and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
CRSI	4.51	.71	.44	6.36	.00
SRSI	1.47	.64	.16	2.29	.02
SEX	.78	.67	.08	1.17	.24
constant	15.94	3.58			

Below, Hypothesis 3 is divided into two sections. Each section describes in detail the contribution of each independent variable in predicting scores on the TWVI Subscale.

Hypothesis 3A: People's scores on the CRSI Scale and people's scores on the SRSI Scale of the RSI will each positively predict people's scores on TWVI Subscale of the WVI.

CRSI scores, SRSI scores, and Sex of the Subject were entered by a stepwise regression technique to predict scores on the TWVI Subscale. The computer entered the CRSI Scale first into the equation indicating that this variable accounted for the most variance in the dependent variable. On its own, the CRSI Scale significantly predicted the dependent variable ( $F=37.12$ ,  $p=.00$ ) (See Table 13A).  $R^2$  in Step 1 of Table 13A revealed that the CRSI Scale explained a fairly large proportion of variance ( $R^2=.17$ ) in the dependent

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variable. In Table 13B, the  $t$  statistic for the CRSI Scale showed that this variable contributed significantly to the prediction of TWVI scores ( $t=6.36$ ,  $p=.00$ ). The SRSI Scale was the second variable entered into the equation. Shown in Step 2 of Table 13A, the CRSI Scale and the SRSI Scale together significantly predicted the dependent variable ( $F=21.13$ ,  $p=.00$ ). Change in  $R^2$  from Step 1 to Step 2 reveals that the SRSI Scale accounted for a moderate proportion ( $R^2=.02$ ) of unique variance beyond that accounted for by the CRSI Scale (See Table 13A). In Table 13B, the  $t$  statistic for the SRSI Scale revealed that this variable also contributed significantly in predicting TWVI scores ( $t=2.29$ ,  $p=.02$ ).

The regression coefficient for CRSI Scale and the regression coefficient for the SRSI Scale, found in Table 13B, showed that both RSI scales had a positive relationship to the dependent variable. Holding the SRSI Scale and Sex of the Subject constant, and increasing the CRSI score by one unit, TWVI scores were predicted to increase 4.51 points. Holding the CRSI Scale and Sex of the Subject constant, and increasing the SRSI score by one unit, TWVI scores were predicted to increase 1.47 points. Because the two variables significantly predicted the TWVI scores, and they had a positive relationship to the TWVI Subscale, Hypothesis 3A was supported.

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Hypothesis 3B: Beyond people's scores on the CRSI Scale and the SRSI Scale of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the TWVI Subscale of the WVI.

After the CRSI Scale and the SRSI Scale, Sex of the Subject was entered as Step 3 in the equation by the stepwise regression method. Together the three scales significantly predicted TWVI scores ( $F=14.57$ ,  $p=.00$ ) (See Table 13A). However, change in  $R^2$  from Step 2 to Step 3, showed that Sex of the Subject accounted for only a small portion of unique variance ( $R^2=.01$ ) in the dependent variable. Also, the computer reported that Sex of the Subject did not reach the .05 significance criteria. This finding indicates that Sex of the Subject did not significantly contribute in predicting the dependent variable. In Table 13B, the  $t$  statistic for Sex of the Subject also indicates this variable's lack of contribution in predicting TWVI scores ( $t=1.17$ ,  $p=.24$ ). This result supported Hypothesis 3B.

In summarizing findings using stepwise regression, two variables, the CRSI Scale and the SRSI Scale significantly contributed in predicting scores on the TWVI Subscale. Sex of Subject, however, was not found to be a significant contributor.

After the first independent variable is entered into a stepwise regression, for variables that follow in later steps, only the unique variance is measured. Therefore, to further explore Sex of the Subject's and the SRSI Scale's ability to predict TWVI scores, additional regression equations were conducted.



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To evaluate whether Sex of the Subject might explain a significant level of variance if it was not entered in regression equation after the two RSI scales, the researcher opted to test the significance of Sex of the Subject alone in predicting TWVI scores. Sex of the Subject was entered into a simple regression equation to predict TWVI scores. Shown in Table 14A, Sex of the Subject did not significantly predict TWVI scores ( $F=1.69$ ,  $p=.19$ ), and accounted for a small proportion of variance ( $R^2=.01$ ) in the dependent variable. This finding further confirms results on the stepwise regression pertaining to Sex of the Subject.

Table 14A

Simple Regression Effect on the TWVI Subscale by  
Sex of the Subject

ANOVA						
			df	ms	F	p
Multiple R	.10	Reg	1	38.72	1.69	.19
R <sup>2</sup>	.01	Res	176	22.86		
Adjusted R <sup>2</sup>	.00					
St. error	4.78					

The individual contribution of Sex of the Subject in predicting TWVI scores is measured by the regression coefficient for this independent variable. Table 14B shows the regression coefficient, Sex of the Subject, and its significance level. The  $t$  statistic, shown in Table 14B, also reveals that this variable did not contribute significantly to predicting TWVI scores ( $t=1.30$ ,  $p=.19$ ).

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Table 14B

Regression Coefficients of Independent Variables  
and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
SEX	.94	.72	.10	1.30	.19
constant	37.57	.54			

Additionally, to determine the significance of the SRSI Scale when it is not entered after the CRSI Scale to predict TWVI scores, the SRSI was entered in a simple regression to predict TWVI scores. Interestingly, the SRSI Scale, on its own, did not significantly predict TWVI Scores ( $F=.50$ ,  $p=.48$ ) (See Table 15A). The SRSI Scale explained a negligible amount of variance ( $R^2=.00$ ) in the dependent variable (See Table 15A).

Table 15A

Simple Regression Effect on the TWVI Subscale by  
the SRSI Scale

ANOVA					
		df	ms	F	p
Multiple R	.05	Reg 1	11.56	.50	.48
$R^2$	.00	Res 176	23.02		
Adjusted $R^2$	-.00				
St. error	4.80				

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Table 15B

Regression Coefficients of Independent Variables  
and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
SRSI	.48	.68	.05	.71	.48
constant	36.82	1.83			

In Table 15B, the t statistic showed that the SRSI Scale did not contribute significantly to predicting TWVI scores. This finding contrast with the stepwise results in which the SRSI Scale was found to be a significant contributor in predicting TWVI scores.

Hypothesis 4: The degree that people endorse "connected" vocational resources as measured by the Connected Options (CVRO) Scale of the Vocational Resource Options Questionnaire (VROQ), will be predicted by people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and Sex of the Subject.

A hierarchical regression equation, using the three independent variables above, was applied as the primary method to predict subjects' scores on the CVRO scale. CRSI scores were entered into the equation first, SRSI scores were entered second, and Sex of the Subject was entered third. In combination, the three variables predicted subjects' scores on the dependent variable at a significant level ( $F=13.79$ ,

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Table 16A

Hierarchical Regression Effect on the CVRO Scale by the CRSI Scale, the SRSI Scale, and Sex of the Subject

Order of Entry	$R^2$	df	ms	F	p
Step 1...CRSI	.07	1	774.89	13.92	.00
Step 2...SRSI	.16	2	893.63	17.74	.00
Step 3...SEX	.19	3	679.16	13.79	.00

The individual contribution of each variable in predicting CVRO scores is measured by the regression coefficient for each independent variable. Table 16B shows the regression coefficient for each independent variable and its significance level.

Table 16B

Regression Coefficients of Independent Variables and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
CRSI	3.22	1.14	.19	2.82	.01
SRSI	-4.22	1.04	-.28	-4.07	.00
SEX	2.40	1.07	.15	2.25	.03
constant	43.39	5.78			

On the following page, Hypothesis 4 is divided into three



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Hypothesis 4A: People's scores on the CRSI Scale of the RSI will positively predict people's scores on the CVRO Scale of the VROQ.

CRSI scores were entered as Step 1 in the hierarchical regression equation in predicting CVRO scores. On its own, the CRSI Scale predicted scores on the CVRO Scale significantly ( $F=13.92$ ,  $p=.00$ ), and  $R^2$  in Step 1 of Table 16A shows that the CRSI Scale explained a modest proportion of variance ( $R^2=.07$ ) in dependent variable. In Table 16B, the  $t$  statistic for the CRSI Scale revealed that the CRSI Scale made a significant contribution in predicting CVRO scores. (See Table 16A). The regression coefficient for the CRSI Scale, shown in Table 16B, reveals that this scale predicted scores on the dependent variable in a positive direction. Holding the SRSI Scale and Sex of the Subject constant, for each unit increase in CRSI scores, CVRO scores were predicted to increase by 3.22 points. Because a positive relationship was identified between the two variables, and the CRSI Scale significantly predicted CVRO scores, Hypothesis 4A was supported.

Hypothesis 4B: Beyond scores on the CRSI Scale, people's scores on the SRSI Scale of the RSI will not contribute significantly to predicting people's scores on the CVRO Scale of the VROQ.

The SRSI Scale was entered after the CRSI Scale as the second step in the hierarchical regression predicting the dependent variable. In combination the CRSI and SRSI Scales

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significantly predicted CVRO scores ( $F=17.74$ ,  $p=.00$ ) (See Table 16A). More importantly, change in  $R^2$  from Step 1 to Step 2 indicated that the SRSI Scale explained a moderate proportion of unique variance ( $R^2=.09$ ) in scores on the CVRO Scale (See Table 16A). In Table 16B, the  $t$  statistic for the SRSI Scale revealed that the SRSI Scale's contribution to predicting the dependent variable was significant ( $t=-.41$ ,  $p=.00$ ). Thus, Hypothesis 4B was not supported. In Table 16B, the regression coefficient for the SRSI Scale shows this variable had a negative relationship to the CVRO Scale. Specifically, holding the CRSI Scale and Sex of the Subject constant, and increasing scores on the SRSI Scale by one unit, CVRO scores were predicted to decrease by 4.22 points.

Hypothesis 4C: Beyond people's scores on the CRSI Scale and the SRSI Scale of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the CVRO Scale of the VROQ.

After CRSI and SRSI Scales, Sex of the Subject was added as Step 3 in a hierarchical regression equation predicting scores on the CVRO Scale. Together, the three independent variables significantly predicted CVRO scores ( $F=13.79$ ,  $p=.00$ ) (See Table 16A). In Table 16A, change in  $R^2$  from Step 2 to Step 3 shows that beyond the RSI scales, Sex of Subject explained a moderate proportion ( $R^2=.03$ ) of variance in the dependent variable. In Table 16B, the  $t$  statistic for Sex of Subject indicates that it made a significant contribution in predicting the dependent variable ( $t=2.25$ ,  $p=.03$ ) (See Table 16B). Because Sex of the Subject added a unique,

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significant contribution to predicting scores on the CVRO Scale, Hypothesis 4C was not supported.

In Table 16B, the regression coefficient for Sex of the Subject shows this variable's relationship to scores on the CVRO Scale. Holding scores on the CRSI and SRSI Scales constant, female subjects were predicted to have scores on the CVRO Scale 2.40 points higher than male subjects.

A brief summary of the hierarchical method applied and results are presented here. In applying a hierarchical method of analysis, the researcher chose to enter the CRSI Scale into the equation first, and SRSI Scale second, and Sex of the Subject third. The CRSI Scale, the SRSI Scale and Sex of the Subject each were significant contributors in predicting CVRO scores.

Stepwise regression was also conducted to evaluate the three variables' contribution to predicting CVRO scores. Similar to hierarchical regression findings all three variables significantly contributed to predicting the dependent variable. However, the variables were entered by the computer in a different order than the researcher had chosen to enter variables using the hierarchical technique. Using the stepwise method, the SRSI Scale was entered into the equation first, the CRSI Scale was entered second, and Sex of the Subject was entered third. These results indicated that the SRSI Scale accounted for the most variance, the CRSI Scale accounted for the next largest proportion variance, and Sex of the Subject accounted for the next

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largest proportion of variance following the identity scales. Thus, stepwise regression procedures were only partially consistent with findings based on the hierarchical method of analysis.

Hypothesis 5: The degree that people endorse "separate" vocational resources, as measured by the Separate Options (SVRO) Scale of the VROQ, will be predicted by people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and Sex of the Subject.

A hierarchical regression that included the three independent variables above was used to predict SVRO scores. SRSI scores were entered into the equation first, CRSI scores were entered second, and Sex of the Subject was entered third. Together these variables significantly predicted subjects' scores on the dependent variable ( $F=4.86$ ,  $p=.00$ ) (See Table 17A). Therefore, Hypothesis 5 was supported. In Step 3 of Table 17A,  $R^2$  showed that the independent variables explained a moderate proportion ( $R^2=.08$ ) of variance in the dependent variable.

Table 17A

Hierarchical Regression Effect on the SVRO Scale by the SRSI Scale, the CRSI Scale, and Sex of the Subject

Order of Entry	$R^2$	df	ms	F	p
Step 1...SRSI	.07	1	713.54	13.16	.00
Step 2...CRSI	.07	2	376.52	6.93	.00
Step 3...SEX	.08	3	264.53	4.86	.00



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To study the contribution of each independent variable, regression coefficients were calculated for each independent variable, and are presented in Table 17B.

Table 17B

Regression Coefficients of Independent Variables  
and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
SRSI	3.78	1.09	.26	3.47	.00
CRSI	-1.07	1.20	-.07	-.90	.37
SEX	.97	1.12	.06	.86	.39
constant	30.45	6.08			

Below, Hypothesis 5 has been divided into three parts. The contribution of each independent variable is fully explored within each section.

Hypothesis 5A: People's scores on the SRSI Scale of the RSI will positively predict people's scores on the SVRO Scale of the VROQ.

SRSI scores were entered in Step 1 of a hierarchical regression equation to predict SVRO scores. The SRSI Scale significantly predicted SVRO scores ( $F=13.16$ ,  $p=.00$ ) (See Table 17A).  $R^2$  in Step 1 of Table 17A shows the SRSI Scale explained a moderate proportion ( $R^2=.07$ ) of the variance in SVRO scores. The  $t$  statistic for the SRSI Scale shows that this scale also made a significant contribution in predicting the dependent variable ( $t=-3.47$ ,  $p=.00$ ) (Table 17A). The SRSI Scale predicted scores on the SVRO Scale in a positive

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direction. In Table 17B, the regression coefficient for the SRSI Scale indicated that for every unit increase in the SRSI Scale, SVRO scores were predicted to increase by 3.78 points. Because the SRSI Scale on its own predicted SVRO scores at a significant level, and there was a positive relationship between these two variables, Hypothesis 5A was supported.

Hypothesis 5B: Beyond scores on the SRSI Scale, people's scores on the CRSI Scale of the RSI will not contribute significantly to the prediction of people's scores on the SVRO Scale of the VROQ.

CRSI scores were entered after SRSI scores as the second step in a hierarchical regression to predict the dependent variable. Shown in Step 2 of Table 17A, the CRSI and SRSI Scales together significantly predicted scores on the SVRO Scale ( $F=6.93$ ,  $p=.00$ ). More importantly, to test Hypothesis 5B, it is necessary to measure the unique contribution of the CRSI Scale beyond the SRSI Scale. Change in  $R^2$  from Step 1 to Step 2 of the regression showed that the CRSI Scale accounted for a negligible proportion ( $R^2=.00$ ) of variance in the dependent variable (See Table 17A). In Table 17B, the  $t$  statistic for the CRSI Scale revealed that the CRSI Scale did not make a significant contribution to predicting SVRO scores ( $t=-.90$ ,  $p=.37$ ) beyond the SRSI Scale. Because the CRSI Scale did not significantly contribute to predicting the dependent variable, Hypothesis 5B was supported.

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Hypothesis 5C: Beyond people's scores on the CRSI Scale and the SRSI Scale of the RSI, Sex of the Subject will not contribute significantly to the prediction of people's scores on the SVRO Scale of the VROQ.

Sex of the Subject was added after the SRSI and CRSI Scales as the third step in a hierarchical regression equation to predict SVRO scores. Together, the three independent variables significantly predicted SVRO scores ( $F=4.86$ ,  $p=.00$ ) (See Table 17A). To test Hypothesis 5C, though, it is necessary to evaluate the unique contribution of Sex of the Subject in predicting SVRO scores. In Table 17A, change in  $R^2$  from Step 2 to Step 3, shows that Sex of the Subject explained only a small proportion ( $R^2=.01$ ) of unique variance in the dependent variable (See Table 17A). The  $t$  statistic for Sex of the Subject, found in Table 17B, shows that Sex of the Subject did not make a significant contribution in predicting scores on the SVRO Scale ( $t=.86$ ,  $p=.39$ ). Therefore, Hypothesis 5C was supported.

In summarizing hierarchical regression findings for Hypothesis 5, the SRSI Scale was found to significantly contribute to predicting SVRO scores. The CRSI Scale and Sex of the Subject, however, were not significant contributors. A stepwise regression was also performed to evaluate the three variables' contribution to predicting SVRO scores. Again, among the three independent variables, the SRSI Scale was the only variable that significantly contributed to predicting SVRO scores. Thus, stepwise regression findings reinforced results of the hierarchical regression analyses.

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Hypothesis 6: The degree that people endorse a composite of "separate" and "connected" vocational resources, as measured by the Total Options (TVRO) Scale of the VROQ, will be predicted by people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and Sex of the Subject.

Similarly to Hypothesis 3, there was no expectation in Hypothesis 6 that either of the RSI scales would predominate over the other in predicting scores for an equally weighted composite of "separate" and "connected" items measured by the TVRO Scale. Instead of using a hierarchical regression, stepwise regression was the primary method applied to assess the contribution of the three independent variables in predicting the TVRO Scale.  $R^2$  in Step 3 of Table 18A shows that together, the CRSI Scale, the SRSI Scale, and Sex of the Subject, accounted for a moderate proportion ( $R^2=.05$ ) of variance in the dependent variable. The independent variables, in combination, significantly predicted subjects' scores on the TVRO Scale ( $F= 3.45$ ,  $p=.02$ ) (See Table 18A). Thus, results supported Hypothesis 6.

Table 18A

Stepwise Regression on the TVRO Scale by  
Sex of the Subject, the CRSI Scale, and the SRSI Scale

Order of Entry	$R^2$	df	ms	F	p
Step 1...SEX	.04	1	595.50	7.65	.00
Step 2...CRSI and SRSI*	.05	3	267.35	3.45	.02

\* Both the CRSI and SRSI Scales were entered in Step 2 of the equation.



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To investigate the contribution of each independent variable in predicting CVRO scores, the researcher calculated the regression coefficient for each independent variable. Table 18B shows the regression coefficient for each independent variable and its significance level.

Table 18B

Regression Coefficients of Independent Variables  
and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
SEX	3.37	1.34	.19	2.52	.01
CRSI	2.15	1.43	.11	1.50	.14
SRSI	-.44	1.30	-.03	-.34	.74
constant	73.84	7.26			

Below, Hypothesis 6 is divided into two sections. In each section, the contribution of the independent variables are further explored.

Hypothesis 6A: People's scores on both the CRSI and SRSI Scales of the RSI will positively predict people's scores on the TVRO Scale of the VROQ.

The CRSI Scale, the SRSI Scale, and Sex of the Subject were entered by a stepwise regression method to predict scores on the TVRO Scale. The computer entered Sex of the Subject into the stepwise equation first indicating that it accounted for most of the variance in TVRO scores. The CRSI Scale and the SRSI Scale were added in the second step of the equation. Together, the three scales significantly predicted scores on the TVRO Scale ( $F=3.45$ ,  $p=.02$ ) (See Table 18A). To

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adequately test Hypothesis 6A, it is necessary to evaluate the unique contributions of the CRSI Scale and the SRSI Scale, beyond Sex of the Subject, in predicting the dependent variable. The computer reported that neither the CRSI Scale nor the SRSI Scale alone reached the .05 significance criterion in predicting the dependent variable. Consequently, the two RSI scales were added together in the second step of the stepwise equation rather than being entered into the equation in separate steps. Thus, in Table 18A, change in  $R^2$  from Step 1 to Step 2 consisted of the addition of both the CRSI Scale and the SRSI Scale. Change in  $R^2$  from Step 1 to Step 2 shows that the two variables accounted for a small proportion of variance ( $R^2=.01$ ) in the dependent variable. Beyond Sex of the Subject, the  $t$  statistic for the CRSI Scale and the  $t$  statistic for the SRSI Scale shows that neither scale significantly contributed in predicting TVRO scores ( $t=1.50$ ,  $p=.14$  and  $t=-0.34$ ,  $p=.74$  respectively). Because the two RSI Scales were not significant contributors in predicting the dependent variable, Hypothesis 6A was not supported.

After the first variable is entered into a stepwise equation, only unique variance is measured for variables that follow. It was important to evaluate whether the CRSI and SRSI Scales might have predictive significance if they had not followed the variable Sex of the Subject in the stepwise equation above. Thus, the researcher opted to conduct alternate analyses, using the CRSI and SRSI Scales as the

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first variables entered into hierarchical equations. Two hierarchical regressions that included the three independent variables were used to predict TVRO scores.

In one of the hierarchical regression equations, the CRSI Scale was entered as the first variable in a hierarchical equation, the SRSI Scale was entered second, and Sex of the Subject was entered third. It was found in Step 1 of the equation, that the CRSI Scale did not significantly predict the TVRO scores. The significance level ( $F=3.28$ ,  $p=.07$ ) reached, however, was just below the criterion level of .05 that the researcher applied to determine variables' significance (See Table 19A). In Table 19A, the F statistic for Step 2 of the equation shows the significance level of the equation became only poorer ( $F=1.94$ ,  $p=.15$ ) when SRSI scores were entered in Step 2 of the equation.

Table 19A

Hierarchical Regression Effect on the TVRO Scale by the CRSI Scale, the SRSI Scale, and Sex of the Subject

Order of Entry	$R^2$	df	ms	F	p
Step 1...CRSI	.02	1	261.04	3.28	.07
Step 2...SRSI	.02	2	154.92	1.94	.15
Step 3...SEX	.05	3	267.35	3.45	.02

To investigate the contribution of each independent variable in predicting TVRO scores, the researcher calculated the regression coefficient for each independent variable. Table

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19B shows the regression coefficient for each independent variable and its significance level. The  $t$  statistic for the CRSI Scale and the  $t$  statistic for the SRSI Scale also shows that each variable did not contribute significantly to predicting TVRO scores ( $t=1.50$ ,  $p=.14$  and  $t=-.34$ ,  $p=.74$ , respectively).

Table 19B

Regression Coefficients of Independent Variables  
and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
CRSI	2.15	1.43	.11	1.50	.14
SRSI	-.44	1.30	-.03	-.34	.74
SEX	3.37	1.34	.19	2.52	.01
constant	73.84	7.26			

In the second regression equation, when the SRSI Scale was entered as the first step in a hierarchical regression equation to predict TVRO Scale scores, this variable did not come close to reaching significance in predicting the dependent variable ( $F=1.29$ ,  $p=.26$ ) (See Table 20A). Again, as shown in Step 2 of Table 20A, the addition of the CRSI Scale scores into the equation did not improve the equation so that the predictive ability of the regression reached a level of significance ( $F=1.94$ ,  $p=.15$ ).



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Table 20A

Hierarchical Regression Effect on the TVRO Scale by  
the SRSI Scale, the CRSI Scale, and Sex of the Subject

Order of Entry	R <sup>2</sup>	df	ms	F	p
Step 1...SRSI	.01	1	103.62	1.29	.26
Step 2...CRSI	.02	2	154.92	1.94	.15
Step 3...SEX	.05	3	267.35	3.45	.02

To investigate the contribution of each independent variable in predicting TVRO scores, the researcher calculated the regression coefficient for each independent variable. Table 20B shows the regression coefficient for each independent variable and its significance level. Again, the t statistic for the SRSI Scale and the CRSI Scale show that each variable did not contribute significantly to predicting TVRO scores ( $t = -.33$ ,  $p = .74$  and  $t = 1.50$ ,  $p = .14$ , respectively).

Table 20B

Regression Coefficients of Independent Variables  
and their Significance Levels

Variable	b	SE b	Beta	t	Sig t
SRSI	-.44	1.30	-.03	-.33	.74
CRSI	2.15	1.43	-.11	1.50	.14
SEX	3.37	1.33	.19	2.52	.01
constant	3.84	7.26			

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Hypothesis 6B: Beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject will not significantly contribute to the prediction of people's scores on the TVRO Scale of the VROQ.

As mentioned earlier, when the three independent variables were included in the stepwise regression to predict scores on the TVRO Scale, Sex of the Subject was the first variable entered into the equation (See Table 18A). In Step 1 of Table 18A,  $R^2$  shows that Sex of the Subject accounted for a moderate proportion of the variance ( $r^2=.04$ ) in TVRO Scale. The variance accounted for by Sex of the Subject was significant ( $F=7.65$ ,  $p=.01$ ). Additionally, the  $t$  statistic for Sex of the Subject shows that this variable significantly contributed to predicting scores on the dependent variable ( $t=2.52$ ,  $p=.01$ ) (See Table 18B). Thus, Hypothesis 6B was not supported. In Table 18B, the regression coefficient for Sex of the Subject reveals that this variable predicted TVRO scores in a positive direction. Holding other variables constant, female subjects were predicted to have scores on the TVRO Scale 3.37 points higher than male subjects.

To adequately test Hypothesis 6B, the researcher conducted a second analysis using a hierarchical regression technique. Sex of the Subject was entered after the CRSI Scale and the SRSI Scale as the third step in a hierarchical regression to predict TVRO scores. Together the CRSI Scale, the SRSI Scale, and Sex of the Subject predicted scores on

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the TVRO scale significantly ( $F=3.45$ ,  $p=.01$ ) (See Table 19A). Beyond the two RSI Scales, the  $t$  statistic for Sex of the Subject shows that this variable continued to predict TVRO Scores at a significant level ( $t=2.52$ ,  $p=.01$ ) (See Table 19B). In Table 19A, change in  $R^2$  from Step 2 to Step 3 shows that Sex of the Subject accounted for a moderate proportion of unique variance ( $R^2=.03$ ) which was slightly less than when it was the first variable entered in the stepwise equation. Thus, it appears that Sex of the Subject shared some common variance with either or both of the RSI Scales. The findings presented on the basis of the alternate hierarchical regression are consistent with results found using stepwise regression. Sex of the Subject continued to significantly predict scores on the TVRO Scale, regardless of whether it was entered as the first or last variable in the equation.

In summarizing findings from Hypothesis 6, Sex of the Subject was to found significantly contribute in predicting scores on the TVRO Scale. However, the SRSI Scale and the CRSI Scale were not found to be significant contributors.

### **Summary**

Results of data analyses are presented in Chapter 5. Demographic characteristics and normative data were reported on the sample. Reliability was computed along for primary scales used in the study. Reliability based on Cronbach's alpha ranged from .65 to .85, and reliability measured through item to scale correlations ranged from .22 to .71 on connected and separate scales of the three instruments used

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in the study. Analysis of variance and correlation analyses were used in preliminary analyses to explore relationships between demographic variables and primary variables. Results of these analyses indicated none of the demographic variables were significantly related to specific primary variables. Also, a correlation matrix was calculated for primary variables and demographic variables, and data points were plotted for predicted values and actual values for the dependent variables. Results of these calculations supported the use of regression analyses recommended for hypothesis testing.

The following is a summary of the results for each of the 6 hypotheses:

Hypothesis #1: The results indicated that people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and Sex of the Subject together significantly predicted people's scores on the CWVI Subscale of the WVI. The hypothesis was supported by the results.

Hypothesis #1A: The results indicated that people's scores on the CRSI Scale positively predicted people's scores on the CWVI Subscale. Therefore, the hypothesis was supported by the results.

Hypothesis #1B: The results indicated that beyond scores on the CRSI Scale, people's scores on the SRSI Scale did not contribute significantly to the prediction of people's scores on the CWVI Subscale. The hypothesis was supported by the results.

Hypothesis #1C: The results indicated that, beyond people's scores on the CRSI and SRSI Scales, Sex of the Subject did contribute significantly to the prediction of people's scores on the CWVI Subscale of the WVI. The hypothesis was not supported by the results.

Hypothesis #2: The results indicated that people's scores on the SRSI Scale of the RSI, people's scores on the CRSI Scale of the RSI, and Sex of the Subject, together predicted people's scores on the SWVI Subscale. The hypothesis was supported by the results.



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Hypothesis #2A: The results indicated that people's scores on the SRSI Scale positively predicted people's scores on the SWVI Subscale. The hypothesis was supported by the results.

Hypothesis #2B: The results indicated that, beyond scores on the SRSI Scale, people's scores on the CRSI Scale did not contribute significantly to the prediction of people's scores on the SWVI Subscale. The hypothesis was supported by the results.

Hypothesis #2C: The results indicated that beyond people's scores on the SRSI and CRSI Scales, Sex of the Subject did not contribute significantly to the prediction of people's scores on the SWVI Subscale. The hypothesis was supported by the results.

Hypothesis #3: The results indicated that people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and Sex of the Subject, together predicted people's scores on the TWVI Subscale of the WVI. The hypothesis was supported by the results.

Hypothesis #3A: The results indicated that people's scores on CRSI and SRSI Scales positively predicted people's scores on the TWVI Subscale. The hypothesis was supported by the results.

Hypothesis #3B: The results indicated that beyond people's scores on the CRSI and SRSI Scales of the RSI, Sex of the Subject did not contribute significantly to the prediction of people's scores on the TWVI Subscale. The hypothesis was supported by the results.

Hypothesis #4: The results indicated that people's scores on the CRSI Scale of the RSI, people's scores on the SRSI Scale of the RSI, and Sex of the Subject, together predicted people's scores on the CVRO Scale of the VROQ. The hypothesis was supported by the results.

Hypothesis #4A: The results indicated that people's scores on the CRSI Scale positively predicted people's scores on the CVRO Scale. The hypothesis was supported by the results.

Hypothesis #4B: The results indicated that beyond scores on the CRSI Scale, people's scores on the SRSI Scale contributed significantly to the prediction of people's scores on the CVRO Scale. The hypothesis was supported by the results.

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Hypothesis #4C: The results indicated that beyond scores on the CRSI and SRSI Scales, Sex of the Subject contributed significantly to the prediction of people's scores on the CVRO Scale. The hypothesis was not supported by the results.

Hypothesis #5: The results indicated that people's scores on the SRSI Scale, people's scores on the CRSI Scale, and Sex of the Subject, together predicted people's scores on the SVRO Scale of the VROQ. The hypothesis was supported by the results.

Hypothesis #5A: The results indicated that people's scores on the SRSI Scale positively predicted people's scores on the SVRO Scale. The hypothesis was supported by the results.

Hypothesis #5B: The results indicated that beyond people's scores on the SRSI Scale, people's scores on the CRSI Scale did not contribute significantly to the prediction of people's scores on the SVRO Scale. The hypothesis was supported by the results.

Hypothesis #5C: The results indicated that beyond people's scores on the SRSI and CRSI Scales, Sex of the Subject did not contribute significantly to the prediction of people's scores on the SVRO Scale of the VROQ. The hypothesis was supported by the results.

Hypothesis #6: The results indicated that people's scores on the CRSI Scale, people's scores on the SRSI Scale, and Sex of the Subject, together predicted people's scores on the SVRO Scale of the VROQ. The hypothesis was supported by the results.

Hypothesis #6A: The results indicated that people's scores on the CRSI and SRSI Scales of the RSI did not positively predict people's scores on the TVRO Scale of the VROQ. The hypothesis was not supported by the results.

Hypothesis #6B: The results indicated that beyond people's scores on the CRSI and SRSI Scales, Sex of the Subject significantly contributed to the prediction of people's scores on the TVRO Scale. The hypothesis was not supported by the results.

None of the demographic variables tested in preliminary analyses were related to primary variables of the study. The relationship between demographic variables were not explored further through stepwise regression techniques.

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## Chapter 6

### SUMMARY AND CONCLUSIONS

#### Introduction

In this chapter, a summary of the research is described. Then, a review of the findings is presented. A comparison of the findings for work values and vocational resources follows, and implications are discussed. The findings are presented from the perspective of Gilligan's theoretical conceptualizations about Separate and Connected Identity, and the Stone Center's Self-In-Relation theory. The chapter concludes with a discussion of the limitations of the study, directions for future research, and practical implications of the study.

#### Summary

Human developmental theorists (Erikson, 1968; Levinson, 1978; Perry, 1970) have focused on describing how individuals separate emotionally and physically from adults that are important to them as they develop. The underlying assumption was that development occurs through a process of differentiating oneself from others. Within the last two decades, these theorists have been criticized because they deal primarily with males' experiences, and hence, they inaccurately portray women's development (Gilligan, 1982; Jordon, Surrey, Kaplan, 1991; Miller, 1991). Gilligan (1982) asserted that as a result of focusing on males' process of development, male development became the standard by which



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women were judged. Consequently, researchers evaluated women's development, and the values that grew out of this process of development, as being inferior to males' mode of development (Gilligan, 1982).

In contrast to traditional theories of human development, Gilligan (1982), Miller (1991), and Surrey (1991) assert that people may follow different paths of development and form different identities. People who develop along a "separate" path of development emotionally and physically separate themselves from others to form their own identity (Miller, 1991; Surrey, 1991). In contrast, people who develop along a "connected" path maintain emotional attachments in relationships throughout their development (Surrey, 1991). Men more often than women possess Separate Identities and women more often than men possess Connected Identities (Gilligan, 1982). However, there are some women who possess Separate Identities, and there are some men who possess Connected Identities (Gilligan, 1982; Lyons, 1983). Additionally researchers (Lyons, 1983; Stiller & Forrest, 1991) have found that people can possess characteristics associated with both identities. Gilligan's description of connected and separate traits, and Self-In-Relation theory has helped to explain differences between men and women and has lead to a more accurate understanding of women's development.

Although researchers (Forrest & Mikolaitis, 1986; Gilligan, 1982; Jordon, 1991; Lyons, 1983; Pearson et al., 1991) have explored separate and connected traits in a variety of

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areas, no research has been conducted previously to assess whether traits associated with people's Separate and Connected Identities are reflected within the vocational domain. In this study, the researcher attempted to evaluate whether people's Connected and Separate Identities are reflected in their work values and preferences for vocational resources.

There are compelling reasons to conduct this research. First, from a theoretical standpoint, this research may further researchers' and counselors' understanding of male and female vocational preferences. Thus, career counselors may have a better understanding of how the possession of a Connected and Separate Identity may relate to people's career development. The major value of this research, however, lies in its practical implications for redesigning vocational services so they may meet the specific needs and values of people with these different identities. This is particularly crucial because women, who typically have Connected Identities (Gilligan, 1982), face problems of inequality within the workforce. If career services were provided in a format compatible with women's values, career counselors could better assist women in exploring career options and in dealing with other career issues.

To test whether connected and separate characteristics are reflected in the vocational domain, multiple regression analyses were used to predict whether Connected and Separate Identities influenced people's endorsements of specific work

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values and vocational resources. The following independent variables were used: the extent to which people possess a Connected Identity, a Separate Identity, and Sex of the Subject. Connected Identity and Separate Identity was measured respectively by the Connected Self (CRSI) Scale and the Separate Self (SRSI) Scale of the Relationship Self Inventory (RSI). Two sets of dependent variables were used. First, the importance assigned to "separate" work values, "connected" work values and a composite of "separate" and "connected" work value items was measured respectively by the Separate Work Values (SWVI) Subscale, Connected Work Values (CWVI) Subscale and Total Work Values (TWVI) Subscale of the Work Values Inventory (WVI). Second, endorsements of "separate" vocational resource options, "connected" vocational resource options, and a composite of both sets of options were measured respectively by people's scores on the Connected Options (CVRO) Scale, Separate Options (SVRO) Scale, and Total Options (TVRO) Scale of the Vocational Resource Options Questionnaire (VROQ). The researcher created the VROQ for the purposes of the present research. Three experts on Gilligan's model of separate and connected traits and Self-In-Relation theory evaluated the VROQ. The VROQ was also pilot tested on a sample of college students. The instrument was then revised so that vocational resources would be more representative of the separate and connected dimension they were intended to measure. Additionally, items on the WVI and the VROQ were rated by a different group

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of researchers who were experts on Gilligan's conceptualizations about separate and connected traits, and Self-In-Relation theory. The experts' ratings were used to determine which items would be included in the separate scale, the connected scale, and the total scale of the WVI and the VROQ.

A mail survey was sent through a random sampling procedure to 150 male and 150 female senior college students at Michigan State University. Responses to the survey were voluntary, and students' anonymity was maintained. Responses from 186 subjects who fit the criterion of the study and had adequately completed the survey were used in conducting primary analyses for the study. Reliability of the WVI, RSI and VROQ were measured by Cronbach's alpha and item to scale correlations. The relationship between demographic variables and primary variables in the study was evaluated. None of the demographic variables showed a significant relationship to primary variables in the study.

Regression analyses were applied in testing hypotheses in the study. The results of hypotheses testing are presented below. Findings from hypotheses predicting the importance people assign to work values are presented first. Findings from hypotheses used to predict subjects' endorsements of vocational resource options are presented second.



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## Results of Hypothesis Testing Predicting the Importance Assigned to Work Values

### Hypothesis 1

Hierarchical regression was the primary method of analysis used in Hypothesis 1. Results showed that Hypothesis 1 and its parts were partially supported. The general hypothesis indicated that together the extent to which people possessed a Connected Identity, a Separate Identity, and Sex of the Subject predicted the importance people assigned to "connected" work values.

Hypothesis 1A: As expected, the extent people possessed a Connected Identity positively predicted people's rating of the importance of "connected" work values.

Hypothesis 1B: As expected, beyond the extent people possess a Connected Identity, the extent people possessed a Separate Identity did not contribute significantly to the prediction of the importance people assigned to "connected" work values.

Hypothesis 1C: Unexpectedly, beyond the extent people possessed a Connected and a Separate Identity, Sex of the Subject contributed significantly to the prediction of the importance people assigned to "connected" work values.

A stepwise regression technique confirmed hierarchical regression findings. Results showed that the CRSI Scale accounted for the most variance in the dependent variable and Sex of the Subject accounted for the largest proportion of variance after the CRSI Scale. Both variables significantly contributed to predicting the importance people assigned to "connected" work values. The SRSI Scale, however, did not contribute significantly.

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## Hypothesis 2

Hierarchical regression was the primary method of analysis used on Hypothesis 2. Results showed that Hypothesis 2 and its parts were fully supported. The general hypothesis indicated together the extent people possessed a Connected Identity, a Separate Identity and the Sex of the Subject predicted the importance they assigned to "separate" work values.

Hypothesis 2A: As expected, the extent people possessed a Separate Identity positively predicted the importance that people assigned to "separate" work values.

Hypothesis 2B: As expected, beyond the extent that people possessed a Separate Identity, the extent people possessed a Connected Identity did not contribute significantly to the prediction of the importance people assigned to "separate" work values.

Hypothesis 2C: As expected, beyond the extent people possessed a Separate Identity and a Connected Identity, Sex of the Subject did not contribute significantly to the prediction of the importance people assigned to "connected" work values.

A stepwise regression technique confirmed hierarchical regression findings. Results showed that the SRSI Scale accounted for the most variance in the dependent variable. Also, the SRSI Scale significantly predicted the importance people assigned to "separate" work values. The CRSI Scale and Sex of the Subject, however, did not contribute significantly.

## Hypothesis 3

Stepwise regression was the primary method of analysis used in Hypothesis 3. Hypothesis 3 and its parts were fully

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supported. The general hypothesis indicated that together the extent that people possessed a Connected Identity, a Separate Identity and the Sex of the Subject predicted the importance people assigned to a composite grouping of "separate" and "connected" work values.

Hypothesis 3A: As expected, the extent that people possessed a Connected Identity and the extent that they possessed a Separate Identity each positively predicted people's scores on the composite set of work values.

Hypothesis 3B: As expected, beyond the extent that people possessed a Connected and a Separate Identity, the Sex of the Subject did not contribute significantly to predicting people's scores on the composite set of work values.

Simple regression techniques only partially supported stepwise regression findings. As before, Sex of the Subject was not found to contribute to predicting the importance assigned to the composite set of work values even when Sex of the Subject was the only variable used to predict composite scores. On the other hand, the SRSI Scale, on its own, did not contribute significantly to the prediction the importance people assigned to the composite set of work values although this scale had significantly had contributed to predicting ratings when the computer entered this variable in the second step of a stepwise regression to predict the composite set.

#### **Results of Hypothesis Testing Predicting Endorsements of Vocational Resource Options**

##### Hypothesis 4

Hierarchical regression was the primary method of analysis used in Hypothesis 4. Results showed that

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Hypothesis 4 and its parts were partially supported. The general hypothesis indicated that together the extent that people possessed a Connected Identity, a Separate Identity, and the Sex of the Subject predicted the degree people endorsed "connected" vocational resource options.

Hypothesis 4A: As expected, the extent to which people possessed a Connected Identity positively predicted the degree that people endorsed "connected" vocational resource options.

Hypothesis 4B: Unexpectedly, beyond the extent that people possessed a Connected Identity, the extent that people possessed a Separate Identity contributed significantly to the prediction of the degree that people endorsed "connected" vocational resource options.

Hypothesis 4C: Unexpectedly, beyond the extent that people possessed a Connected Identity and a Separate Identity, Sex of the Subject contributed significantly to the prediction of the degree that people endorsed "connected" vocational resource options.

A stepwise regression technique only partially confirmed hierarchical regression findings. As before, all three independent variables significantly contributed to the prediction of people's endorsements of "connected" vocational resource options. However, the variables were entered by the computer in a different order than the researcher had chosen to enter variables using the hierarchical technique. Using stepwise techniques, results showed that the SRSI Scale accounted for the most variance, and the CRSI Scale accounted for the largest proportion of variance after this scale. After the identity scales, Sex of the Subject accounted for variance in the dependent variable.



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### Hypothesis 5

Hierarchical regression was the primary method of analysis used in Hypothesis 5. Results showed that Hypothesis 5 and its parts were fully supported. The general hypothesis indicated that together the extent that people possessed a Separate Identity, a Connected Identity, and the Sex of the Subject predicted the degree people endorsed separate vocational resource options.

Hypothesis 5A: As expected, the extent to which people possessed a Separate Identity positively predicted the degree that people endorsed "separate" vocational resource options.

Hypothesis 5B: As expected, beyond the extent that people possessed a Separate Identity, the extent that people possess a Connected Identity did not contribute significantly to the prediction of the degree that people endorsed "separate" vocational resource options.

Hypothesis 5C: As expected, beyond the extent that people possessed a Connected Identity and a Separate Identity, Sex of the Subject did not contribute significantly to the prediction of the degree that people endorsed "separate" vocational resource options.

A stepwise regression technique confirmed hierarchical regression findings. The SRSI Scale significantly contributed to predicting people's endorsements of "separate" vocational options. The CRSI Scale and Sex of the Subject, however, did not significantly contribute.

### Hypothesis 6

Stepwise regression was the primary method of analysis applied in Hypothesis 6. Hypothesis 6 and its parts were partially supported. The general hypothesis indicated that together the extent that people possessed a Connected

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Identity, a Separate Identity, and the Sex of the Subject predicted the degree that people endorsed a composite set of "separate" and "connected" vocational resources.

Hypothesis 6A: Unexpectedly, the extent that people possessed a Connected Identity and the extent that they possessed a Separate Identity did not predict the degree that people endorsed a composite grouping of "separate" and "connected" vocational resource options.

Hypothesis 6B: Unexpectedly, beyond the extent that people possessed a Connected and Separate Identity, the Sex of the Subject did significantly contribute to the prediction of the degree that people endorsed a composite grouping of "separate" and "connected" vocational resources.

Hierarchical regression techniques confirmed stepwise regression findings. First, even when they were entered before Sex of Subject in a hierarchical regression, the CRSI Scale and the SRSI Scale continued to be nonsignificant contributors in predicting people's endorsements of the composite set of vocational resources. Secondly, even when it was placed as the last variable in the hierarchical regression predicting the composite set of vocational resources, Sex of the Subject continued to be a significant contributor in predicting people's endorsements of the composite set of vocational resources.

#### Discussion of the Findings

There were six general hypotheses. These hypotheses were subdivided into 16 specific hypotheses. Results from the six hypotheses showed that three hypotheses were partially supported and three were completely supported by findings in this study. Among the 16 specific hypotheses, 11

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hypotheses were supported and 5 hypotheses were not supported, showing that over two-thirds of the hypotheses were consistent with hypothesized relationships.

Findings were largely in accordance this researcher's propositions that Gilligan's conceptualizations about people with Separate and Connected Identities extends into the vocational domain. Hypotheses that predicted that people's Separate Identity would be reflected in their endorsements of vocational resources and work values were all supported. The extent people possessed a Separate Identity predicted their endorsements of the "separate" vocational resources and their endorsements of "separate" work values. Hypotheses that predicted that people's Connected Identity would be reflected in their endorsements of vocational resources and work values were all supported. The extent that people possess a Connected Identity predicted their endorsements of "connected" vocational resources and their endorsements of "connected" work values. These results were found in both of the vocational areas studied, and were also found for both separate and connected dimensions. Thus, they are robust.

Furthermore, the predictive power of the SRSI and the CRSI Scales were reasonably good. The variable, Separate Identity explained at least 7% of the variance in subjects' ratings of "separate" work values and "separate" vocational resources. The variable, Connected Identity, explained at least 7% of the variance in subjects' ratings of "connected" work values and "connected" vocational resources. Stepwise

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regression findings bolstered these results. Connected Identity was the most important factor predicting "connected" scales and Separate Identity was the most important factor predicting "separate" scales on the career instruments for three of four major hypotheses tested. Also, Separate and Connected Identity predicted the composite scale for one of the two hypotheses tested. Therefore, in four of six general hypotheses, Separate and/or Connected Identity (ies) were major variables accounting for variation in scores on the "connected" and "separate" scales respectively or total scales of the career instruments. Together, then, these results strongly demonstrate the explanatory power of the theoretical model employed in this study.

Despite the strong support shown for the theoretical model, other explanations for the findings are plausible and need to be discussed. First, it is possible that the RSI actually measures subjects' degree of sociability. Specific connected items in the WVI and VROQ may be endorsed by people who are sociable. One example of a connected item is "work in which you...are one of the gang". Similarly, specific separate items in the WVI and VROQ may be endorsed by subjects who do not like to socialize with others. An example of a separate item is "work in which you...have freedom in your own area". As a result of the correspondence between connected and separate scales of the RSI and the WVI and VROQ, the RSI would have been found to be a good predictor of scores on these instruments.



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While the above explanation appears reasonable, researchers who developed the RSI state that the instrument is measuring something different than sociability. Pearson et al. (1991) report that the CRSI scale "speaks to how important interconnections with others are to the self, not how much someone socializes..." (p.17). Sociability is not based on an evaluation of the importance that individuals assign to social relationships.

Pearson et al. (1991) found that sociability, which was measured through the EASI-III Temperament Survey, was positively correlated with the CRSI Scale and negatively correlated with the SRSI Scale. However, the correlations were not extremely large ( $r < -.37$  and  $r < .37$ ). Therefore, although there appears to be some relationship between the scales of the RSI and the instrument measuring sociability, it can be concluded that the two instruments are measuring distinct theoretical concepts.

Another explanation for the research findings in this study may be that the RSI actually measures levels of dependency. It could be argued that some specific connected items in the WVI and VROQ are more likely to be endorsed by individuals who are dependent on others. An example is... "work in which you...are one of the gang". In this setting someone who wants to rely on others would be in a good position to locate others that they could rely on. Other specific separate items in the WVI and VROQ may be endorsed by people who strive to avoid being dependent on

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others. An example of a separate item is "work in which you...make your own decisions". As a result of this correspondence between connected and separate scales of the RSI and the WVI and VROQ, the RSI would have been found to be a good predictor of scores on these instruments.

The explanation above is largely based on an assumption that connected forms of interaction are developmentally dysfunctional. Gilligan (1982) and Miller (1991) have cited examples of this assumption in the literature. Specifically, Miller (1991) and Stiver (1991a) have noted that connected traits have been tended to interpreted to be an indication of people's overdependency on others.

Although the RSI could be measuring levels of dependency, Pearson al.'s (1991) research findings do not support it. Pearson et al. (1991) measured the degree that the SRSI and CRSI Scales were associated with scales measuring an unhealthy level of overdependency and an unhealthy level of underdependency. Although there were significant positive correlations between the CRSI Scale and a scale measuring dependency, and although positive correlations were found between the SRSI Scale and a scale measuring underdependency for men, Pearson et al. (1991) have pointed out that the relationship between the scales was not extremely high ( $r < .44$  or  $< -.44$ ). More importantly, among women, the SRSI Scale had an unexpected negative relationship to the scale measuring underdependency. If indeed the RSI was measuring underdependency, then the SRSI Scale should have been correlated with

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the scale measuring underdependency for both men and women. The researchers concluded that the scales measured by each instrument were "clearly distinct from one another" (Pearson et al., 1991, p.28).

Findings may also be explained by men and women's compliance to sex role stereotypes. Broverman et al. (1972) have cited many examples indicating people hold stereotypes about what traits are appropriate for males and females. It is possible that the RSI measures males' compliance to masculine sex role stereotypes on the SRSI Scale, and females' compliance to feminine sex role stereotypes on the CRSI Scale. However, it has been reported that although males more often have Separate Identities, some males do possess Connected Identities, and although females more often possess Connected Identities there are some females who do possess Separate Identities (Gilligan, 1982). The fact that Sex of the Subject was less often a significant predictor on the connected, separate, and total scales of the vocational instruments than subjects' identity, strongly refutes this explanation.

Biologically based differences between males and females is another plausible explanation for study findings. Again, both males and females can have Connected Identities, and both males and females can have Separate Identities (Gilligan, 1982, Lyons, 1983). The fact that the RSI scales, measuring Separate Identity and Connected Identity, more often significantly predicted scores on the vocational scales

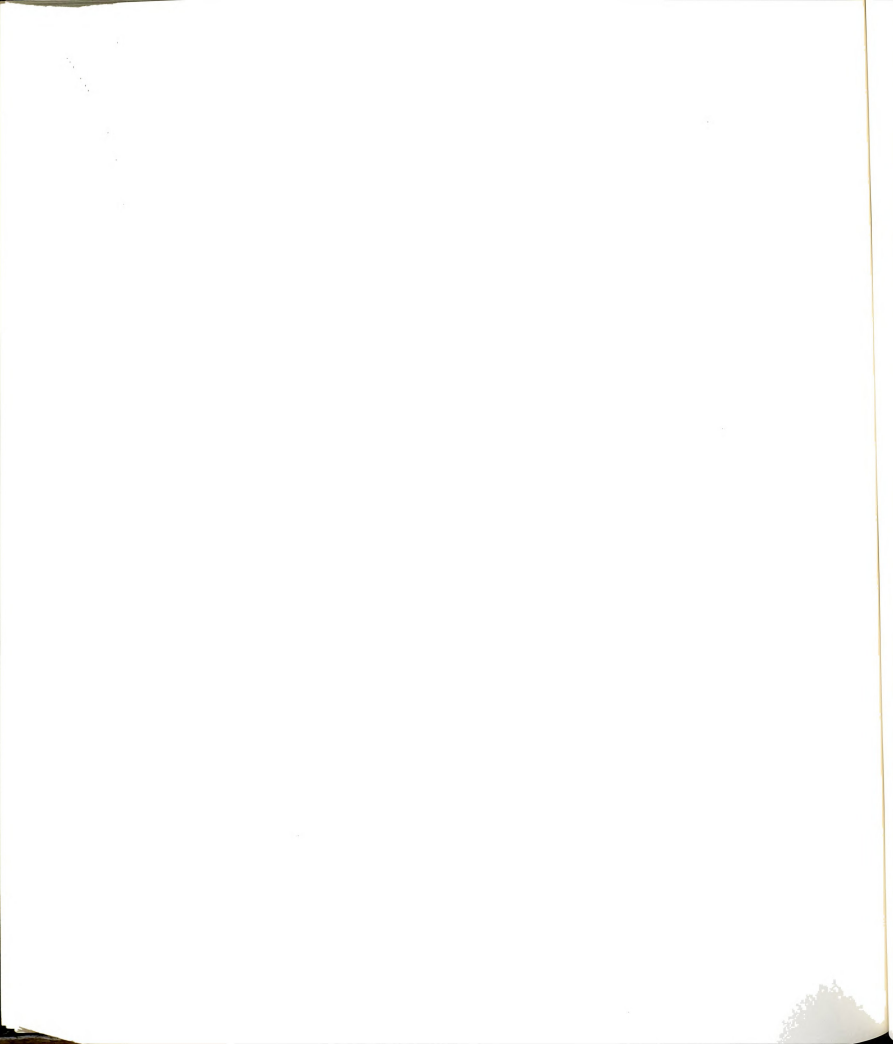
than Sex of the Subject did, severely weakens the argument that biological differences within the sexes accounts for results found.

The relationship between the extent people possess Connected and Separate Identities, Sex of the Subject, and their endorsements of "connected" and "separate" work values and vocational resources is quite complex. This complexity is apparent when consistencies and inconsistencies in the findings from the WVI and VROQ are compared.

#### Similarities and Differences in Findings Across the WVI and VROQ Instruments

Hypotheses 1, 2, and 3, used to predict the importance people assign to work values, parallels Hypotheses 4, 5, and 6 respectively, which were used to predict people's endorsements of vocational resource options. It is of value to consider why similarities and differences occurred for corresponding hypotheses across the vocational domains. Hypotheses relating to the predictions of the "separate" and "connected" career scales will be discussed first, and predictions relating to the composite career scales will be discussed second.

A similarity in pattern was noted in predicting endorsements of "separate" work values and "separate" vocational resources. The extent that people possessed a Separate Identity was related to the degree that they endorsed separate scales on the WVI and VROQ. Sex of the Subject and the extent people possessed a Connected Identity did not





predict scores on the separate scales of the WVI and VROQ. Thus, the major explanation for differences in ratings of "separate" work values and "separate" vocational resource options is the degree to which individuals possess Separate Identities.

A similarity in pattern was also identified in predicting people's endorsements of "connected" work values and "connected" vocational resources. The extent people possessed a Connected Identity was related to the degree that they endorsed connected scales on the two career instruments.

Also Sex of the Subject contributed to predicting scores on the connected scales. In comparison to men, females tended to endorse "connected" work values and "connected" vocational resources to a greater degree.

The relationship found between Sex of the Subject and people's endorsements of connected scales of the WVI and VROQ, was absent between Sex of the Subject and people's endorsements of the separate scales. In other words, Sex of the Subject contributed to predicting connected scales on the WVI and VROQ. In contrast, Sex of the Subject did not contribute to predicting separate scales of the WVI and VROQ.

One potential explanation for the contrasting findings above is that there are biological differences between males and females that account for variations in their endorsements of "connected" work values and "connected" vocational resources. "Connected" work values and "connected"

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vocational resources may reflect a desire to take care of others. And biological differences may underlie women's greater endorsements of these "connected" work values and vocational resources.

Another plausible explanation for these results is that males and females are complying with sex stereotypes. In addition, males may be countersocialized to reject "connected" values and behaviors in the vocational domain. Consequently, men may have social pressures against stating that they have work related values that are "connected", and women may have strong pressures toward stating that they have work related values that are "connected". Similarly, there may be great social pressures for males and females to differentiate themselves in stating their vocational resource preferences. On the other hand, it may be more acceptable for women and men to state preferences for "separate" work values and "separate" vocational resources. In other words, it may be acceptable for women to have separate values in the vocational domain, but they may be pressured additionally to report having "connected" work values. However, it may be unacceptable for males to express connected values when it comes to the vocational field.

Ultimately, the issues posed above are part of a larger ongoing debate about differences observed in male and female behavior. Whether these differences are primarily biological in origin, or are learned behaviors, or result from some interactive process remains to be resolved.

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An inconsistent finding also occurred in predicting the connected scales across the two vocational instruments. As expected, the SRSI Scale did not contribute to predicting the importance people assigned to "connected" work values. However, the SRSI Scale did contribute to predicting people's endorsements of "connected" vocational resource options. One reason this finding may have occurred is because different characteristics of the individual are being measured by each instrument. The VROQ measured people's preferences for carrying out an activity, whereas the WVI measured people's stated values. A second possible reason why the SRSI Scale was significant in one case but not in other may be due to differences in the format of the two vocational instruments. In the WVI, a list of work values was provided in which a mixture of "separate" and "connected" work values and work values not classifiable on either dimension were presented. On the other hand, in the VROQ, subjects responded to two options in a set that were differentiated specifically on connected and separate dimensions. Because of the differences in the format of VROQ and WVI, subjects could more easily discern differences pertaining to connected and separate dimensions among the options presented in each scenario of the VROQ.

In relation to findings above in which the SRSI Scale predicted the CVRO Scale, the predictive power of the SRSI Scale was surprising. Although it was entered after the CRSI Scale in a hierarchical regression equation predicting CVRO

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scores, it accounted for more variance in the CVRO scores than the CRSI Scale did. Using a second method of analysis, stepwise regression, the SRSI Scale explained an even greater amount of variance in CVRO scores whereas the CRSI Scale explained less variance than before. These results indicated that the SRSI Scale and the CRSI Scale shared common variance. The findings were unusual because the SRSI Scale was not expected to predict scores on a "connected" career scale. Findings might be explained by a possible relationship between connected and separate traits, or possibly the format that was applied in the VROQ instrument. These possibilities will be considered in a section describing how findings relate to theoretical constructs and a section that describes limitations of the study.

A third inconsistent finding was revealed in subjects' ratings of the composite scales for each of the two career instruments. Factors found to be significant in predicting the composite scales differed greatly across the vocational instruments. The extent people possessed a Connected Identity and a Separate Identity were each important in predicting people's rating of the composite set of work values, but Sex of the Subject was not. In contrast, Sex of the Subject was important in predicting people's rating of the composite set of vocational resource options, but the two identity scales were not important predictors.

Results in predicting people's rating of the composite set of work values were as expected. However, results in

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predicting people's rating of the composite set of vocational resource options were not as expected. It was hypothesized that the extent that people possess a Separate and Connected Identity would each predict people's endorsements of the composite set of vocational resource options, but that Sex of the Subject would not. The unexpected findings are probably due to the relationship that was found between the SRSI Scale and the CVRO Scale as well as the relationship found between the SRSI Scale and the SVRO Scale. First, Hypothesis 4 showed that the SRSI Scale was negatively related the CVRO Scale, and Hypothesis 5 showed that the SRSI Scale was positively related to the SVRO Scale. Thus when "separate" options and "connected" options are combined on the composite scale of the VROQ, scores from the CVRO Scale and SVRO scale cancelled each other out. Consequently, the SRSI did not show a relationship to the TVRO Scale.

In considering why a relationship was not observed between the extent people possess a Connected Identity and people's endorsements of the set of "connected" and "separate" options, two previous findings need to be discussed. From results in Hypothesis 4, the CRSI Scale explained only 7% of the variance in scores on the CVRO Scale. However, results in Hypothesis 5 showed that the CRSI Scale did not make a significant contribution to predicting scores on the SVRO Scale. Thus when the separate set of options was added to the connected set of options to create the composite set, the lack of relationship between the CRSI Scale and the

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"separate" options probably negated the relationship identified between the CRSI Scale and the "connected" options. Consequently, the CRSI Scale did not contribute to predicting scores on the composite set of items.

Another question to consider is why Sex of Subject predicted people's endorsements of the composite set of vocational resources. This finding had not been expected. A review of findings from Hypothesis 4 and 5 indicates that aside from other variables in the regression equation, Sex of Subject did not predict people's rating of "separate" vocational resources, but did predict people's endorsements of "connected" vocational resources. Frequencies for men and women on the VROQ Scale had shown that women had a significantly higher mean score than men on the CVRO Scale, whereas there were no significant differences between the sexes on their mean scores on the SVRO Scale. Additionally the correlation matrix for the primary variables had revealed that Sex of the Subject was significantly correlated with the CVRO Scale, but not with the SVRO Scale. Together these findings suggest that Sex of the Subject's predictive significance on the composite set of vocational resources is largely due to its relationship to "connected" options rather than its relationship to "separate" options on the TVRO Scale.

#### **Theory Support and Revisions Based on Results**

Generally, research findings supported Gilligan's theoretical constructs about Separate and Connected

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Identity. Similar to research in other fields, such as styles of moral reasoning (Gilligan, 1982; Lyons, 1983; Stiller & Forrest, 1990) and people's self-descriptions (Gilligan, 1982; Lyons, 1983; Stiller & Forrest, 1990) findings in the present research study indicated that separate and connected characteristics are expressed within the vocational domain.

The relative importance that Gilligan (1982) attributed to connected and separate development rather than Sex of the Subject in influencing people's values was clearly supported by the findings in this research study. In each hypothesis predicting people's rating of the importance of "separate" or "connected" work values or their preferences for "separate" or "connected" vocational resource options, the extent people possessed a Separate and Connected Identity contributed significantly in explaining the extent that people endorsed these work values or options. Furthermore, the extent people possess a Separate or Connected Identity consistently contributed to a much larger degree than did Sex of the Subject in explaining people's connected or separate scores on vocational instruments.

This researcher's prediction that Sex of the Subject would not contribute beyond the identity scales to predicting people's endorsements of "separate" and "connected" work values and vocational resources was not consistently supported. Although, Sex of the Subject did not contribute to predicting people's endorsements of "separate" work values

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and "separate" vocational resources, interestingly, Sex of the Subject contributed to predicting people's endorsements for "connected" work values and vocational resources. Still, it only explained 3% or less of unique variance in the connected scales of the WVI and VROQ. Sex of the Subject thus appears to be much less important than people's identities in predicting endorsements of "separate" or connected work values and vocational resources. These results strengthen Gilligan's contention that separate and connected development are more important factors than people's sex in influencing their values.

One other area of interest involves the independence of people's possession of a Separate and Connected Identity. Although the development of Separate and Connected Identities have been treated as independent dimensions in that people can possess both Separate and Connected Identities (Lyons, 1983; Stiller & Forrest, 1990), separate and connected traits do not seem to be completely independent of each other. Previous research utilizing the RSI showed that correlations between scales measuring Connected and Separate Identities were low and negative (Pearson et al., 1991). In the present study, findings relating to the independence of separate and connected traits were inconsistent. First, a significant negative relationship was found between scales measuring the Connected Identity and the Separate Identity. Second, the extent people possessed Separate Identities and the degree they endorsed "connected" vocational resources options also

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showed a significant negative relationship. On the other hand, the independence of the possession a Connected Identity and ratings of "separate" work values and vocational resource options were supported by research findings.

### **Limitations of the Research**

Limitations of the research need to be addressed in considering the implications results have in relation to theory constructs. They are presented in the following areas: generalizability of findings, variables included in analyses, and instruments utilized.

#### Generalizability of Findings

One important limitation of the research is its generalizability to other populations. This research was conducted on college seniors at a midwestern university. The students had responded to the questionnaire on a voluntary basis. Thus, these findings may not be representative of all college students. For example, in the present study, respondents and nonrespondents might have varied in the degree they possess Connected and Separate Identities.

#### Variables Included in Analyses

Another limitation is that some demographic variables that the researcher might have evaluated in the present study were not tested due to lack of variability in the research sample. These as well as additional variables that the researcher had not previously considered may relate to people's responses on the primary variables in the study.

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### Instruments Utilized

A limitation in using the WVI to measure "connected" and "separate" work values needs to be addressed. Although many items appeared acceptable for use in categorizing values as "separate" or "connected", some items that were presented were not clearly differentiated on separate or connected dimensions. The WVI was not designed to measure all possible varieties of separate and connected forms of work values. Despite this limitation, a major strength of the WVI is that it disguises the dimensions that are being measured in the study. It includes "separate" work values, "connected" work values, and values that do not pertain to either dimension. Thus, it is more consistent with work values in a natural environment insofar as not all work values are based on separate and connected dimensions. A review of the limitations of the VROQ which follows, will clarify this point.

Additionally, a limitation in the development of the WVI should be considered. The researcher chose 18 of 45 WVI items that appeared to consist of a separate and/or connected dimension. The items were then given to experts who rated them on the extent that they were representative of separate or connected dimensions. 13 of the 18 items were judged appropriate for the connected, separate and total scales of the WVI. A bias on the part of this researcher might have influenced which items were included in the scale. However, the final items on the scales were determined by experts' independent ratings of these items. Because no instrument

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was available that adequately described vocational resource options that varied along separate or connected dimensions, the researcher created the VROQ. As such, research supporting the reliability and validity of this instrument is largely absent. Also, biases that the researcher might have in understanding separate and connected identities might have been introduced into the instrument. The instrument however was evaluated by a set of experts. A second set of experts also evaluated options in the VROQ independently to determine the extent that options were representative of separate or connected perspectives. These assessments were likely to temper any bias that the researcher might have had in developing the instrument. Finally, pilot testing was also likely to enhance the construct validity of the instrument.

Another limitation was identified through differences in findings between the VROQ and the WVI. In the VROQ, two options are presented together in a set. The two options differ on the degree that they emphasize separate and connected interactions. As subjects perceive differences in separateness and connectedness between on two options presented in each set, it is likely that subjects reacted more strongly to differences in these options than if the options had been presented with other options which were not differentiated along separate and connected dimensions. Tajfel (1978) has argued that when people are made saliently aware of their identity, they will accentuate the differences

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that they perceive between people who possess this identity versus those who do not. It may be that in the act of contrasting connected and separate options, subjects become more aware of their Connected and/or Separate Identity. Consequently, their negative or positive ratings of options may be accentuated. Since, in reality, options for career services are not presented as a choice between "separate" or "connected" options, subjects' negative or positive endorsement may be greater on the VROQ than would be found normally.

There is a limitation pertaining to the development of all instruments used in the study. The same group of experts who rated the separate and connected scales of the VROQ and the WVI, had also created the RSI. If these researchers had a bias in their perspective in understanding Separate and Connected Identities, this bias may have been introduced into all three instruments used in the research study. This concern is lessened by research that has been conducted to support the construct validity of the RSI (Pearson et al., 1991).

#### **Implications for New Research**

On the basis of the limitations noted above, there are many directions for future research that would be valuable.

Specifically, because of concerns about women's disadvantages within the workforce, it is extremely important to see how research findings based on this sample of college students compare to research conducted on men and women in the workforce. Demographic variables need to be considered

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that could not be tested with the college sample used. For example, by measuring a broader range of subjects' ages, the variable, Age of the Subject may predict differences in scores that were not found in the present study. As was mentioned in a review of the literature on work values, presented in Chapter 3, past research has indicated variations in work values based on racial/ethnic differences, marital status, and differences between workers who have families versus those who do not. These variables should be considered for inclusion in further research conducted to assess the importance assigned to "separate" and "connected" work values.

New variables should be included in future research to answer questions that arose from results in the present study. In the present study, Sex of the Subject was found to predict subjects' rating of "connected" work values and "connected" vocational resources. It is not clear why Sex of the Subject predicted subjects' rating of these connected items. It is possible that there are biological differences in subjects that influenced their endorsements of the connected vocational items. On the other hand, it may be that there are strong external societal pressures that are associated with males and females' differential ratings on "connected" vocational items. Variables that pertain to social desirability of items for each sex might be included in further research, and may lead to a better understanding what led to a difference in males' and females' scores on

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The present study did not show causal relationships between independent and dependent variables. Instead relationships between the variables were measured. Longitudinal research could be of great value. This research could address questions such as, "As people's Separate and Connected Identities evolve over time, do corresponding changes occur in people's work values?" Based on research indicating that occupational experiences may influence people's work values (Mortimer & Lorence, 1979), another question that might be asked is, "Do changes in people's career paths affect their work values and the degree that they possess Separate and Connected Identities?" This research is of value because little is known about the stability with which people maintain a Connected or a Separate Identity over time.

Further research might also be extremely valuable to career counselors who are working with clients. A study that measures the extent that students have Connected and Separate Identities in relation to people's decisions to use "connected" and separate" resources options at a career center and their actual usage rates of the two forms of vocational resources is important to assess. This research design is important to measure people's actual behaviors as opposed to what they state they would do. To carry out this research though, career centers will need to design and provide vocational resource options that emphasize either separate or connected forms of interactions. Research on vocational

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resources that career counselors provide to clients is also needed. Specific research is needed to evaluate the extent to which a wide range of vocational resources facilitate connected or separate interactions.

Further use of the WVI in evaluating "separate" and "connected" work values needs to be considered. Because separate and connected items from the WVI did not encompass a full range of connected and separate work values, researchers might construct an instrument that does include a wider range possible connected and separate items. It is recommended though that work value items that are not based on separate and connected dimensions also be included in the instrument so "connected" and "separate" work values are not set up in contrast to each other.

In future studies researchers should consider revising the VROQ. Specifically, another set of options that differs along a different dimension could be added into the instrument. This set of options would not be scored along the separate or connected scales, but would serve to lessen the contrast that was set up between separate and connected options in the present version of the VROQ. Also, other vocational options should be added into the survey to increase the variety of vocational issues dealt with.

Research is also needed to evaluate whether different instruments other than the use of a survey would differentially elicit separate or connected responses from subjects. For example, would a face-to-face interview elicit stronger

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Finally, much of the research on Connected Identity and Separate Identity has been conducted with an emphasis on better understanding women's development. This study shows that men's development may be more complex than previously acknowledged, and thus further research is needed to better understand men who have Connected Identities as well as those who have Separate Identities. Men with Connected Identities may have vocational needs that are currently neglected. Additional research could contribute to developing vocational resources and practices that are more helpful to these men.

#### **Practical Implications**

There are a number of practical implications that can be derived from this study. They relate primarily to the types of services provided for students at college career counseling center. This study also has broader implications for the way in which the workplace is structured in our society and its consequences for women.

Clearly, an important goal of all career counseling centers is to assist students in understanding their career values and to provide them with the tools to make good career decisions. This study has shown that students' career values and the tools that they desire to use are strongly related to the extent they possess Separate and Connected Identities.

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people's possession of a Connected or Separate Identity. This study showed that students who have more of a Separate Identity will be more likely to value "separate" vocational resources. Similarly, students who have more of a Connected Identity will be more likely to value "connected" vocational resources.

Based on research findings, career counselors will want to make adjustments in services provided to address differences in people's identities. They will need to assess students' identities to help students evaluate their work values, and identify vocational resources aids that are compatible with their identities. Methods will need to be developed by counselors to evaluate the extent students possess Connected and Separate Identities. Career counselors will want to develop techniques to evaluate the extent to which separate and connected dimensions are present within specific work values.

After student's identities have been evaluated, career counselors can help students to understand how their identities relate to their work values. It is important to recognize that as people grow older they may change in terms of the relative importance they attach to separate and connected components of their identities. Gilligan (1982) suggested that people tend to integrate connected and separate traits over time as they mature. Accordingly, their career values may also change over time. The counselor might point out this information to the student who is trying to

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work out future career decisions. Also, Hotelling and Forrest (1985) have suggested that the counselor might help students to mature through helping them perceive the strengths and limitations of the two identities. Consequently they will explore the identity that they tend to use less often. In knowing that they may come to integrate this alternate identity within themselves, students are likely to make career decisions that allow for future changes in their identity.

In addition to providing guidance on students' work values, career counselors need to consider whether available vocational resources allow for connected and separate interactions by students. Counselors may need to refine existing vocational resources to meet the needs of connected and separate individuals. Where no "separate" or "connected" vocational resources exist, counselors will need to design them.

Separate vocational resources might include the use of a computer system that allows students to work out their career values on their own, or the use of an inventory which presents career options consistent with students' values in an impersonal manner. Connected vocational resources might include talking about career values and reactions towards careers within a group setting, or the provision of feedback to others on their interviewing style in an interactive manner

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need to carefully evaluate and test them. Vocational resources that appear to be compatible with Separate and Connected individuals may not be. For example, for the present study, the researcher had designed a specific vocational resource option to be separate on the VROQ. However, in the pilot study, subjects responded to this option with connected comments. As part of the process of evaluating and testing these vocational resources, career counselors will also need to assess whether people with these identities actually do use services developed for them, and whether they benefit from them.

Although this study did not directly address issues of gender inequality in the workplace, its findings do relate to these issues. This study supports findings by other researchers that women less often have Separate Identities than men. Unfortunately, however, the workplace in our society appears to be based on a separate framework. And according to Stiver (1991b), values considered important in the workplace, such as competition and striving for success, often come into conflict with women's values for connected relationships. For instance, when women place their own career advancement ahead of doing things for others, they tend to feel selfish. The importance that women place on relationships is not well understood in the workplace, Stiver (1991b) states. Few attempts have been made to change the workplace to meet the needs of women. Rather, as Stiver (1991b) notes:

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In dealing with problems women have in the workforce the suggested resolution usually involves helping women learn more about competitive situations called for at work--for example how to take more power, be more competitive, act more impersonal develop more invulnerability to feedback, and think more analytically" (p.225).

In other words, just strive to be like a man.

Instead of forcing women to adapt to a "manly" approach, this researcher argues that fundamental changes in the structure of the workplace are needed. There are potential advantages that could result from restructuring the workplace to facilitate connected interactions. The special skills of connected people can facilitate a move away from traditional hierarchical organizations towards teamwork oriented structures. Connected people's understanding and awareness of others' needs gives them an advantage in mutual decision-making, cooperation, and negotiation. These skills are vital to Quality of Work Life, Parallel Organizations, and other worker participation groups. Connected people would be particularly well suited to leading these groups and to serve as roles models. By applying empathic skills, Connected individuals may be able to draw out ideas and elicit cooperative behavior from participants in a work group. Thus, the effectiveness of the work group may be enhanced.

In addition to changing the organization structure of the workplace, performance evaluation and compensation and incentive methods can be altered. Briefly, organizations can change these methods to reinforce connected types of behaviors that are necessary for team oriented structures. This

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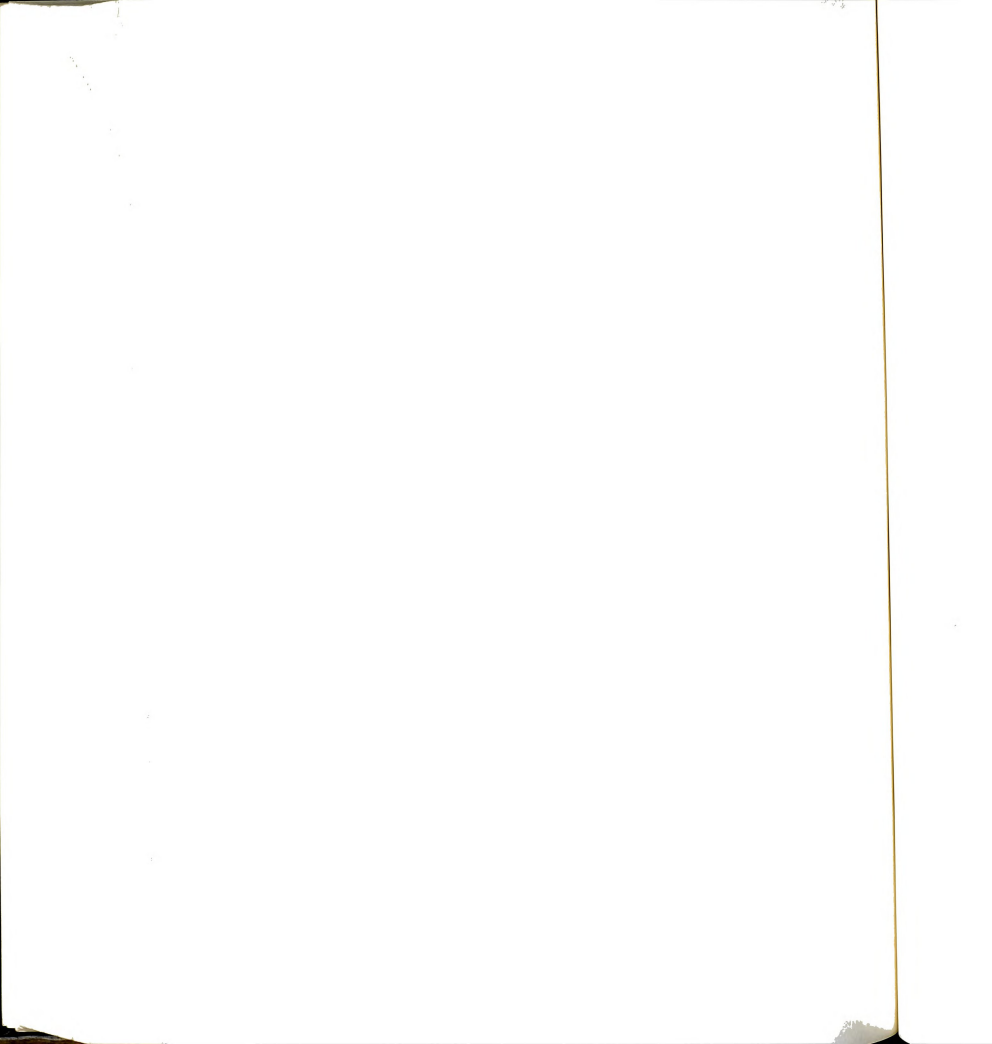
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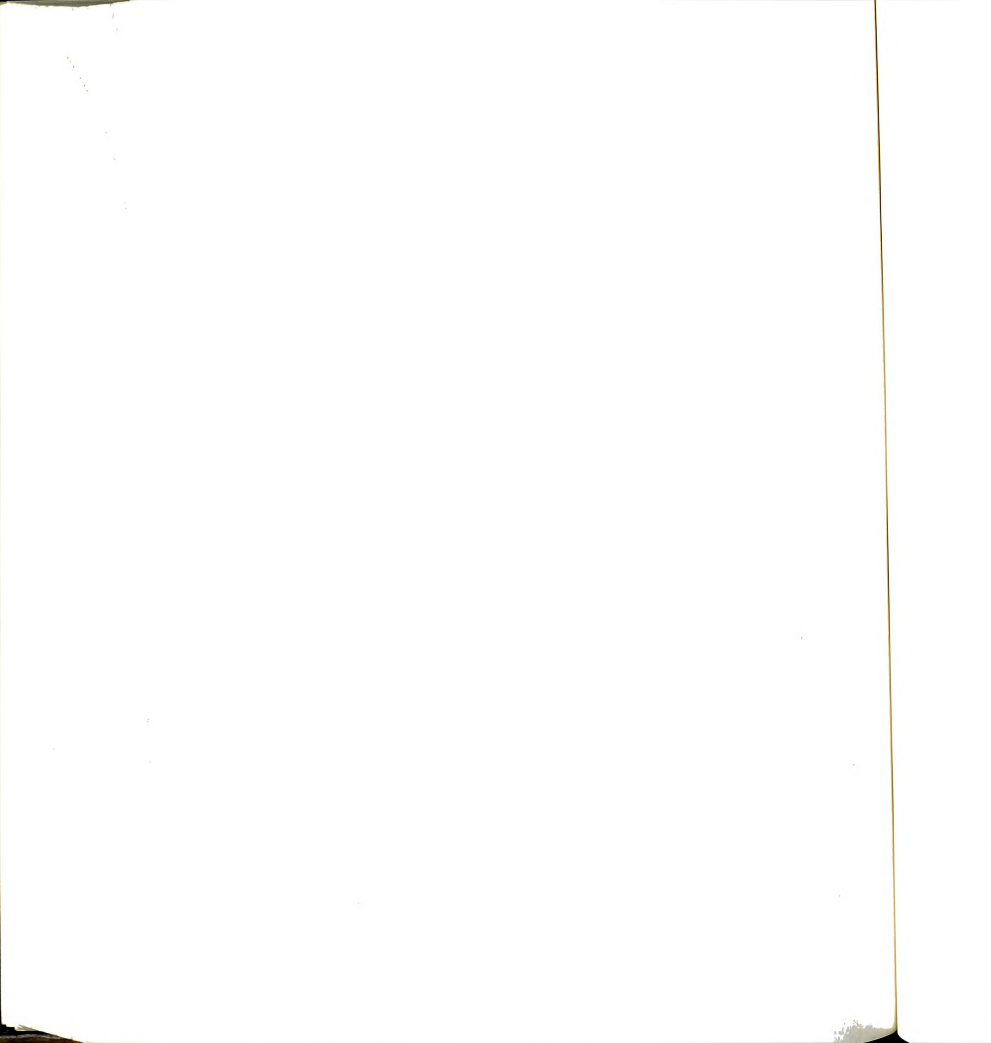


may serve to offset gender related biases in pay and career advancement.

Differences in Identity need to be recognized and these differences should not be devalued. In the words of Alice Rossi, "Men and women do not have to do the same things or be the same things in order to be socially, economically and politically equal" (Rossi, 1977, p.3). This declaration applies equally well to people who possess Separate and Connected Identities. Perhaps the special nature of connected individuals can be used to construct cooperative relations in the workplace and in society at large. Why not envision a different kind of society; one that allows for connected people to make their own distinctive contribution.



## **APPENDICES**



**APPENDIX A**

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## APPENDIX A

### COVER LETTER FOR QUESTIONNAIRE

#### WHAT HELPS YOU GET A GOOD CAREER???

Dear Senior,

I need your help! You are one of a small group of Michigan State seniors who are being asked to fill out a questionnaire on your values, and your attitudes towards different kinds of vocational resources.

As you probably know, many students have a difficult time deciding on a career to enter. Presently Career Resource Centers have not identified all factors that may be important to determining the types of vocational resources individuals may best learn from. Your responses to this questionnaire will help in learning more about how individuals' characteristics correspond to people's endorsements of vocational resources. Findings may provide information useful to University Career Resource Centers in designing vocational services. Your assistance, in the long run may benefit future students who are trying to make career decisions. So, even though you may be graduating shortly from MSU, you may still contribute to research that is of great potential value.

You are probably wondering "Well, what is a vocational resource?" A vocational resource is a tool that helps you deal with a vocational task, such as writing a good resume or deciding on a career. Some types of vocational resources students may use are computerized vocational guidance programs, or discussions with a vocational counselor or business representative.

In completing this survey, you are being asked to fill out two questionnaires in which you rate your values, and one questionnaire in which you will rate the degree that you endorse different vocational resources. Also, you are being asked to provide some demographic information. This questionnaire takes approximately 45 minutes to complete.

Because I deeply appreciate your participation in this research project, upon mailing back the completed questionnaire, you will be included in a drawing in which four people will each win \$50!

Responses  
at the Admin  
and addresses  
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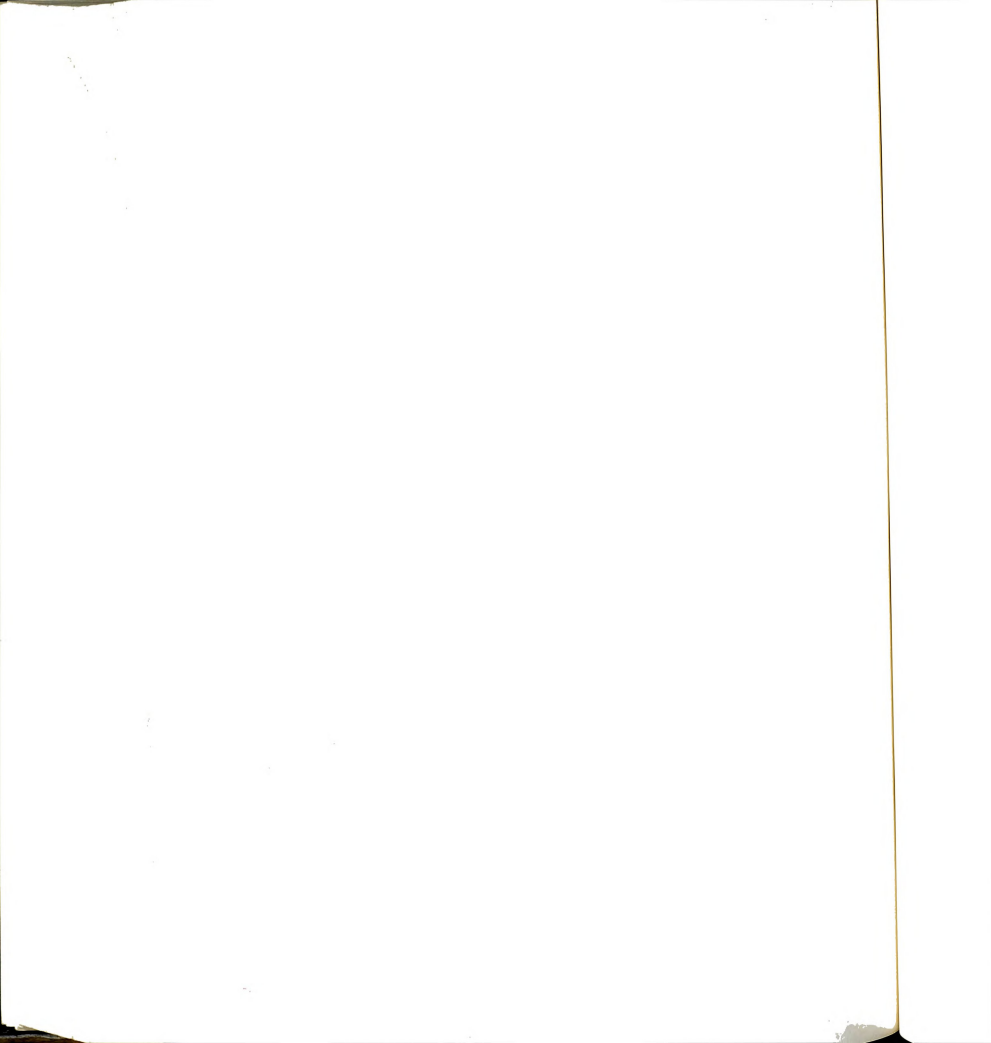
Responses to the survey are completely anonymous. Staff at the Administration Building will have a record of names and addresses that questionnaires are sent to, but this information is not available to me, the researcher, who will only receive the results of the questionnaire. You may decide not to participate, or refuse to answer specific questions without any negative consequence. Still, your responses to the survey are considered very important.

Please let me know that you will help by filling out the numbered questionnaire and sending it back to me in the enclosed envelope. By completing and returning this questionnaire, you indicate your voluntary agreement to participate in this research. If you decide not to complete the questionnaire, please mail it back to me anyway so that it can be reused.

I am looking forward to learning from your responses ways to improve vocational services for students. If you have any questions or concerns, or would like to receive a summary of research results, please call me at (517) 355-2753.

Sincerely,

Loren J. Adams



**APPENDIX B**  
**RESEARCH QUESTIONNAIRE**

This survey  
honestly and  
that you have

Section I: Work

The statements below  
These are satisfactory  
They are not all correct  
but are of little importance  
important it is or

Circle one number

Work in

1. ...have to keep
2. ...help others
3. ...can get a raise
4. ...look forward
5. ...have freedom
6. ...gain prestige
7. ...need to have
8. ...are one of the
9. ...know your
10. ...can be the best
11. ...have a boss
12. ...like the set
13. ...get the feel  
day's
14. ...have authority

## APPENDIX B

### RESEARCH QUESTIONNAIRE

This survey contains 4 sections. Please fill in each section as honestly and completely as you possibly can. Check to make sure that you have answered all questions to the best of your ability.

#### Section I: Work Values Inventory

The statements below represent values which people consider important in their work. These are satisfactions which people often seek in their jobs or as a result of their jobs. They are not all considered equally important; some are very important to some people but are of little importance to others. Read each statement carefully and indicate how important it is or would be for you.

- 5 means "very important"
- 4 means "important"
- 3 means "moderately important"
- 2 means "of little importance"
- 1 means "unimportant"

Circle one number under each item to show your rating of the statement.

Work in which you...

- |                                                          |   |   |   |   |   |
|----------------------------------------------------------|---|---|---|---|---|
| 1. ...have to keep solving new problems.                 | 1 | 2 | 3 | 4 | 5 |
| 2. ...help others.                                       | 1 | 2 | 3 | 4 | 5 |
| 3. ...can get a raise.                                   | 1 | 2 | 3 | 4 | 5 |
| 4. ...look forward to changes in your job.               | 1 | 2 | 3 | 4 | 5 |
| 5. ...have freedom in your own area.                     | 1 | 2 | 3 | 4 | 5 |
| 6. ...gain prestige in your field.                       | 1 | 2 | 3 | 4 | 5 |
| 7. ...need to have artistic ability.                     | 1 | 2 | 3 | 4 | 5 |
| 8. ...are one of the gang.                               | 1 | 2 | 3 | 4 | 5 |
| 9. ...know your job will last.                           | 1 | 2 | 3 | 4 | 5 |
| 10. ...can be the kind of person you would like to be.   | 1 | 2 | 3 | 4 | 5 |
| 11. ...have a boss who gives you a square deal.          | 1 | 2 | 3 | 4 | 5 |
| 12. ...like the setting in which your job is done.       | 1 | 2 | 3 | 4 | 5 |
| 13. ...get the feeling of having done a good day's work. | 1 | 2 | 3 | 4 | 5 |
| 14. ...have authority over others.                       | 1 | 2 | 3 | 4 | 5 |

15. ...try out new
16. ...create some
17. ...know by the  
good.
18. ...have a boss
19. ...are sure of
20. ...add beauty
21. ...make your
22. ...have pay in  
of living
23. ...are mentall
24. ...use leaders
25. ...have adequ
26. ...have a way  
that yo
27. ...form frien
28. ...know that
29. ...do not do
30. ...feel you h
31. ...add to the
32. ...do many
33. ...are lookec
34. ...have gooc
35. ...lead the k
36. ...have a go  
light
37. ...plan and
38. ...need to be
39. ...are paid e
40. ...are your

- |                                                                                              |   |   |   |   |   |
|----------------------------------------------------------------------------------------------|---|---|---|---|---|
| 15. ...try out new ideas and suggestions.                                                    | 1 | 2 | 3 | 4 | 5 |
| 16. ...create something new.                                                                 | 1 | 2 | 3 | 4 | 5 |
| 17. ...know by the results when you've done a good job.                                      | 1 | 2 | 3 | 4 | 5 |
| 18. ...have a boss who is reasonable.                                                        | 1 | 2 | 3 | 4 | 5 |
| 19. ...are sure of always having a job.                                                      | 1 | 2 | 3 | 4 | 5 |
| 20. ...add beauty to the world.                                                              | 1 | 2 | 3 | 4 | 5 |
| 21. ...make your own decisions.                                                              | 1 | 2 | 3 | 4 | 5 |
| 22. ...have pay increases that keep up with the cost of living.                              | 1 | 2 | 3 | 4 | 5 |
| 23. ...are mentally challenged.                                                              | 1 | 2 | 3 | 4 | 5 |
| 24. ...use leadership abilities.                                                             | 1 | 2 | 3 | 4 | 5 |
| 25. ...have adequate lounge, toilet and other facilities.                                    | 1 | 2 | 3 | 4 | 5 |
| 26. ...have a way of life, while not on the job, that you like.                              | 1 | 2 | 3 | 4 | 5 |
| 27. ...form friendships with your fellow employees.                                          | 1 | 2 | 3 | 4 | 5 |
| 28. ...know that others consider your work important.                                        | 1 | 2 | 3 | 4 | 5 |
| 29. ...do not do the same thing all the time.                                                | 1 | 2 | 3 | 4 | 5 |
| 30. ...feel you have helped another person.                                                  | 1 | 2 | 3 | 4 | 5 |
| 31. ...add to the well-being of other people.                                                | 1 | 2 | 3 | 4 | 5 |
| 32. ...do many different things.                                                             | 1 | 2 | 3 | 4 | 5 |
| 33. ...are looked up to by others.                                                           | 1 | 2 | 3 | 4 | 5 |
| 34. ...have good contacts with fellow workers.                                               | 1 | 2 | 3 | 4 | 5 |
| 35. ...lead the kind of life you most enjoy.                                                 | 1 | 2 | 3 | 4 | 5 |
| 36. ...have a good place in which to work (good lighting, quiet, clean, enough space, etc.). | 1 | 2 | 3 | 4 | 5 |
| 37. ...plan and organize the work of others.                                                 | 1 | 2 | 3 | 4 | 5 |
| 38. ...need to be mentally alert.                                                            | 1 | 2 | 3 | 4 | 5 |
| 39. ...are paid enough to live right.                                                        | 1 | 2 | 3 | 4 | 5 |
| 40. ...are your own boss.                                                                    | 1 | 2 | 3 | 4 | 5 |

41. ...make attrac
42. ...are sure of a  
your p
43. ...have a supe
44. ...see the resu
45. ...contribute  
Now ch

## Section II: A

The following qu  
descriptions. Ple  
select the most a

1. I often try to a  
worst problems
2. A close friend  
need help and kn
3. I cannot choo  
self-developmer
4. I want to be r
5. In making de  
to keep a relation
6. I find it hard  
fortunes I believ
7. I try to curb r
8. Being unselfi  
making myself
9. Loving is lik  
wouldn't love th
10. In my every  
for an eye and a
11. I want to lea



- |                                                                            |   |   |   |   |   |
|----------------------------------------------------------------------------|---|---|---|---|---|
| 41. ...make attractive products.                                           | 1 | 2 | 3 | 4 | 5 |
| 42. ...are sure of another job in the company if<br>your present job ends. | 1 | 2 | 3 | 4 | 5 |
| 43. ...have a supervisor who is considerate.                               | 1 | 2 | 3 | 4 | 5 |
| 44. ...see the results of your efforts.                                    | 1 | 2 | 3 | 4 | 5 |
| 45. ...contribute new ideas.                                               | 1 | 2 | 3 | 4 | 5 |

Now check to be sure that you rated every statement.

## Section II: A SURVEY ON ME AND MY VALUES

The following questions are part of an inventory concerning people's values and self-descriptions. Please read each statement below. Then, using the rating scale provided, select the most appropriate response and circle the number that best describes you.

- |                                                                                                                         | Not<br>like me<br>at all | 1 | 2 | 3 | 4 | 5 | Very<br>much<br>like me |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------|---|---|---|---|---|-------------------------|
| 1. I often try to act on the belief that self-interest is one of the worst problems facing society.                     |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 2. A close friend is someone who will help you whenever you need help and know that you will help them if they need it. |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 3. I cannot choose to help someone else if it will hinder my self-development.                                          |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 4. I want to be responsible for myself.                                                                                 |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 5. In making decisions, I can neglect my own values in order to keep a relationship.                                    |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 6. I find it hard to sympathize with people whose misfortunes I believe are due mainly to their shortcomings.           |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 7. I try to curb my anger for fear of hurting others.                                                                   |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 8. Being unselfish with others is more important than making myself happy.                                              |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 9. Loving is like a contract: If its provisions aren't met, you wouldn't love the person any more.                      |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 10. In my everyday life I am guided by the notion of "an eye for an eye and a tooth for a tooth".                       |                          | 1 | 2 | 3 | 4 | 5 |                         |
| 11. I want to learn to stand on my own two feet.                                                                        |                          | 1 | 2 | 3 | 4 | 5 |                         |

12. I believe that  
can teach their ch  
with others.

13. I try not to th  
is a principle at s

14. I don't often  
good for me late

15. Activities of

16. If what I wan  
again to see if I

17. I do not wan

18. I am guided  
to be treated.

19. I believe tha  
let others shift fo

20. Being unse

21. When a frien  
not worked, I ar

22. I feel empty

23. Sometimes I  
do the things th

24. In order to c

25. I feel that m  
persons I care a

26. People who  
goals can't expe

27. Relationship

28. I often keep  
even if it means

29. If someone  
the offer even i

Circle the number that best describes you.

- |                                                                                                                                                | Not<br>like me<br>at all | 1 | 2 | 3 | 4 | 5 | Very<br>much<br>like me |
|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---|---|---|---|---|-------------------------|
| 12. I believe that one of the most important things that parents can teach their children is how to cooperate and live in harmony with others. |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 13. I try not to think about the feelings of others when there is a principle at stake.                                                        |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 14. I don't often do much for others unless they can do some good for me later on.                                                             |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 15. Activities of care that I perform expand both me and others.                                                                               |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 16. If what I want to do upsets other people, I try to think again to see if I really want to do it.                                           |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 17. I do not want others to be responsible for me.                                                                                             |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 18. I am guided by the principle of treating others as I want to be treated.                                                                   |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 19. I believe that I have to look out for myself and mine, and let others shift for themselves.                                                |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 20. Being unselfish with others is a way I make myself happy.                                                                                  |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 21. When a friend traps me with demands, and negotiation has not worked, I am likely to end the friendship.                                    |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 22. I feel empty if I'm not loosely involved with someone else.                                                                                |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 23. Sometimes I have to accept hurting someone else if I am to do the things that are important in my life.                                    |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 24. In order to continue a relationship it has to let both of us grow.                                                                         |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 25. I feel that my development has been shaped more by the persons I care about than by what I do and accomplish.                              |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 26. People who don't work hard to accomplish respectable goals can't expect me to help when they're in trouble.                                |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 27. Relationships are a central part of my identity.                                                                                           |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 28. I often keep quiet rather than hurt someone's feelings, even if it means giving a false impression.                                        |                          |   |   |   | 1 | 2 | 3 4 5                   |
| 29. If someone offers to do something for me, I should accept the offer even if I really want something else.                                  |                          |   |   |   | 1 | 2 | 3 4 5                   |

Circle the number

30. The worst thing  
to have my friend

31. If I am really  
even if it upsets o

32. Before I can b  
know my true fee

33. What it all boi  
on is myself.

34. Even though  
decisions based u

35. Even though  
when I need to ta

36. I like to see m  
of friends.

37. Those about

38. I accept my o

39. I believe that  
responsible for n

40. The people w  
close personal re

41. It is necessar  
my actions have

42. True respons  
for as well as the

43. The feelings  
what is right.

44. If someone  
think about whe

45. I make decis  
me and mine.

46. Once I've w

Circle the number that best describes you.

	Not like me at all	1	2	3	4	5	Very much like me
30. The worst thing that could happen in a friendship would be to have my friend reject me.					1	2	3 4 5
31. If I am really sure that what I want to do is right, I do it even if it upsets other people.					1	2	3 4 5
32. Before I can be sure I really care for someone, I have to know my true feelings.					1	2	3 4 5
33. What it all boils down to is that the only person I can rely on is myself.					1	2	3 4 5
34. Even though I am sensitive to others' feelings, I make decisions based upon what I feel is best for me.					1	2	3 4 5
35. Even though it's difficult, I have learned to say no to others when I need to take care of myself.					1	2	3 4 5
36. I like to see myself as interconnected with a network of friends.					1	2	3 4 5
37. Those about whom I care deeply are part of who I am.					1	2	3 4 5
38. I accept my obligations and expect others to do the same.					1	2	3 4 5
39. I believe that I must care for myself because others are not responsible for me.					1	2	3 4 5
40. The people whom I admire are those who seem to be in close personal relationships.					1	2	3 4 5
41. It is necessary for me to take responsibility for the effect my actions have on others.					1	2	3 4 5
42. True responsibility involves making sure my needs are cared for as well as the needs of others.					1	2	3 4 5
43. The feelings of others are not relevant when deciding what is right.					1	2	3 4 5
44. If someone asks me for a favor, I have a responsibility to think about whether or not I want to do the favor.					1	2	3 4 5
45. I make decisions based upon what I believe is best for me and mine.					1	2	3 4 5
46. Once I've worked out my position on some issue, I stick to it.					1	2	3 4 5

Circle the num

47. I believe that I  
taking care of my

48. The best way  
you don't really w

49. Doing things

50. All you really

51. I deserve the

52. You've got to  
circumstances and

53. I cannot afford  
when I am certain

54. If someone do  
something for the

55. Caring about

56. If other people  
my sake I want th

57. When I make  
to make the right

58. I try to approac  
and efficiency as

59. If I am to help  
stand my own me

60. I like to acqui

Circle the number that best describes you.

	Not like me at all	1	2	3	4	5	Very much like me
47. I believe that in order to survive I must concentrate more on taking care of myself than on taking care of others.					1	2	3 4 5
48. The best way to help someone is to do what they ask even if you don't really want to do it.					1	2	3 4 5
49. Doing things for others makes me happy.					1	2	3 4 5
50. All you really need to do to help someone is to love them.					1	2	3 4 5
51. I deserve the love of others as much as they deserve my love.					1	2	3 4 5
52. You've got to look out for yourself, or the demands of circumstances and of other people will eat you up.					1	2	3 4 5
53. I cannot afford to give attention to the opinions of others when I am certain I am correct.					1	2	3 4 5
54. If someone does something for me, I reciprocate by doing something for them.					1	2	3 4 5
55. Caring about other people is important to me.					1	2	3 4 5
56. If other people are going to sacrifice something they want for my sake I want them to understand what they are doing.					1	2	3 4 5
57. When I make a decision it's important to use my own values to make the right choice.					1	2	3 4 5
58. I try to approach relationships with the same organization and efficiency as I approach my work.					1	2	3 4 5
59. If I am to help another person it is important to me to understand my own motives.					1	2	3 4 5
60. I like to acquire many acquaintances and friends.					1	2	3 4 5

Section III:

Five scenarios  
can be used to

Scenario 1:  
(satisfactions  
challenged"  
Learning abo  
provide satis

You are  
from 1 (highest

Option  
environments f  
among these, as  
your original or  
This method all  
without the inf

Option  
together about  
explore other p  
helping each o  
own work val

Circle the nu  
2.

1. How likely  
with Option

2. How likely  
with Option

3. To what ex  
help you e

4. To what ex  
help you e

5. How likely

6. How likely



### Section III: VOCATIONAL RESOURCE OPTIONS

Five scenarios follow. In each scenario, two vocational resource options are given that can be used to aid people in dealing with different vocational issues or problems.

**Scenario 1:** You are assessing the importance of work values (satisfactions you obtain from your career, such as feeling "mentally challenged" or "forming friendships with fellow employees", etc.). Learning about your work values is important in identifying jobs that will provide satisfaction.

You are given a list of 15 work values which you rank in order of importance from 1 (highest in importance) to 15 (lowest). Afterwards...

**Option 1:** You use a computerized program which gives you descriptions of work environments focusing on different sets of work values. You rate your preferences among these, and the computer prioritizes your values. Then you compare the results to your original ordering of the 15 items and see if you need to reconsider any of them. This method allows you to develop a clear understanding of your own work values without the influence of others.

**Option 2:** You participate in a small group in which people informally talk together about their rankings of the 15 work values. The goal of this exercise is to help explore other people's experiences to understand their ranking of their work values. In helping each other explore how they have developed their work values, you clarify your own work values.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are you to feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you evaluate your work values?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you evaluate your work values?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	

Scenario 2: Y  
options.

An expert  
worried about making  
decision between

Option 1:  
group decides to  
problems of other  
more time will be  
dealt with. How  
person's degree of

Option 2:  
decides that they  
problems. They  
group members  
proportion of time  
needs for assistance

Circle the number  
2.

1. How likely is it that you will choose Option 1 with Option 1?
2. How likely is it that you will choose Option 2 with Option 2?
3. To what extent will you help you evaluate Option 1?
4. To what extent will you help you evaluate Option 2?
5. How likely is it that you will choose Option 1 with Option 1?
6. How likely is it that you will choose Option 2 with Option 2?

**Scenario 2: You are working in a group that is considering career options.**

An expert directs a group of 6 people. One of the participants is extremely worried about making a good career choice because in 3 days he must make a final decision between two job offers.

**Option 1:** Because this one person appears to be in great need of assistance, the group decides to spend more time helping him work on his problems than on the problems of other members of the group. If others' needs are stronger in later sessions, more time will then be spent on their problems. Eventually all persons' needs will be dealt with. However, within each session, the time spent will be allocated based on each person's degree of need.

**Option 2:** Although this one person is in great need of assistance, the group decides that they will spend an equal amount of time at every session on each person's problems. They feel it would be unfair to spend more time on one person because all group members need assistance on their vocational choices. Everyone obtains an equal proportion of time within each counseling session, no matter how much their immediate needs for assistance differ.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are to you feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you evaluate your vocational decisions?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you evaluate your vocational decisions?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	

**Scenario 3: You are taking a course on Careers at the University to aid you in making future career choices.**

Students have been told to look through career literature and to interview people in various careers to prepare an individual presentation about a specific vocation.

Option 1: You are told to collect information separately, despite the fact that your topic may overlap with other students. The professor gives a fixed proportion of A's, B's, C's, D's, and F's. You must do better on your presentation than others to obtain a good grade and stand out in the class.

Option 2: You are told you can cooperate with others in getting information, even though you are giving individual presentations. Unlike the professor in Option 1, this professor does not give a specific proportion of A's, B's, C's, D's, and F's, so it is possible that everyone could obtain the same grade. Through interacting cooperatively with others in the class, it will be easier to get information for your class presentation, but in this setting you are not as likely to stand out for your individual accomplishments.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are you to feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you learn about careers to make good future career choices?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you learn about careers to make good future career choices?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	

**Scenario 4: You consult a career counselor as you decide on possible career paths.**

The career counselor gives you a variety of materials to help you through each step of assessing your career values, career interests, career aptitudes and viable career choices.

**Option 1:** After carrying out each task (eg. use of a questionnaire to assess work values), you return to see the counselor. Although you have not yet decided on a career path, you talk with the counselor about your progress, and you discuss your thoughts and impressions. The counselor never advises you to choose specific careers, but instead asks questions to help you to clarify your thoughts at each stage of the assessment. Your continued interaction with the career counselor helps you develop definite ideas about a potential career direction to follow.

**Option 2:** In contrast to Option 1, you do not meet with the career counselor while in the process of clarifying your career direction. You meet with the counselor only after you have carried out all the steps and after you have formed some definite ideas about career paths that interest you. When you finally meet with the counselor, you discuss the career path you plan to follow and why your career choices are right for you. The counselor never advises you to choose specific careers, but the two of you discuss whether your career plans are realistic. In this situation, you have worked on your own so that the career counselor has not influenced your initial decisions about your career direction.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are you to feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you decide on possible career paths?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you decide on possible career paths?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	

# Section IV: DEMOGRAPHIC INFORMATION

In this section, the following demographic information is needed. Please fill in the questions below by writing in a number or by checking off one response for each question.

1. How old are you? \_\_\_\_\_

2. What is your sex?    \_\_\_\_\_ Male        \_\_\_\_\_ Female

3. What race do you consider yourself?

\_\_\_\_\_ White/Caucasian

\_\_\_\_\_ Native American

\_\_\_\_\_ Black/African American

\_\_\_\_\_ Asian

\_\_\_\_\_ Hispanic/Chicano

\_\_\_\_\_ Other (please specify)

\_\_\_\_\_

4. In what state do you have permanent residency? \_\_\_\_\_ (State)

5. Have you taken any time off from your schooling?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If you answered Yes, how many months or years did you interrupt your schooling?

\_\_\_\_\_ 1 month up to 6 months

\_\_\_\_\_ More than 6 months up to 1 year

\_\_\_\_\_ More than 1 year up to 5 years

\_\_\_\_\_ More than 5 years

6. What is your marital status?

\_\_\_\_\_ Married

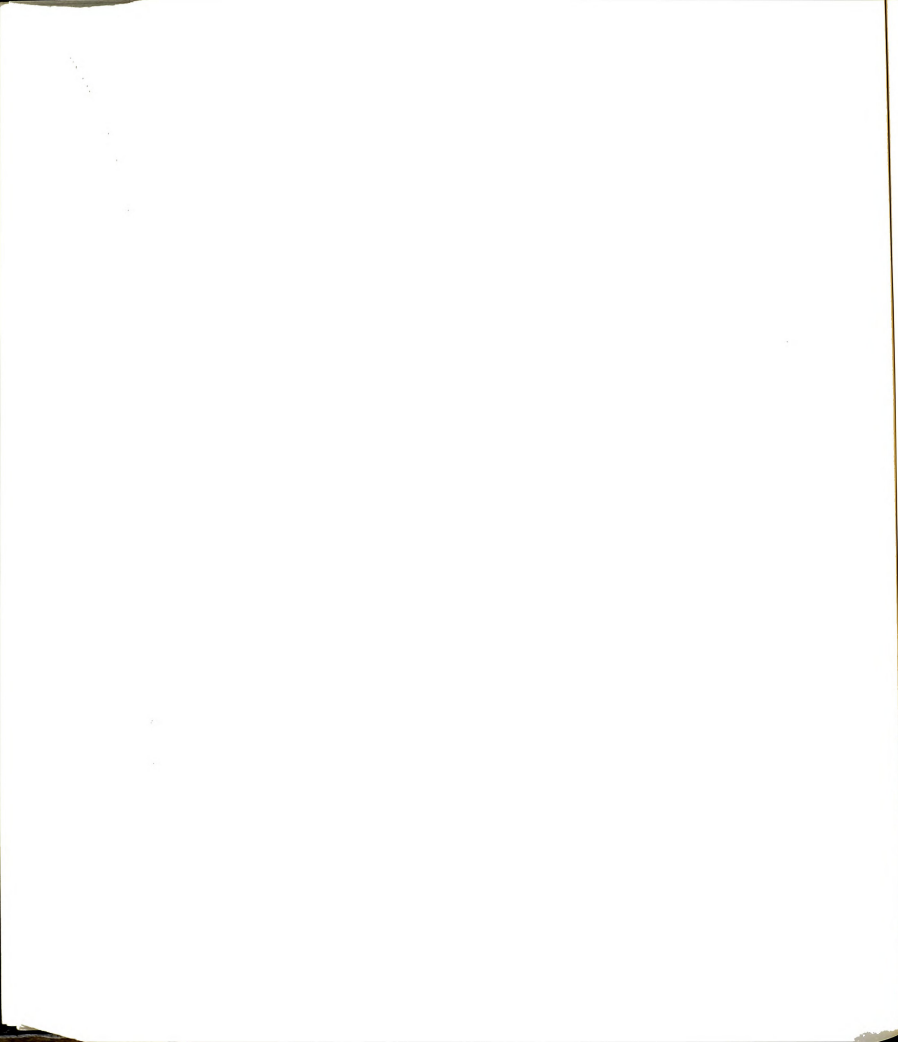
\_\_\_\_\_ Separated

\_\_\_\_\_ Divorced

\_\_\_\_\_ Widowed

\_\_\_\_\_ Single (never married)

7. Do you have children?    \_\_\_\_\_ Yes        \_\_\_\_\_ No



8. Estimate the range of your parents' total income, not just wages and salaries but from all sources and before taxes and other deductions in 1990:

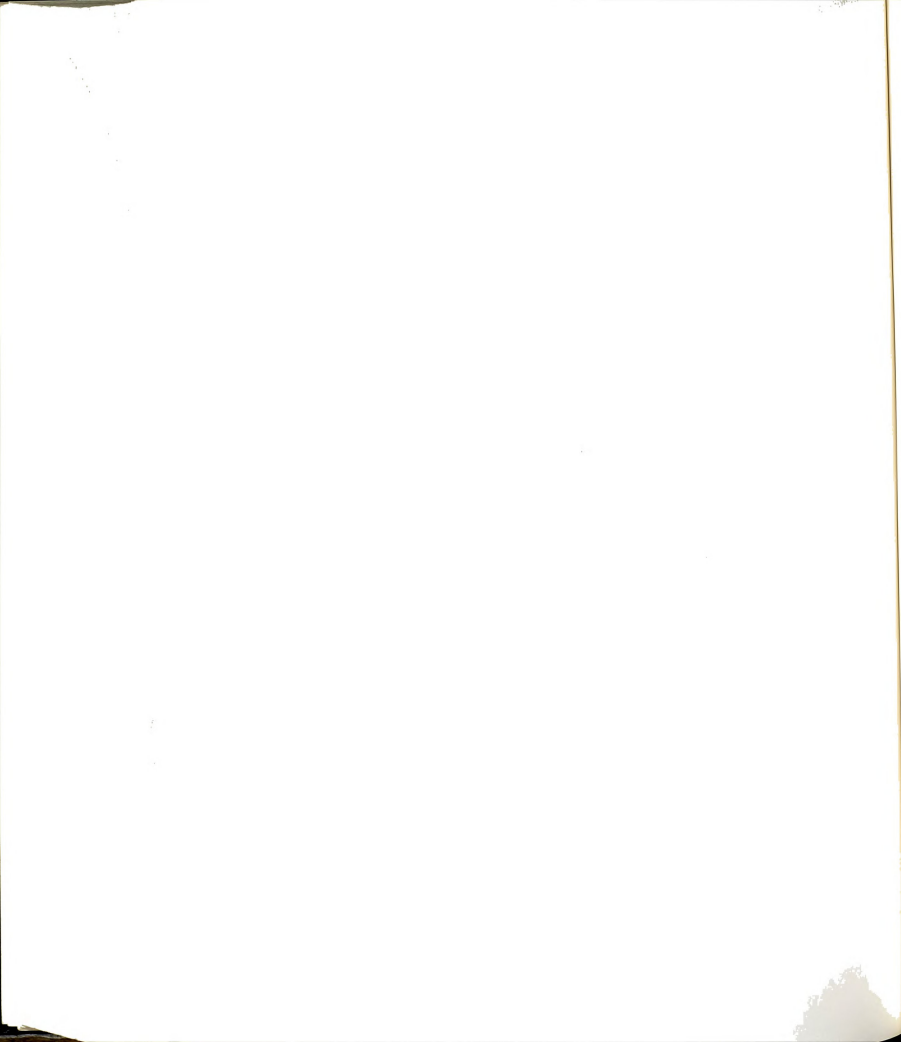
- \_\_\_\_\_ Under \$20,000
- \_\_\_\_\_ \$20,000 - 49,999
- \_\_\_\_\_ \$50,000 - 99,999
- \_\_\_\_\_ \$100,000 or more

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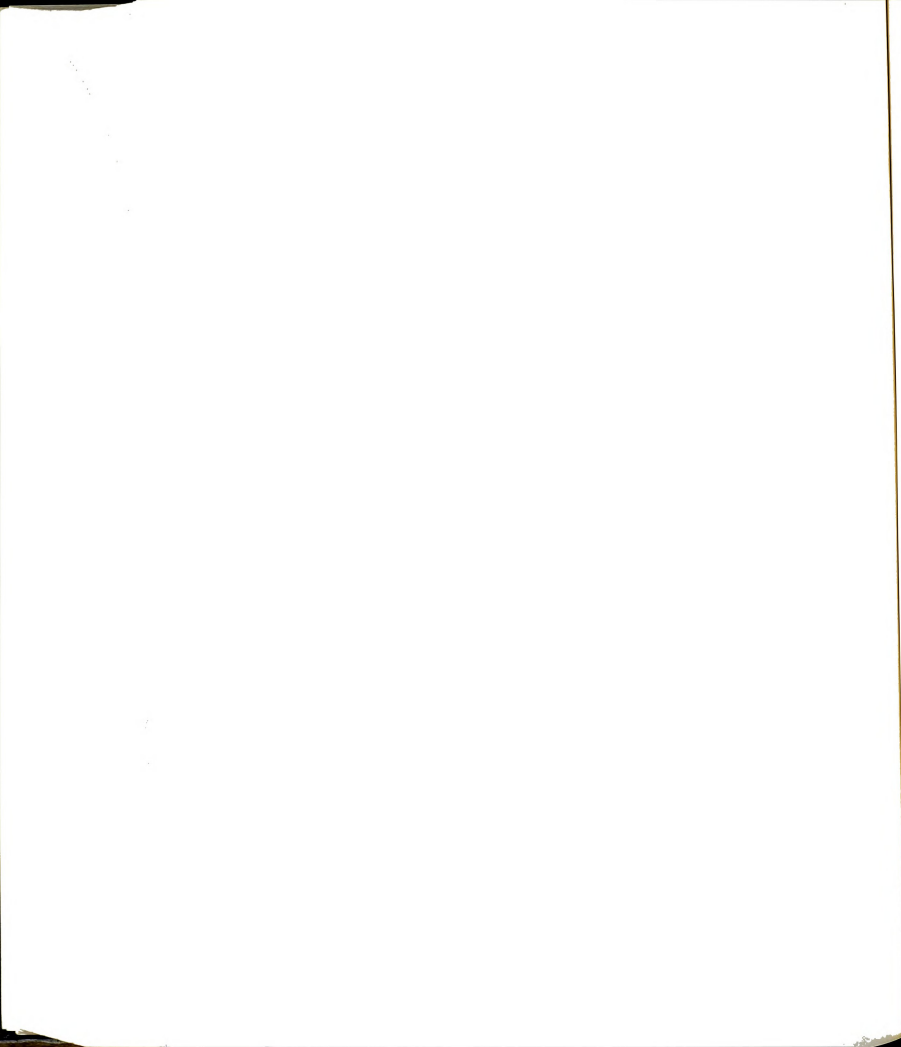
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**APPENDIX C**

**FOLLOW-UP LETTER MAILED ONE WEEK AFTER THE QUESTIONNAIRE**



## APPENDIX C

### FOLLOW-UP LETTER MAILED ONE WEEK AFTER THE QUESTIONNAIRE

#### WHAT HELPS YOU GET A GOOD CAREER???

Dear Senior,

Last week a questionnaire was sent to you to help evaluate your individual values and vocational resources that you may prefer. Your name was randomly selected from seniors attending Michigan State University. Your responses to this survey will help in learning more about how individuals' traits correspond to people's endorsements of vocational resources. Results may provide information useful for designing vocational services.

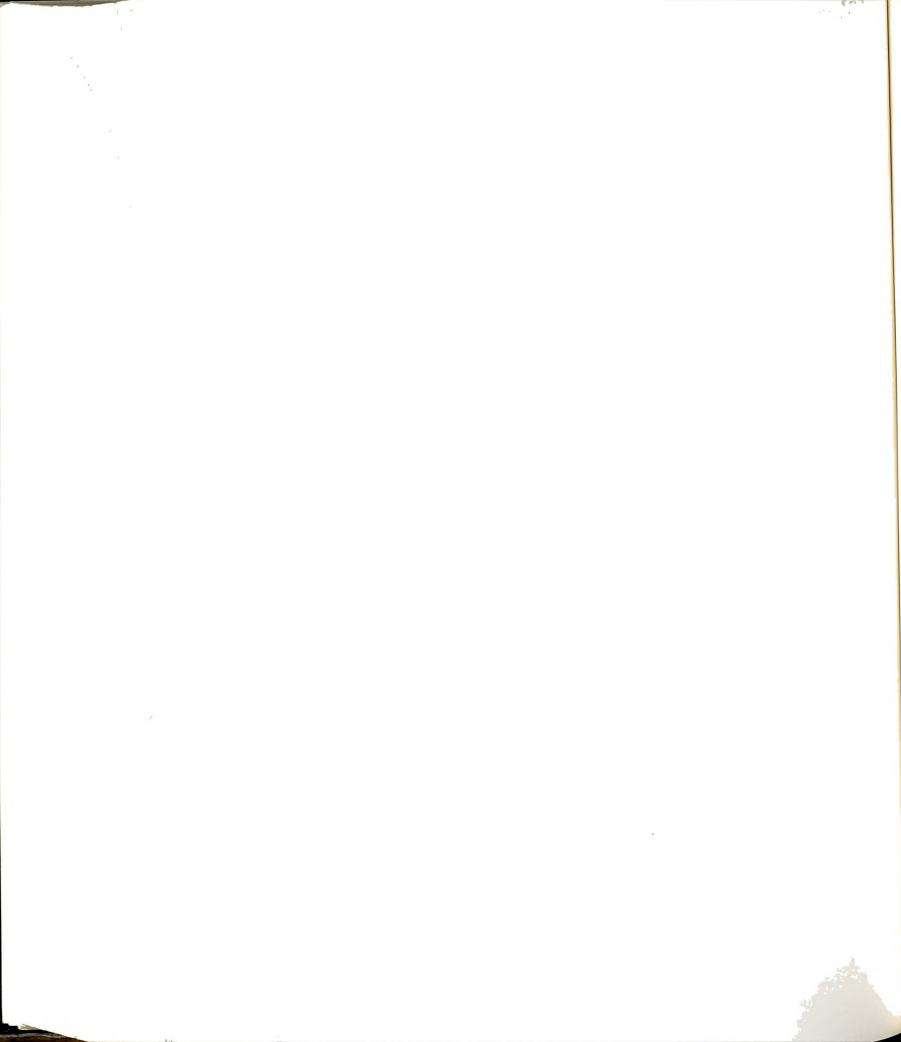
If you have already mailed this questionnaire back to me in the enclosed envelope, I really appreciate your quick response. If not, could you please complete it and send it back as soon as possible. Because you are among a small representative sample of MSU seniors, it is extremely important to get your feedback.

If you did not receive the questionnaire, or if it has been lost, please call me at 355-2753. Another copy will be sent to you immediately. Thanks very much for your time and assistance.

Sincerely,

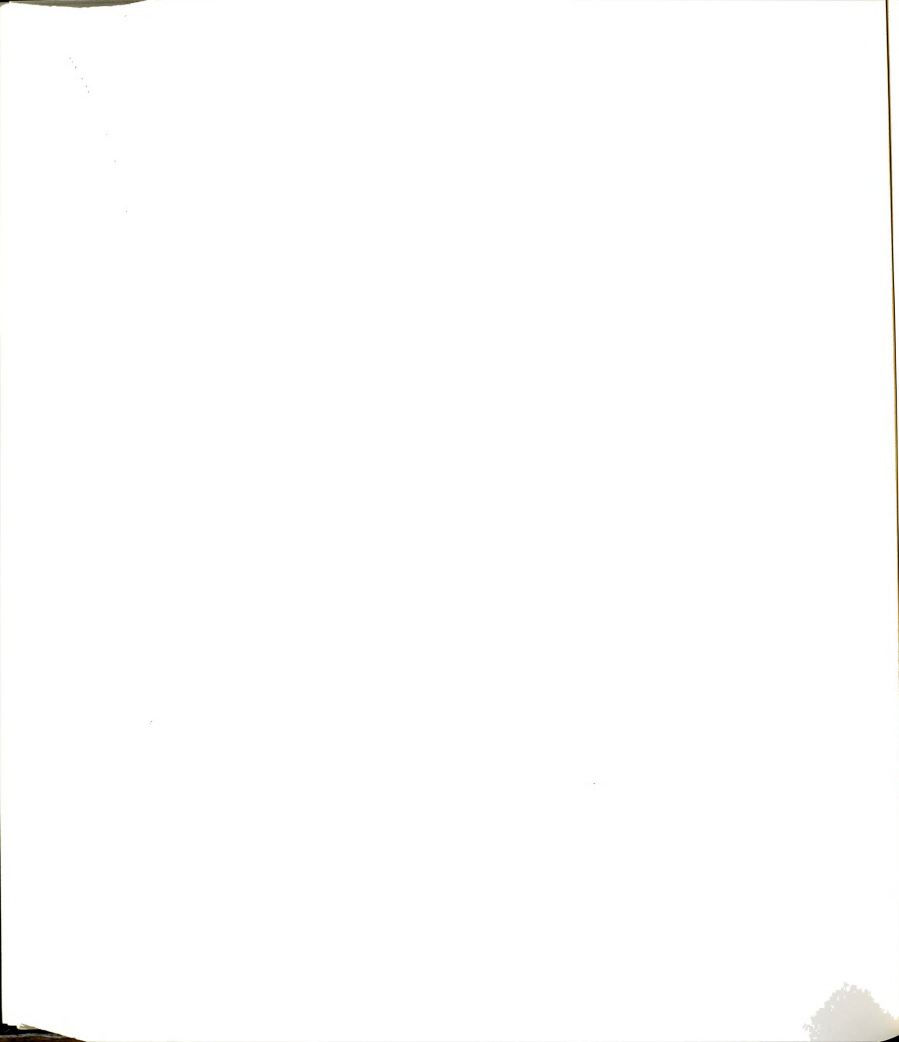
Loren J. Adams

P.S. Remember, to be included in the drawing for \$50.00, your completed questionnaire needs to be returned in the enclosed envelope. The numbers on the returned questionnaires and envelopes are used to select the four winners. The drawing will be held within the next 6 weeks.



APPENDIX D

SECOND FOLLOW-UP LETTER MAILED  
THREE WEEKS AFTER THE QUESTIONNAIRE



APPENDIX D

SECOND FOLLOW-UP LETTER MAILED  
THREE WEEKS AFTER THE QUESTIONNAIRE

WHAT HELPS YOU GET A GOOD CAREER???

Dear Senior,

About three weeks ago, I sent you a questionnaire asking about your values and the kinds of vocational resources you may prefer. As of today, your survey has not been received.

I have undertaken this research with an understanding of the difficulty that many college students have in making career choices and in obtaining desired careers. This study may provide information that would be helpful to University Career Resource Centers in redesigning vocational services.

I am writing you again because of the importance your response has to the usefulness of this study. Your name was drawn through a randomized sampling technique through the Administration Office of Michigan State University. For the results of this study to be truly representative of seniors at MSU, it is tremendously important that you respond to this questionnaire and mail it back.

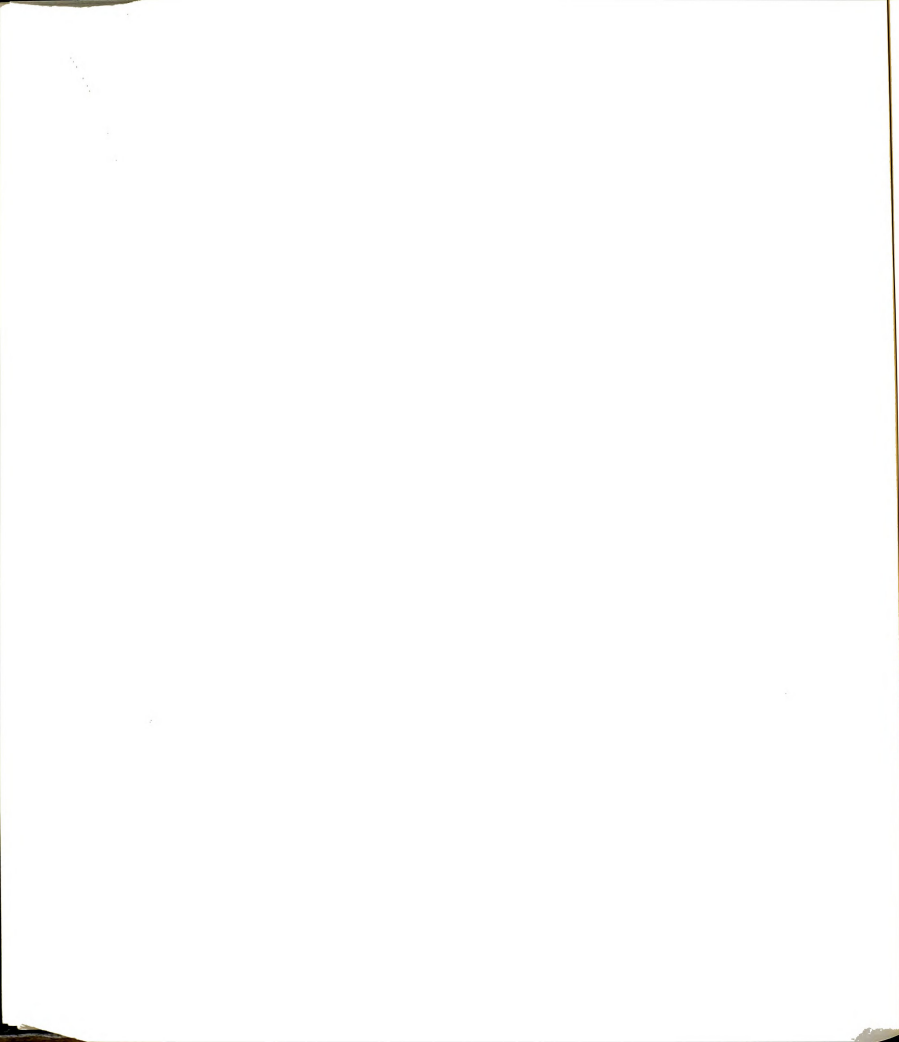
In case you have misplaced your questionnaire, I have enclosed a replacement copy for you to complete and mail back. Please accept my sincere thanks for your help. If you have any questions, please feel free to call me at 355-2753.

Sincerely,

Loren J. Adams

P.S. The contest in which 4 students will receive \$50.00 each will be held within the month.





**APPENDIX E**

**LETTER MAILED TO THE FOUR STUDENTS WHO WON CASH AWARDS**



APPENDIX E

LETTER MAILED TO THE FOUR STUDENTS WHO WON CASH AWARDS

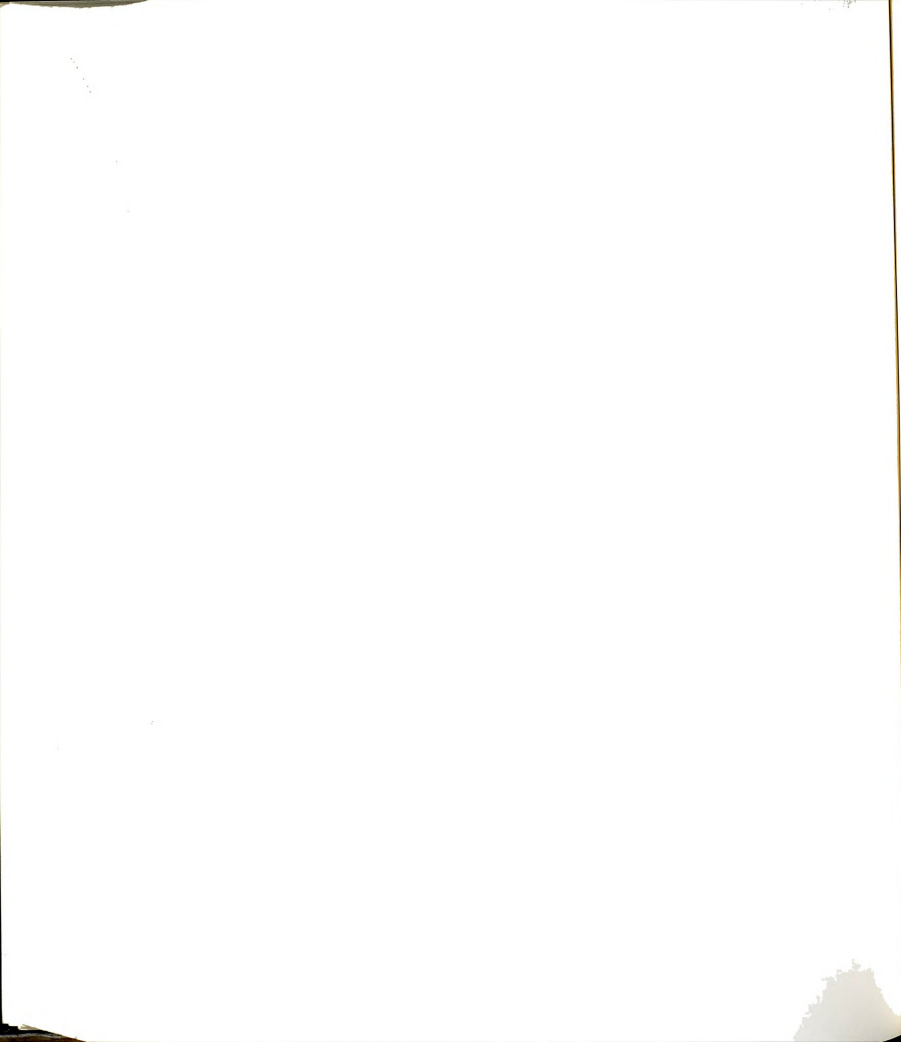
Dear Senior,

Congradulations! You have won the drawing for \$50 as a participant in my dissertation research on people's individual values and preferences for vocational resource options.

Thanks very much for your help.

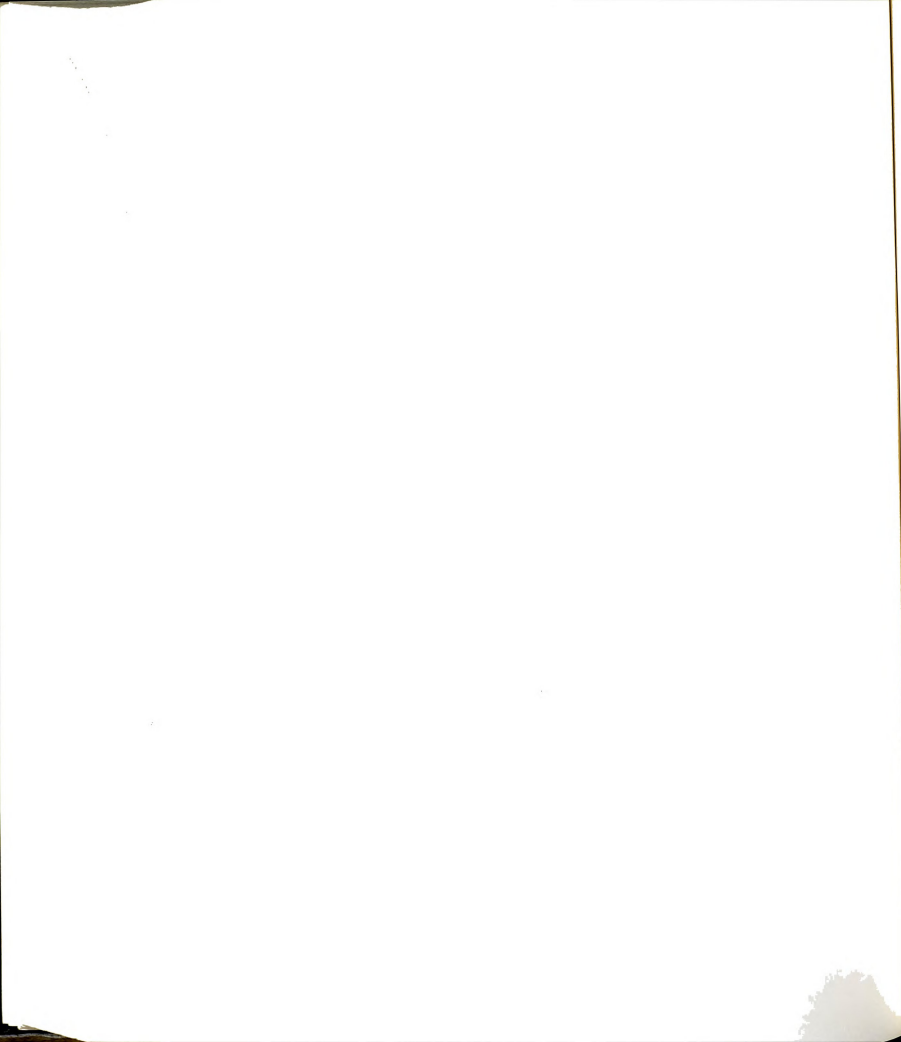
Sincerely,

Loren J. Adams



APPENDIX F

THE WORK VALUES INVENTORY



# APPENDIX F

## THE WORK VALUES INVENTORY

The statements below represent values which people consider important in their work. These are satisfactions which people often seek in their jobs or as a result of their jobs. They are not all considered equally important; some are very important to some people but are of little importance to others. Read each statement carefully and indicate how important it is or would be for you.

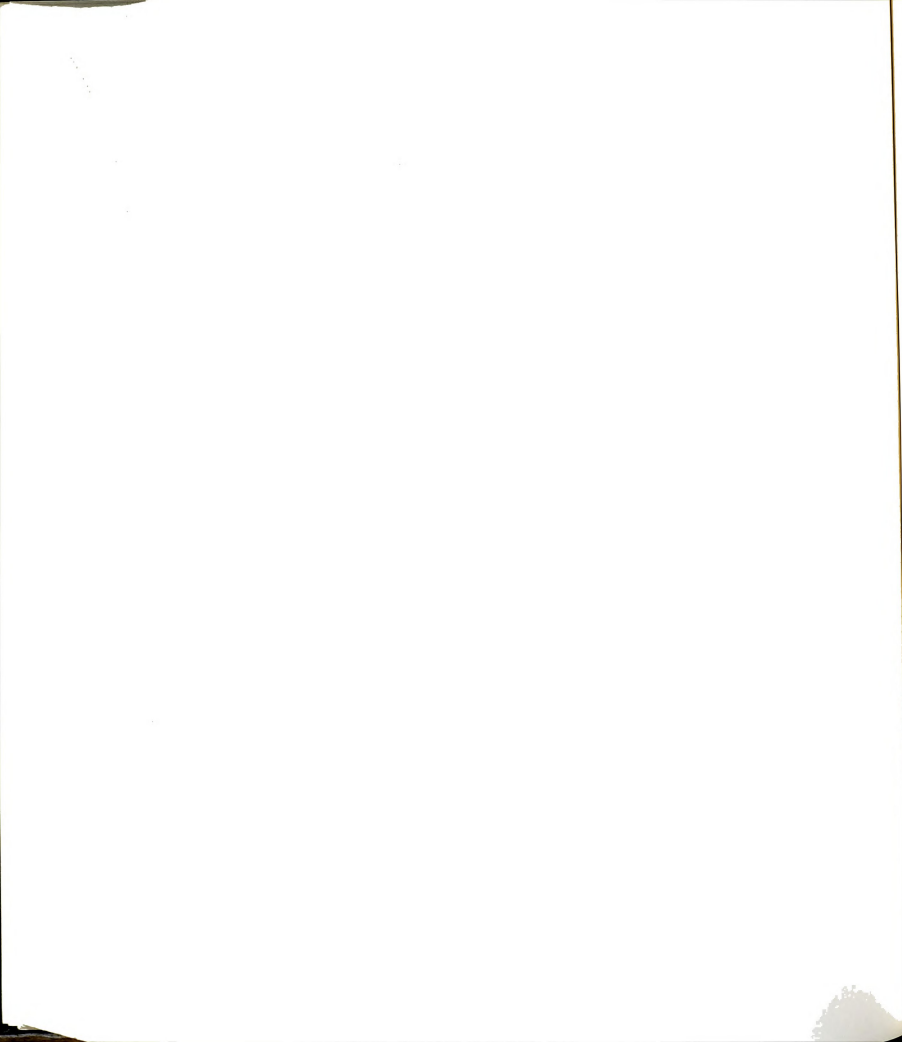
5 means "very important"  
 4 means "important"  
 3 means "moderately important"  
 2 means "of little importance"  
 1 means "unimportant"

Circle one number under each item to show your rating of the statement.

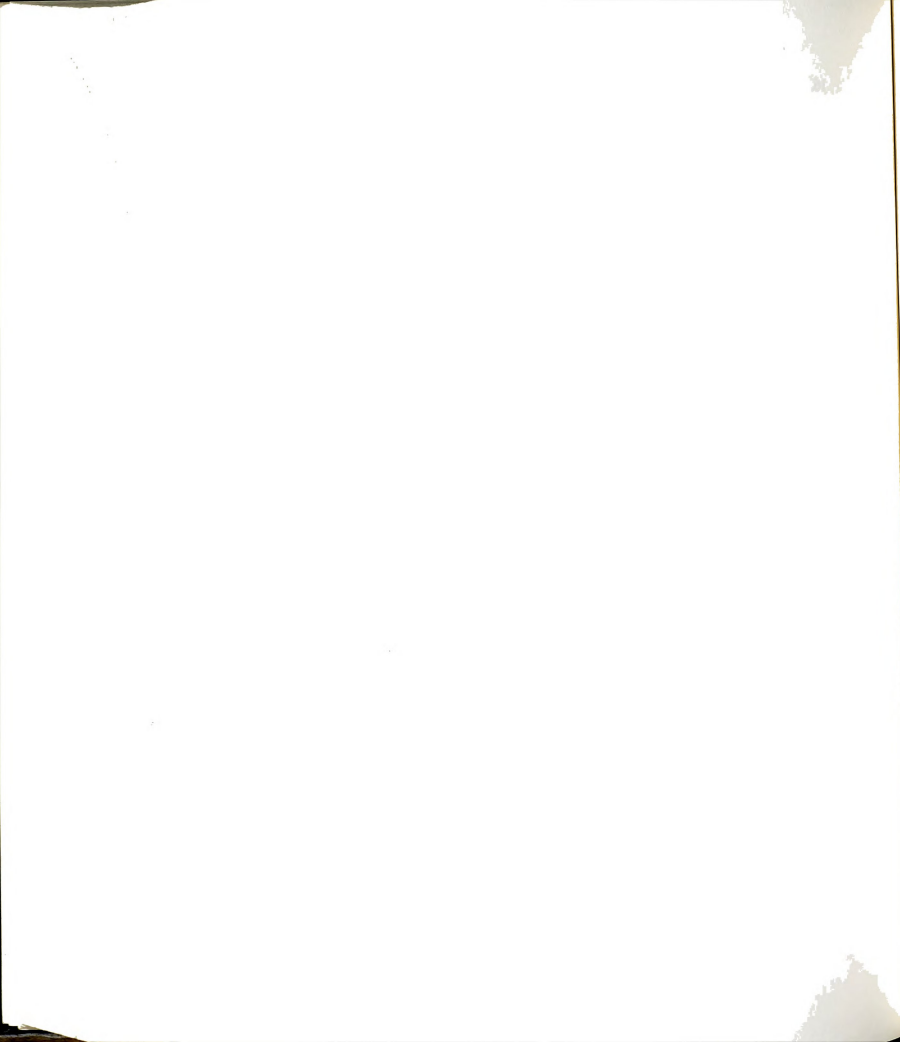
Work in which you...

- |                                                          |   |   |   |   |   |
|----------------------------------------------------------|---|---|---|---|---|
| 1. ...have to keep solving new problems.                 | 1 | 2 | 3 | 4 | 5 |
| 2. ...help others.                                       | 1 | 2 | 3 | 4 | 5 |
| 3. ...can get a raise.                                   | 1 | 2 | 3 | 4 | 5 |
| 4. ...look forward to changes in your job.               | 1 | 2 | 3 | 4 | 5 |
| 5. ...have freedom in your own area.                     | 1 | 2 | 3 | 4 | 5 |
| 6. ...gain prestige in your field.                       | 1 | 2 | 3 | 4 | 5 |
| 7. ...need to have artistic ability.                     | 1 | 2 | 3 | 4 | 5 |
| 8. ...are one of the gang.                               | 1 | 2 | 3 | 4 | 5 |
| 9. ...know your job will last.                           | 1 | 2 | 3 | 4 | 5 |
| 10. ...can be the kind of person you would like to be.   | 1 | 2 | 3 | 4 | 5 |
| 11. ...have a boss who gives you a square deal.          | 1 | 2 | 3 | 4 | 5 |
| 12. ...like the setting in which your job is done.       | 1 | 2 | 3 | 4 | 5 |
| 13. ...get the feeling of having done a good day's work. | 1 | 2 | 3 | 4 | 5 |
| 14. ...have authority over others.                       | 1 | 2 | 3 | 4 | 5 |
| 15. ...try out new ideas and suggestions.                | 1 | 2 | 3 | 4 | 5 |





- |                                                                                              |   |   |   |   |   |
|----------------------------------------------------------------------------------------------|---|---|---|---|---|
| 16. ...create something new.                                                                 | 1 | 2 | 3 | 4 | 5 |
| 17. ...know by the results when you've done a good job.                                      | 1 | 2 | 3 | 4 | 5 |
| 18. ...have a boss who is reasonable.                                                        | 1 | 2 | 3 | 4 | 5 |
| 19. ...are sure of always having a job.                                                      | 1 | 2 | 3 | 4 | 5 |
| 20. ...add beauty to the world.                                                              | 1 | 2 | 3 | 4 | 5 |
| 21. ...make your own decisions.                                                              | 1 | 2 | 3 | 4 | 5 |
| 22. ...have pay increases that keep up with the cost of living.                              | 1 | 2 | 3 | 4 | 5 |
| 23. ...are mentally challenged.                                                              | 1 | 2 | 3 | 4 | 5 |
| 24. ...use leadership abilities.                                                             | 1 | 2 | 3 | 4 | 5 |
| 25. ...have adequate lounge, toilet and other facilities.                                    | 1 | 2 | 3 | 4 | 5 |
| 26. ...have a way of life, while not on the job, that you like.                              | 1 | 2 | 3 | 4 | 5 |
| 27. ...form friendships with your fellow employees.                                          | 1 | 2 | 3 | 4 | 5 |
| 28. ...know that others consider your work important.                                        | 1 | 2 | 3 | 4 | 5 |
| 29. ...do not do the same thing all the time.                                                | 1 | 2 | 3 | 4 | 5 |
| 30. ...feel you have helped another person.                                                  | 1 | 2 | 3 | 4 | 5 |
| 31. ...add to the well-being of other people.                                                | 1 | 2 | 3 | 4 | 5 |
| 32. ...do many different things.                                                             | 1 | 2 | 3 | 4 | 5 |
| 33. ...are looked up to by others.                                                           | 1 | 2 | 3 | 4 | 5 |
| 34. ...have good contacts with fellow workers.                                               | 1 | 2 | 3 | 4 | 5 |
| 35. ...lead the kind of life you most enjoy.                                                 | 1 | 2 | 3 | 4 | 5 |
| 36. ...have a good place in which to work (good lighting, quiet, clean, enough space, etc.). | 1 | 2 | 3 | 4 | 5 |
| 37. ...plan and organize the work of others.                                                 | 1 | 2 | 3 | 4 | 5 |
| 38. ...need to be mentally alert.                                                            | 1 | 2 | 3 | 4 | 5 |
| 39. ...are paid enough to live right.                                                        | 1 | 2 | 3 | 4 | 5 |
| 40. ...are your own boss.                                                                    | 1 | 2 | 3 | 4 | 5 |

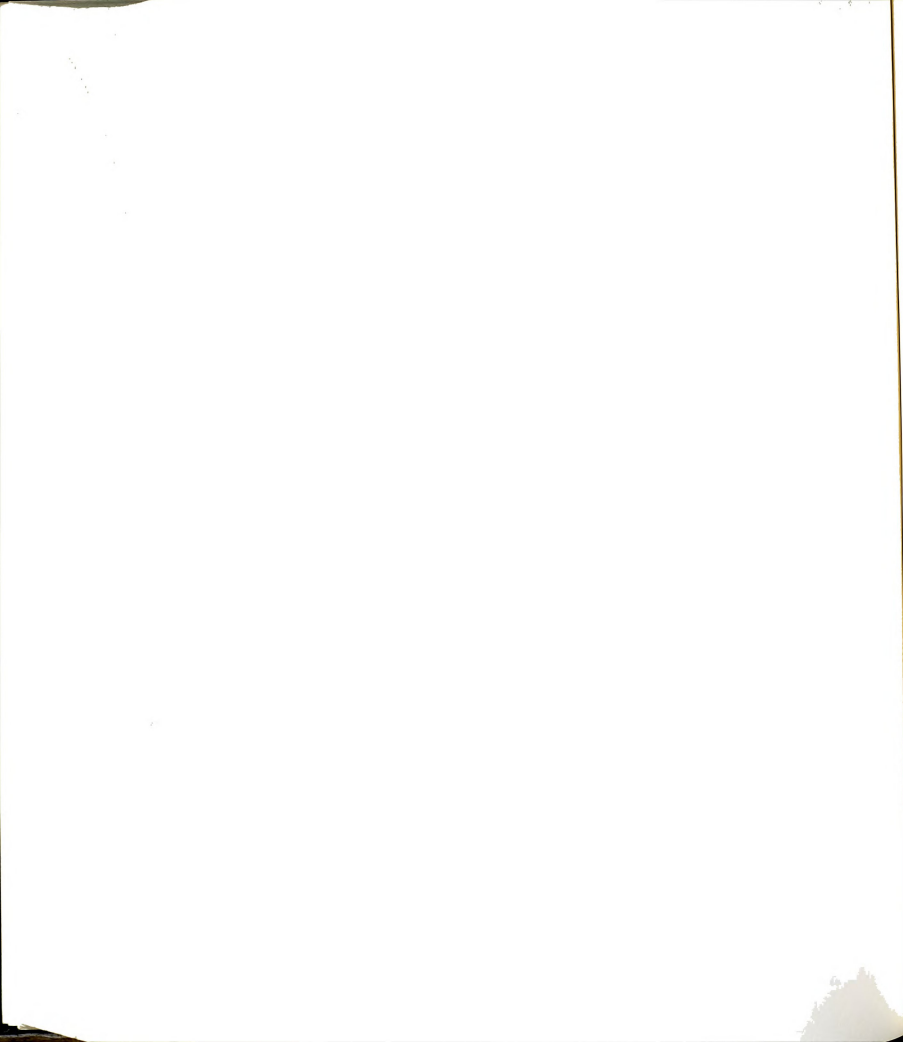


- |                                                                           |   |   |   |   |   |
|---------------------------------------------------------------------------|---|---|---|---|---|
| 41. ..make attractive products.                                           | 1 | 2 | 3 | 4 | 5 |
| 42. ..are sure of another job in the company if<br>your present job ends. | 1 | 2 | 3 | 4 | 5 |
| 43. ..have a supervisor who is considerate.                               | 1 | 2 | 3 | 4 | 5 |
| 44. ..see the results of your efforts.                                    | 1 | 2 | 3 | 4 | 5 |
| 45. ..contribute new ideas.                                               | 1 | 2 | 3 | 4 | 5 |

Now check to be sure that you rated every statement.

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**APPENDIX G**  
**THE RELATIONSHIP SELF INVENTORY**



# APPENDIX G

## THE RELATIONSHIP SELF INVENTORY

The following questions are part of an inventory concerning people's values and self-descriptions. Please read each statement below. Then, using the rating scale provided, select the most appropriate response and circle the number that best describes you.

	Not like me at all	1	2	3	4	5	Very much like me
1. I often try to act on the belief that self-interest is one of the worst problems facing society.						1 2 3 4 5	
2. A close friend is someone who will help you whenever you need help and know that you will help them if they need it.						1 2 3 4 5	
3. I cannot choose to help someone else if it will hinder my self-development.						1 2 3 4 5	
4. I want to be responsible for myself.						1 2 3 4 5	
5. In making decisions, I can neglect my own values in order to keep a relationship.						1 2 3 4 5	
6. I find it hard to sympathize with people whose misfortunes I believe are due mainly to their shortcomings.						1 2 3 4 5	
7. I try to curb my anger for fear of hurting others.						1 2 3 4 5	
8. Being unselfish with others is more important than making myself happy.						1 2 3 4 5	
9. Loving is like a contract: If its provisions aren't met, you wouldn't love the person any more.						1 2 3 4 5	
10. In my everyday life I am guided by the notion of "an eye for an eye and a tooth for a tooth".						1 2 3 4 5	
11. I want to learn to stand on my own two feet.						1 2 3 4 5	
12. I believe that one of the most important things that parents can teach their children is how to cooperate and live in harmony with others.						1 2 3 4 5	
13. I try not to think about the feelings of others when there is a principle at stake.						1 2 3 4 5	
14. I don't often do much for others unless they can do some good for me later on.						1 2 3 4 5	
15. Activities of care that I perform expand both me and others.						1 2 3 4 5	





- |                                                                                                                   |   |   |   |   |   |
|-------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 16. If what I want to do upsets other people, I try to think again to see if I really want to do it.              | 1 | 2 | 3 | 4 | 5 |
| 17. I do not want others to be responsible for me.                                                                | 1 | 2 | 3 | 4 | 5 |
| 18. I am guided by the principle of treating others as I want to be treated.                                      | 1 | 2 | 3 | 4 | 5 |
| 19. I believe that I have to look out for myself and mine, and let others shift for themselves.                   | 1 | 2 | 3 | 4 | 5 |
| 20. Being unselfish with others is a way I make myself happy.                                                     | 1 | 2 | 3 | 4 | 5 |
| 21. When a friend traps me with demands, and negotiation has not worked, I am likely to end the friendship.       | 1 | 2 | 3 | 4 | 5 |
| 22. I feel empty if I'm not loosely involved with someone else.                                                   | 1 | 2 | 3 | 4 | 5 |
| 23. Sometimes I have to accept hurting someone else if I am to do the things that are important in my life.       | 1 | 2 | 3 | 4 | 5 |
| 24. In order to continue a relationship it has to let both of us grow.                                            | 1 | 2 | 3 | 4 | 5 |
| 25. I feel that my development has been shaped more by the persons I care about than by what I do and accomplish. | 1 | 2 | 3 | 4 | 5 |
| 26. People who don't work hard to accomplish respectable goals can't expect me to help when they're in trouble.   | 1 | 2 | 3 | 4 | 5 |
| 27. Relationships are a central part of my identity.                                                              | 1 | 2 | 3 | 4 | 5 |
| 28. I often keep quiet rather than hurt someone's feelings, even if it means giving a false impression.           | 1 | 2 | 3 | 4 | 5 |
| 29. If someone offers to do something for me, I should accept the offer even if I really want something else.     | 1 | 2 | 3 | 4 | 5 |
| 30. The worst thing that could happen in a friendship would be to have my friend reject me.                       | 1 | 2 | 3 | 4 | 5 |
| 31. If I am really sure that what I want to do is right, I do it even if it upsets other people.                  | 1 | 2 | 3 | 4 | 5 |
| 32. Before I can be sure I really care for someone, I have to know my true feelings.                              | 1 | 2 | 3 | 4 | 5 |
| 33. What it all boils down to is that the only person I can rely on is myself.                                    | 1 | 2 | 3 | 4 | 5 |
| 34. Even though I am sensitive to others' feelings, I make decisions based upon what I feel is best for me.       | 1 | 2 | 3 | 4 | 5 |
| 35. Even though it's difficult, I have learned to say no to others when I need to take care of myself.            | 1 | 2 | 3 | 4 | 5 |



- |                                                                                                                        |   |   |   |   |   |
|------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 36. I like to see myself as interconnected with a network of friends.                                                  | 1 | 2 | 3 | 4 | 5 |
| 37. Those about whom I care deeply are part of who I am.                                                               | 1 | 2 | 3 | 4 | 5 |
| 38. I accept my obligations and expect others to do the same.                                                          | 1 | 2 | 3 | 4 | 5 |
| 39. I believe that I must care for myself because others are not responsible for me.                                   | 1 | 2 | 3 | 4 | 5 |
| 40. The people whom I admire are those who seem to be in close personal relationships.                                 | 1 | 2 | 3 | 4 | 5 |
| 41. It is necessary for me to take responsibility for the effect my actions have on others.                            | 1 | 2 | 3 | 4 | 5 |
| 42. True responsibility involves making sure my needs are cared for as well as the needs of others.                    | 1 | 2 | 3 | 4 | 5 |
| 43. The feelings of others are not relevant when deciding what is right.                                               | 1 | 2 | 3 | 4 | 5 |
| 44. If someone asks me for a favor, I have a responsibility to think about whether or not I want to do the favor.      | 1 | 2 | 3 | 4 | 5 |
| 45. I make decisions based upon what I believe is best for me and mine.                                                | 1 | 2 | 3 | 4 | 5 |
| 46. Once I've worked out my position on some issue, I stick to it.                                                     | 1 | 2 | 3 | 4 | 5 |
| 47. I believe that in order to survive I must concentrate more on taking care of myself than on taking care of others. | 1 | 2 | 3 | 4 | 5 |
| 48. The best way to help someone is to do what they ask even if you don't really want to do it.                        | 1 | 2 | 3 | 4 | 5 |
| 49. Doing things for others makes me happy.                                                                            | 1 | 2 | 3 | 4 | 5 |
| 50. All you really need to do to help someone is to love them.                                                         | 1 | 2 | 3 | 4 | 5 |
| 51. I deserve the love of others as much as they deserve my love.                                                      | 1 | 2 | 3 | 4 | 5 |
| 52. You've got to look out for yourself, or the demands of circumstances and of other people will eat you up.          | 1 | 2 | 3 | 4 | 5 |
| 53. I cannot afford to give attention to the opinions of others when I am certain I am correct.                        | 1 | 2 | 3 | 4 | 5 |
| 54. If someone does something for me, I reciprocate by doing something for them.                                       | 1 | 2 | 3 | 4 | 5 |
| 55. Caring about other people is important to me.                                                                      | 1 | 2 | 3 | 4 | 5 |

56. If other people are going to sacrifice something they want for my sake I want them to understand what they are doing.

1 2 3 4 5

57. When I make a decision it's important to use my own values to make the right choice.

1 2 3 4 5

58. I try to approach relationships with the same organization and efficiency as I approach my work.

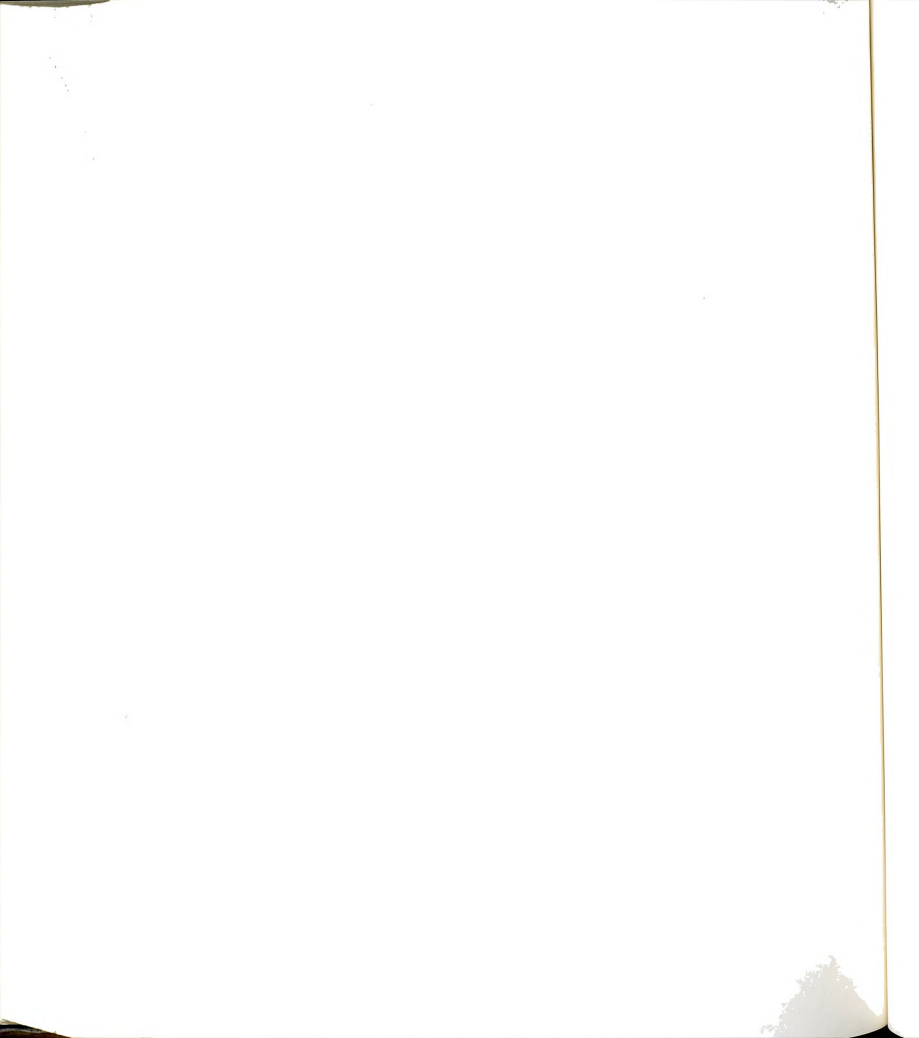
1 2 3 4 5

59. If I am to help another person it is important to me to understand my own motives.

1 2 3 4 5

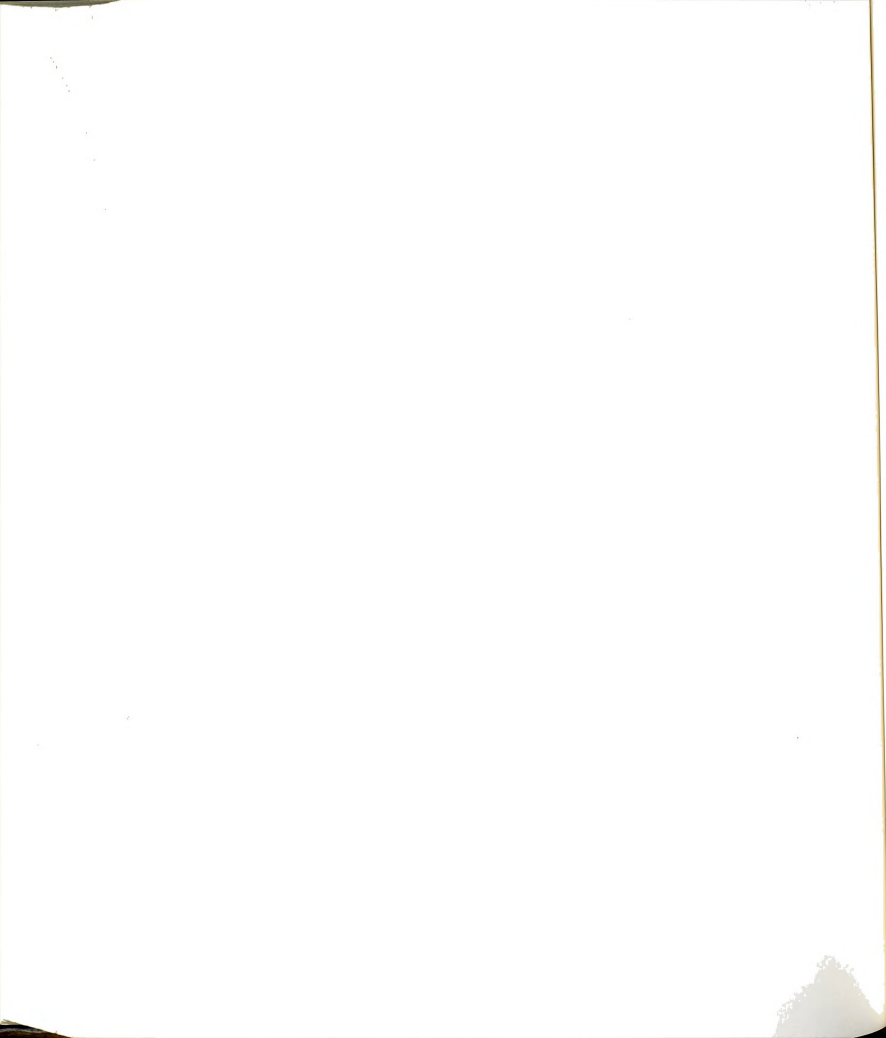
60. I like to acquire many acquaintances and friends.

1 2 3 4 5



**APPENDIX H**

**THE VOCATIONAL RESOURCE OPTIONS QUESTIONNAIRE**

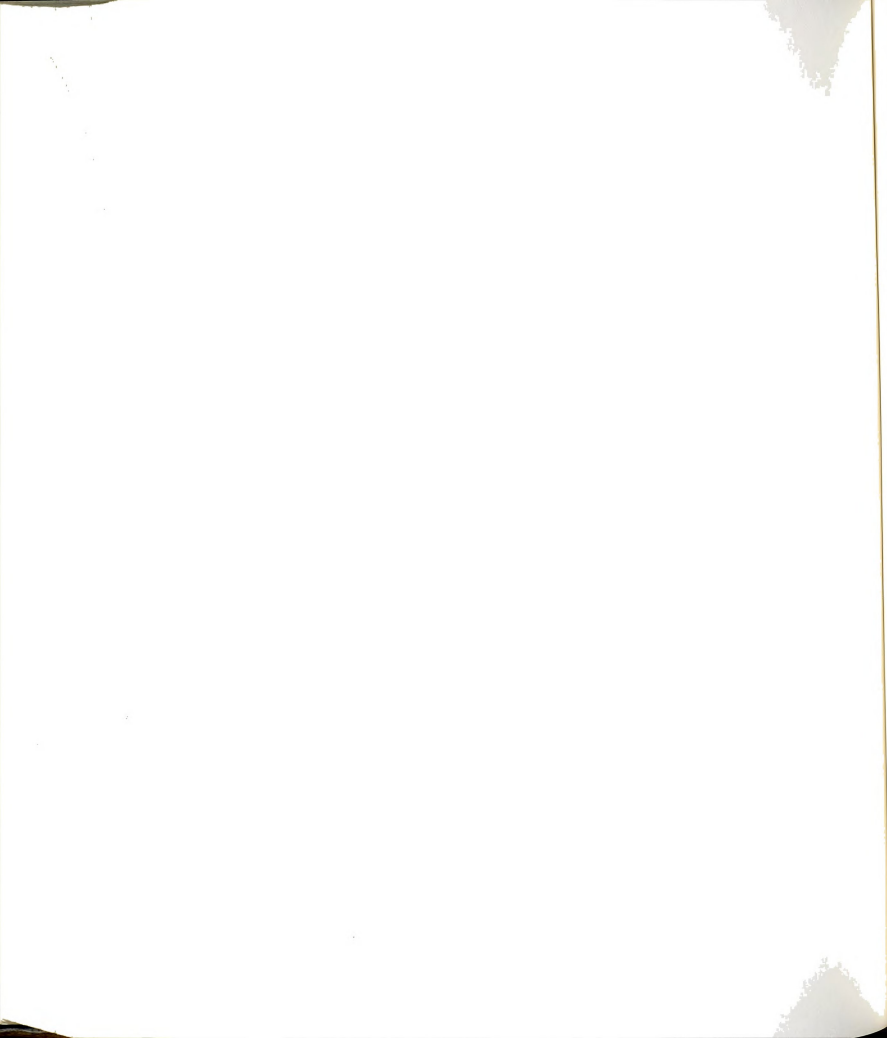




## **APPENDIX H**

### **THE VOCATIONAL RESOURCE OPTIONS QUESTIONNAIRE**

In the questionnaire that follows, please read each scenario carefully. Then answer the questions provided as honestly as you possibly can.



Five scenarios follow. In each scenario, two vocational resource options are given that can be used to aid people in dealing with different vocational issues or problems.

**Scenario 1:** You are assessing the importance of work values (satisfactions you obtain from your career, such as feeling "mentally challenged" or "forming friendships with fellow employees", etc.). Learning about your work values is important in identifying jobs that will provide satisfaction.

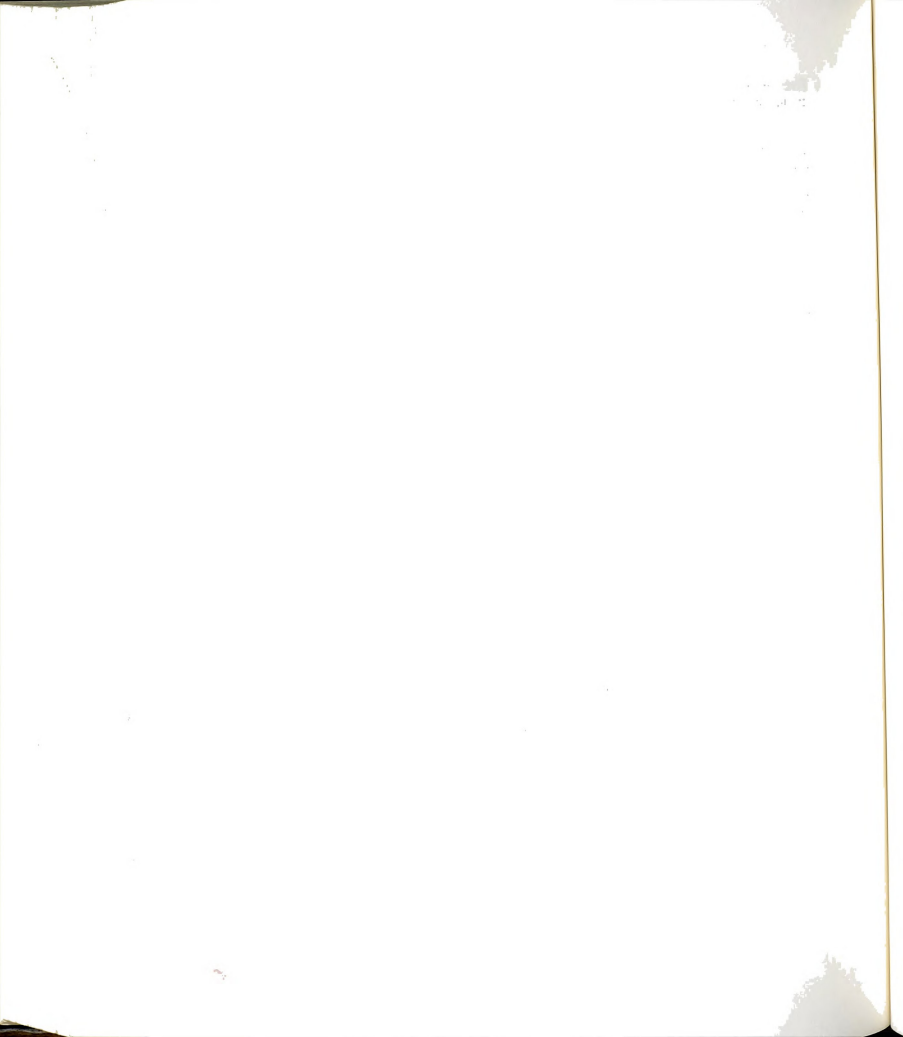
You are given a list of 15 work values which you rank in order of importance from 1 (highest in importance) to 15 (lowest). Afterwards...

**Option 1:** You use a computerized program which gives you descriptions of work environments focusing on different sets of work values. You rate your preferences among these, and the computer prioritizes your values. Then you compare the results to your original ordering of the 15 items and see if you need to reconsider any of them. This method allows you to develop a clear understanding of your own work values without the influence of others.

**Option 2:** You participate in a small group in which people informally talk together about their rankings of the 15 work values. The goal of this exercise is to help explore other people's experiences to understand their ranking of their work values. In helping each other explore how they have developed their work values, you clarify your own work values.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are to you feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you evaluate your work values?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you evaluate your work values?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	



**Scenario 2: You are working in a group that is considering career options.**

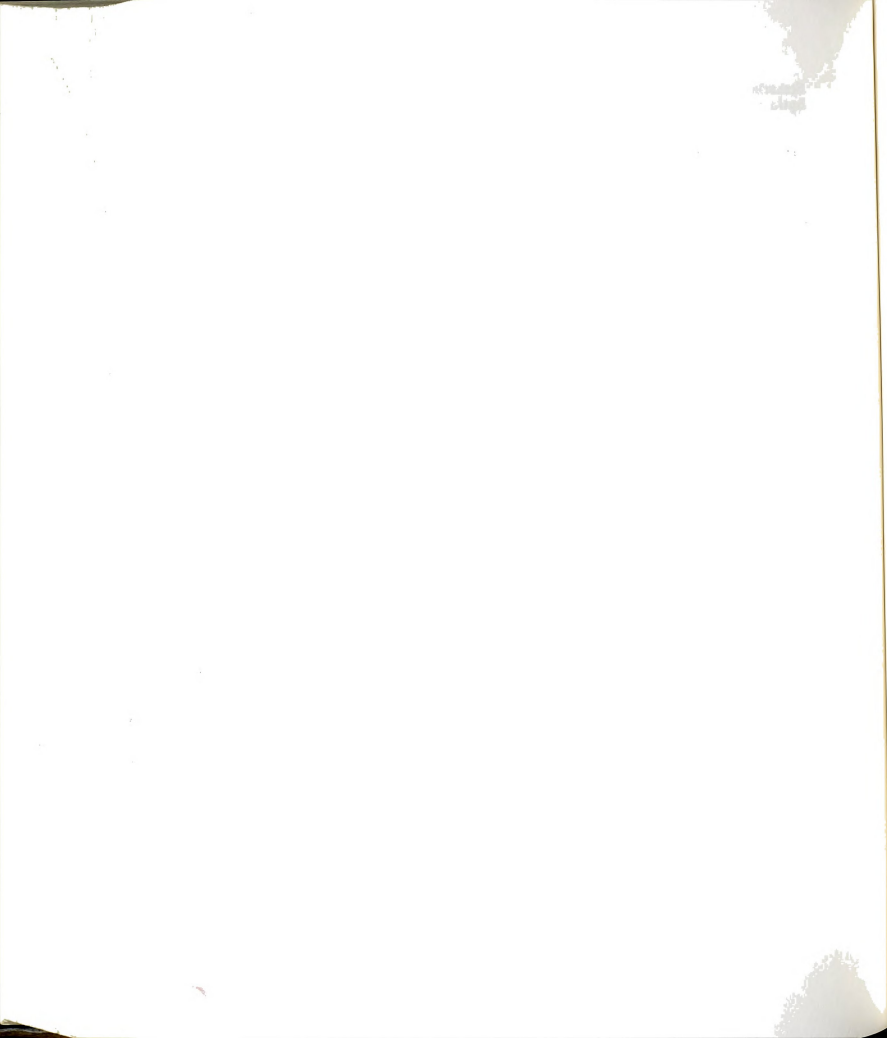
An expert directs a group of 6 people. One of the participants is extremely worried about making a good career choice because in 3 days he must make a final decision between two job offers.

**Option 1:** Because this one person appears to be in great need of assistance, the group decides to spend more time helping him work on his problems than on the problems of other members of the group. If others' needs are stronger in later sessions, more time will then be spent on their problems. Eventually all persons' needs will be dealt with. However, within each session, the time spent will be allocated based on each person's degree of need.

**Option 2:** Although this one person is in great need of assistance, the group decides that they will spend an equal amount of time at every session on each person's problems. They feel it would be unfair to spend more time on one person because all group members need assistance on their vocational choices. Everyone obtains an equal proportion of time within each counseling session, no matter how much their immediate needs for assistance differ.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are to you feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you evaluate your vocational decisions?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you evaluate your vocational decisions?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	



**Scenario 3: You are taking a course on Careers at the University to aid you in making future career choices.**

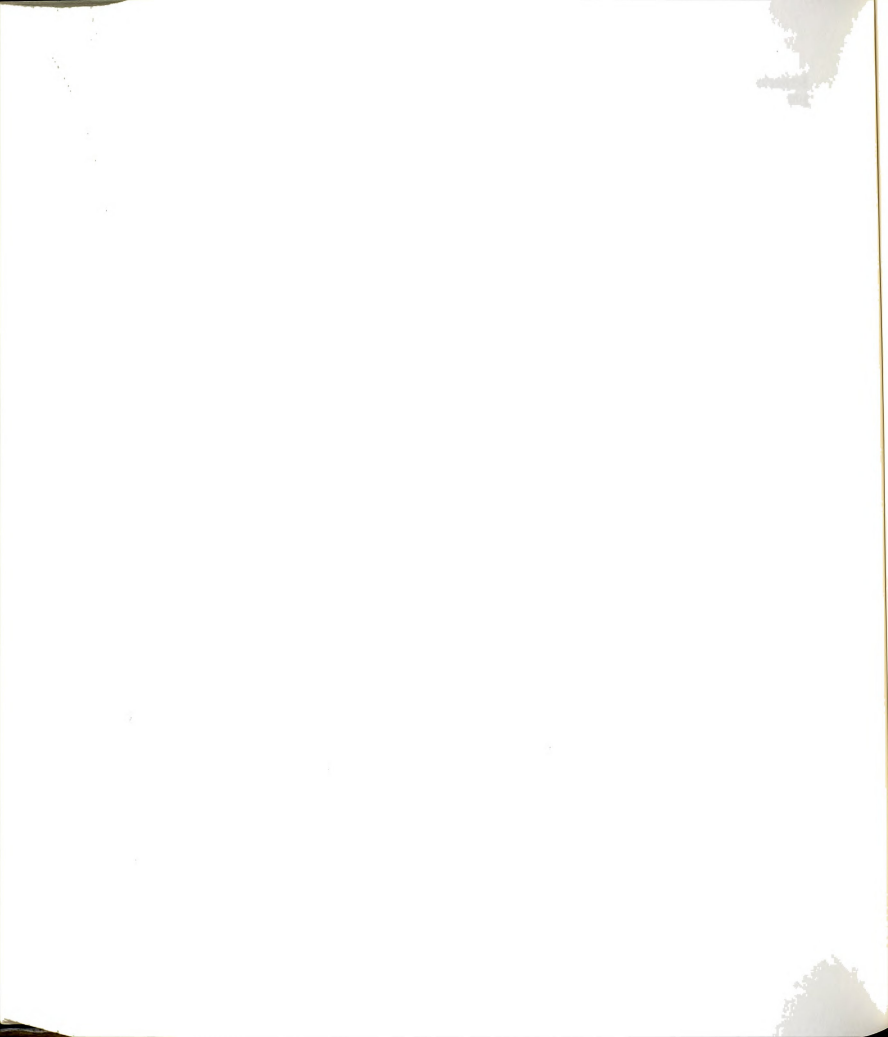
Students have been told to look through career literature and to interview people in various careers to prepare an individual presentation about a specific vocation.

Option 1: You are told to collect information separately, despite the fact that your topic may overlap with other students. The professor gives a fixed proportion of A's, B's, C's, D's, and F's. You must do better on your presentation than others to obtain a good grade and stand out in the class.

Option 2: You are told you can cooperate with others in getting information, even though you are giving individual presentations. Unlike the professor in Option 1, this professor does not give a specific proportion of A's, B's, C's, D's, and F's, so it is possible that everyone could obtain the same grade. Through interacting cooperatively with others in the class, it will be easier to get information for your class presentation, but in this setting you are not as likely to stand out for your individual accomplishments.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are to you feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you learn about careers to make good future career choices?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you learn about careers to make good future career choices?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	





**Scenario 4: You consult a career counselor as you decide on possible career paths.**

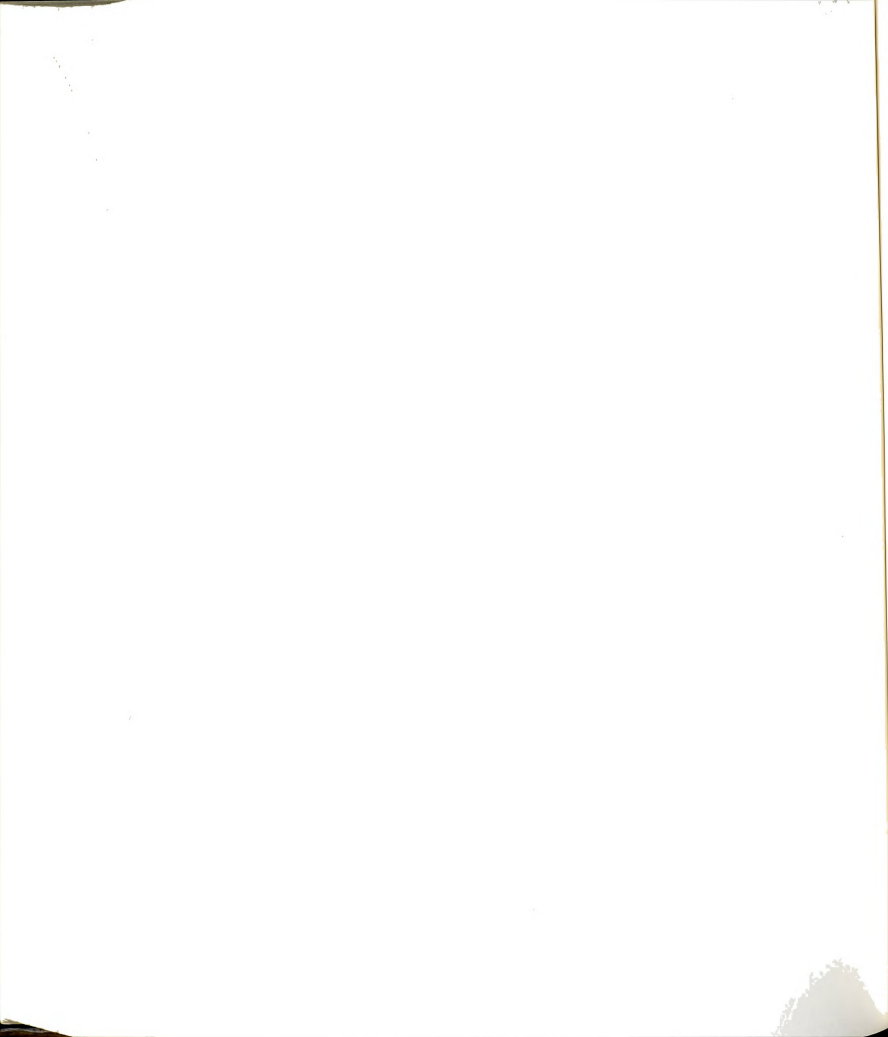
The career counselor gives you a variety of materials to help you through each step of assessing your career values, career interests, career aptitudes and viable career choices.

**Option 1:** After carrying out each task (eg. use of a questionnaire to assess work values), you return to see the counselor. Although you have not yet decided on a career path, you talk with the counselor about your progress, and you discuss your thoughts and impressions. The counselor never advises you to choose specific careers, but instead asks questions to help you to clarify your thoughts at each stage of the assessment. Your continued interaction with the career counselor helps you develop definite ideas about a potential career direction to follow.

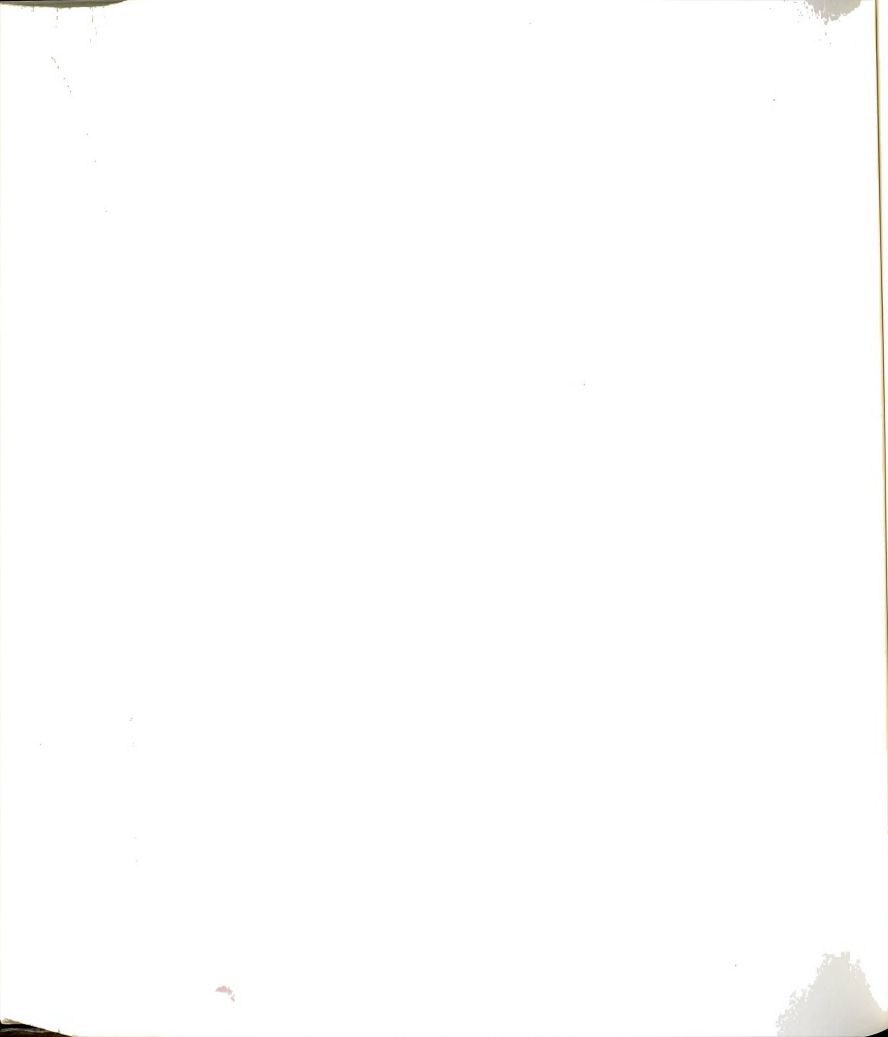
**Option 2:** In contrast to Option 2, you do not meet with the career counselor while in the process of clarifying your career direction. You meet with the counselor only after you have carried out all the steps and after you have formed some definite ideas about career paths that interest you. When you finally meet with the counselor, you discuss the career path you plan to follow and why your career choices are right for you. The counselor never advises you to choose specific careers, but the two of you discuss whether your career plans are realistic. In this situation, you have worked on your own so that the career counselor has not influenced your initial decisions about your career direction.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are to you feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you decide on possible career paths?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you decide on possible career paths?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	



**APPENDIX I**  
**EXPERTS' RATING FORMS**



## APPENDIX I

### EXPERTS' RATING FORMS

August 24, 1991

Dear

Ellen Strommen suggested that I might contact you as a member of the research team that designed the Relationship Self Inventory. I am working on a dissertation project that involves Self-In-Relationship theory, and the Relationship Self Inventory, and I would greatly appreciate your assistance. I would like to obtain your ratings of the degree that you believe specific work values and vocational resources options are representative of people who have Connected and/or Separate identities.

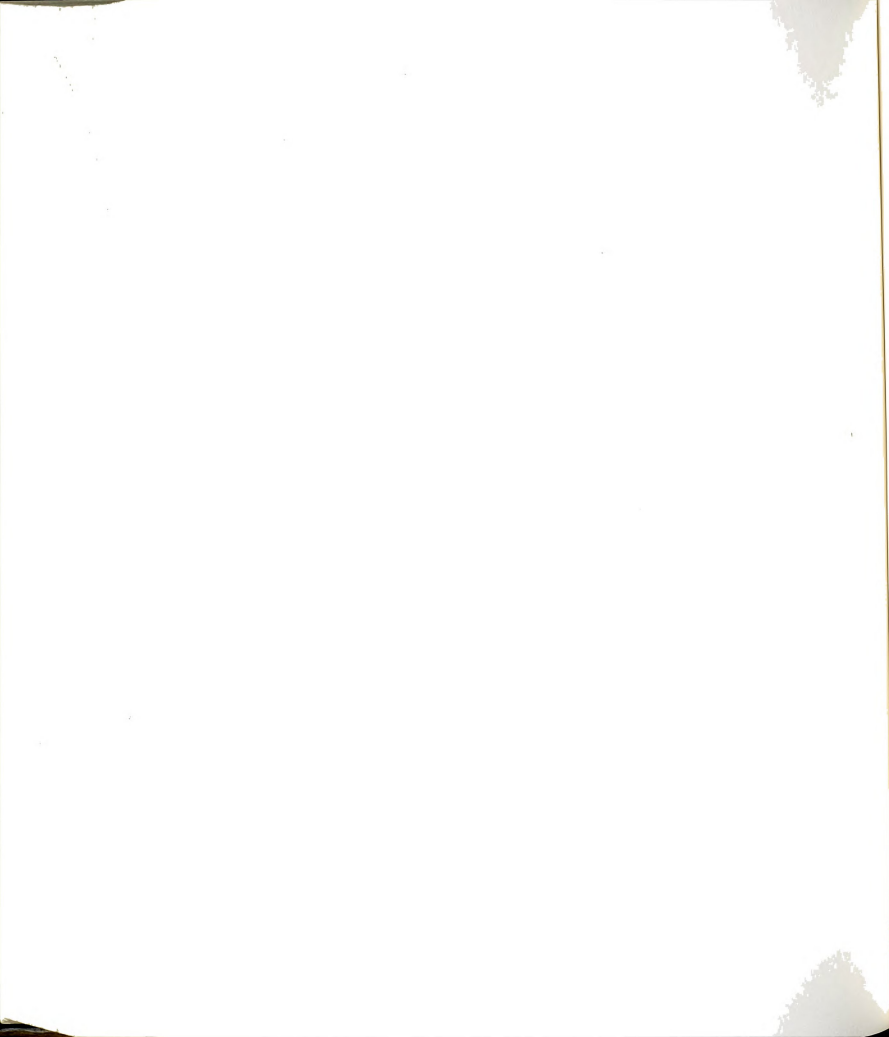
Your feedback on these rating sheets are extremely valuable to me. Because you are a researcher who is very knowledgeable about the characteristics of individuals with Connected and Separate Selves, your rating will be used to place work values and vocational resources options within the following categories, "Separate", or "Connected" in nature, or a work value or vocational resource option that is not classifiable on a Separate or Connected dimension.

This research is important because the results may indicate ways that vocational counselors could design vocational services that better meet the needs of people who have Separate and/or Connected identities. It may also suggest whether the traits observed in individuals who have Connected and Separate identities extend to their career values. Also, because I am using the Relationship Self Inventory (RSI) in my research project, I will provide further information on the reliability and validity of the current RSI.

On the next page I will provide instructions on how to fill out the rating forms. Thank you very much for your assistance.

Sincerely,

Loren J. Adams



## Part I: Work Value Ratings

To determine whether specific work values may be classified as "separate" or "connected" in nature, I would like to have you rate the following work values on the degree to which these values are likely to be representative of (1) someone who has a Connected self, and (2) someone who has a Separate self. Your ratings will be used to place work values within the following classifications: "separate", "connected", or "a work value that is not classifiable on a connected or separate dimension". The resulting classifications will be used as part of my dissertation research in evaluating whether people who have been classified as having a "Separate self", and/or "Connected self" differ in the degree of importance that they assign to specific work values.

In completing these rating sheets, please think about characteristics of Separate and Connected individuals as has been identified in their moral values, their descriptions of themselves and in their relationships with others.

Please circle the number that best describes the extent that the following work values are representative of the "separate" self, and the "connected" self:

1	2	3	4	5
Definitely Not Repre- sentative	Probably Not Repre- sentative	Maybe Repre- sentative	Probably Repre- sentative	Definitely Represent- ative

### Work Value #1: Work in which you...help others.

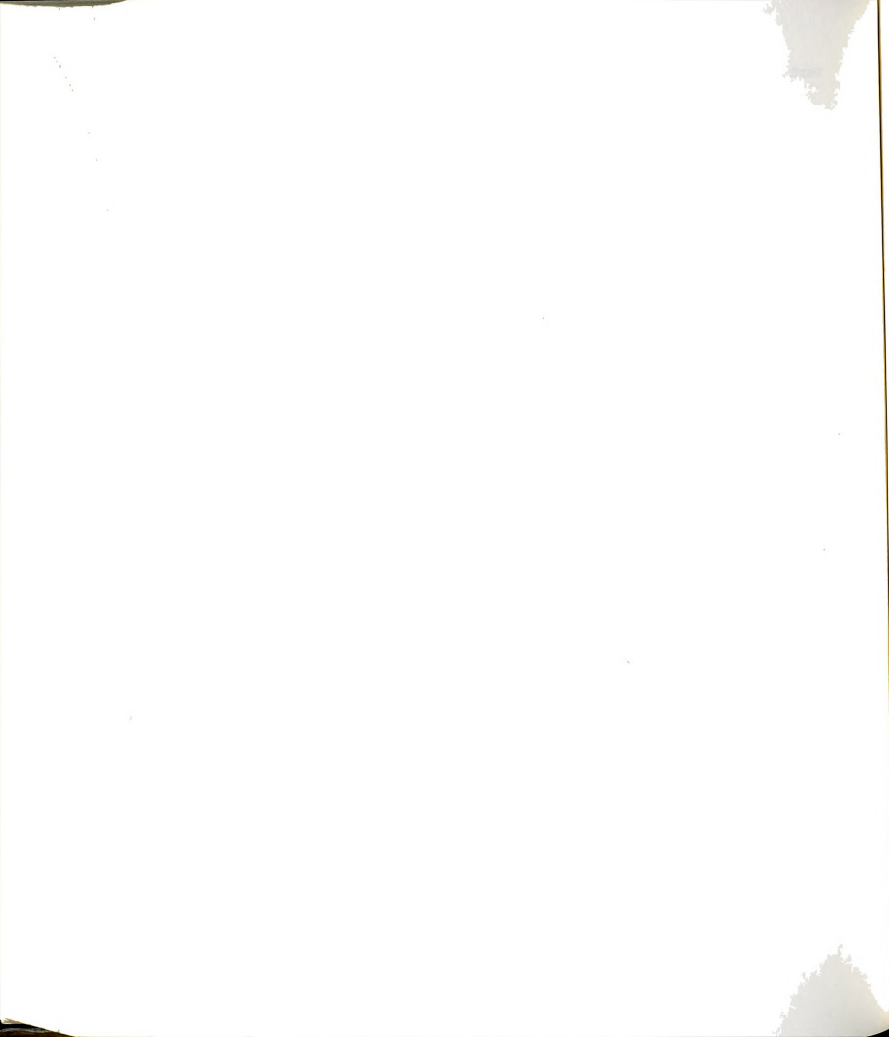
To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

### Work Value #2: Work in which you...can get a raise.

To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)





Circle the number that best describes the extent to which the work values are representative of the "separate" self and/or the "connected" self.

1	2	3	4	5
Definitely Not Repre- sentative	Probably Not Repre- sentative	Maybe Repre- sentative	Probably Repre- sentative	Definitely Represent- ative

**Work Value #3:** Work in which you...have freedom in your own area.

To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**Work Value #4:** Work in which you...gain prestige in your field.

To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**Work Value #5:** Work in which you...are one of the gang.

To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**Work Value #6:** Work in which you...have authority over others.

To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)



Circle the number that best describes the extent to which the work values are representative of the "separate" self and/or the "connected" self.

1	2	3	4	5
Definitely Not Repre- sentative	Probably Not Repre- sentative	Maybe Repre- sentative	Probably Repre- sentative	Definitely Represent- ative

**Work Value #7: Work in which you...make your own decisions.**

To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**Work Value #8: Work in which you...have pay increases that keep up with the cost of living.**

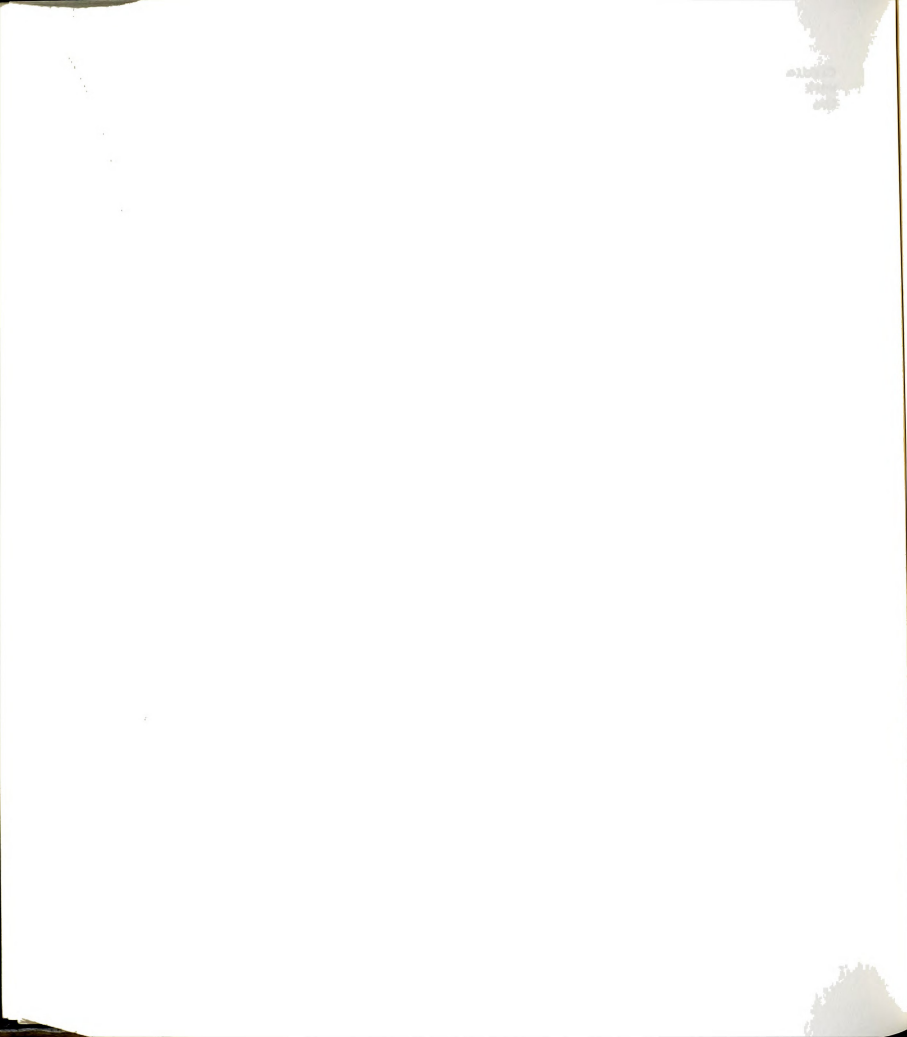
To what extent is this work value representative of:

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**Work Value #9: Work in which you...use leadership abilities.**

To what extent is this work value representative of:

- a) the "connected" self 1 2 3 4 5 (Circle one number)
- b) the "separate" self 1 2 3 4 5 (Circle one number)



Circle the number that best describes the extent to which the work values are representative of the "connected" self and/or the "separate" self.

1	2	3	4	5
Definitely Not Repre- sentative	Probably Not Repre- sentative	Maybe Repre- sentative	Probably Repre- sentative	Definitely Represen- tative

**Work Value #10:** Work in which you...form friendships with your fellow employees.

To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)

**Work Value #11:** Work in which...you know that others consider your work important.

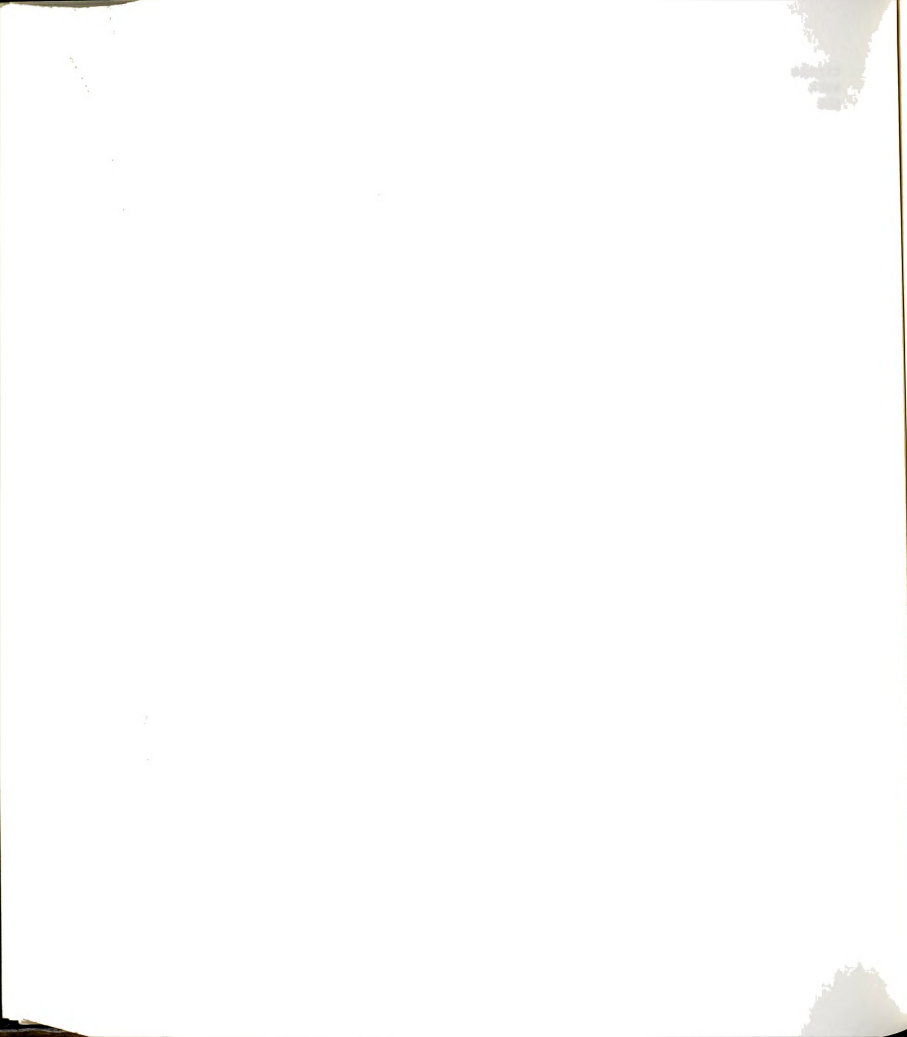
To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one Number)

**Work Value #12:** Work in which you...feel you have helped another person.

To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)



Circle the number that best describes the extent to which the work values are representative of the "connected" self and/or the "separate" self.

1	2	3	4	5
Definitely Not Repre- sentative	Probably Not Repre- sentative	Maybe Repre- sentative	Probably Repre- sentative	Definitely Represent- ative

**Work Value #13: Work in which you...add to the well-being of other people.**

To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)

**Work Value #14: Work in which you are looked up to by others.**

To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)

**Work Value #15: Work in which...you have good contacts with fellow workers.**

To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)





Circle the number that best describes the extent to which the work values are representative of the "connected" self and/or the "separate" self.

1	2	3	4	5
Definitely Not Repre- sentative	Probably Not Repre- sentative	Maybe Repre- sentative	Probably Repre- sentative	Definitely Represent- ative

**Work Value #16:** Work in which you...plan and organize the work of others.

To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)

**Work Value #17:** Work in which you...are your own boss.

To what extent is this work value representative of:

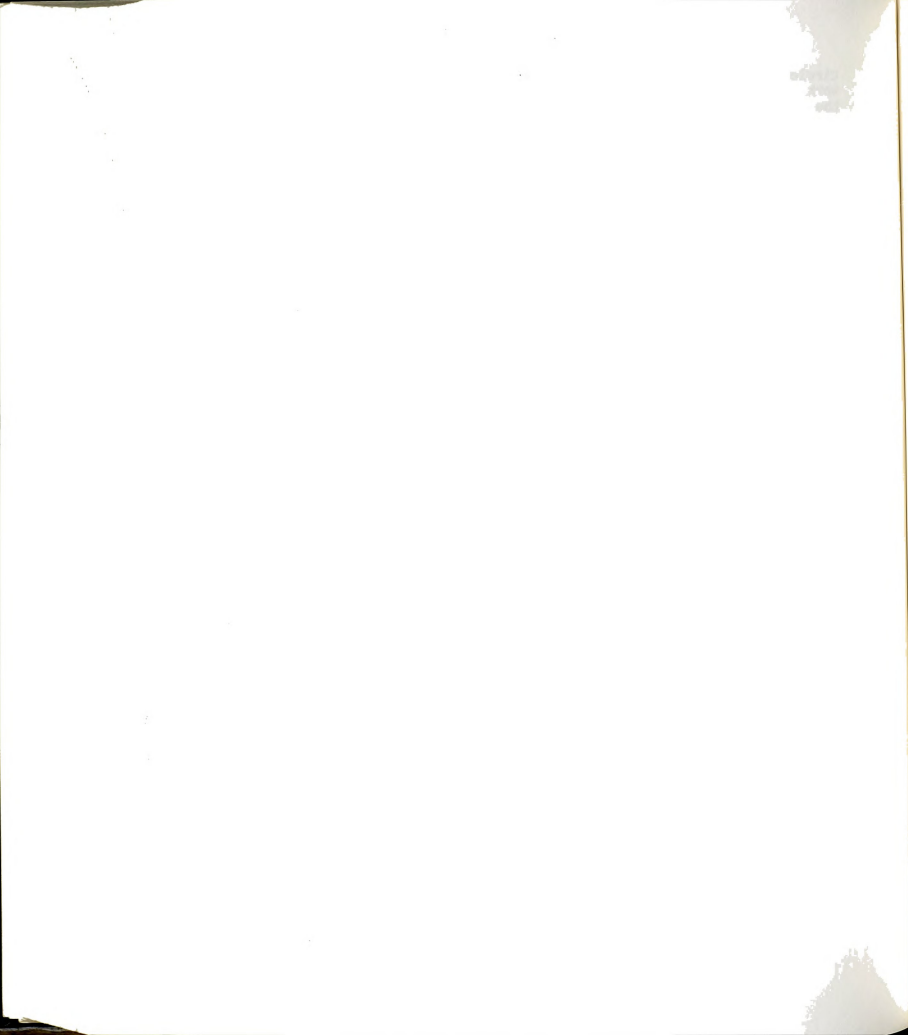
- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)

**Work Value #18:** Work in which you...have a supervisor who is considerate.

To what extent is this work value representative of:

- a) the "connected" self    1    2    3    4    5    (Circle one number)
- b) the "separate" self    1    2    3    4    5    (Circle one number)

These items are from the Work Values Inventory.



## Part II: Vocational Resource Options Ratings

A vocational resource is a person, instrument or activity that aids people in accomplishing a vocational task. Vocational tasks may include deciding on a career, learning how to write a resume, learning how to interview for jobs, and so on.

To evaluate whether specific vocational resource options may be classified as more "connected" or more "separate" in nature than other vocational resource options, I would like to have you rate the following options on the degree to which these options emphasize "connected" or "separate" styles of interaction. Your rating will be used to place vocational resources within the following categories "connected" or "separate", or vocational resources options that were not classifiable on one of the two dimensions. The resulting classifications will be used to evaluate whether people who have been classified as having "connected" and/or "separate" identities differ in the degree that they endorse vocational resource options that emphasize "separate" or "connected" styles of interaction.

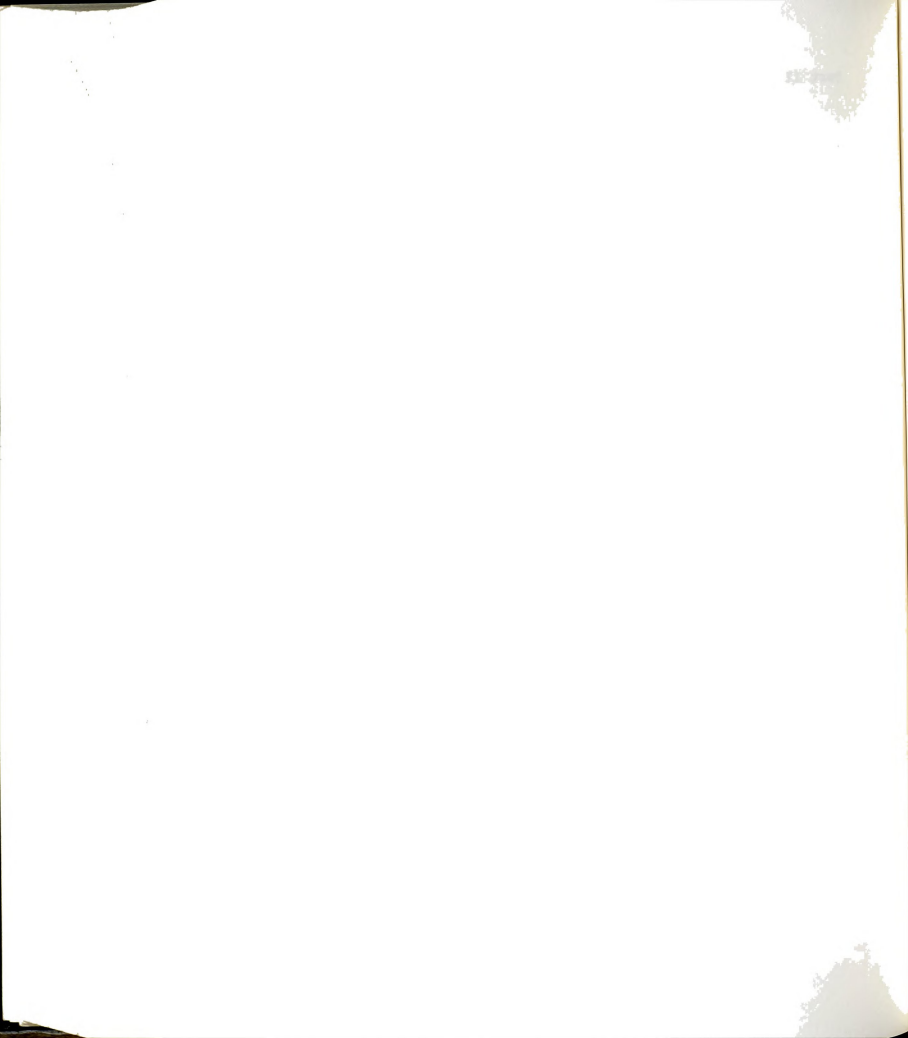
### VOCATIONAL RESOURCE OPTIONS QUESTIONNAIRE

Five scenarios follow. In each scenario, two vocational resource options are given that can be used to aid people in dealing with different vocational issues or problems.

**Scenario 1:** You are assessing the importance of work values (satisfactions you obtain from your career, such as feeling "mentally challenged" or "forming friendships with fellow employees", etc.). Learning about your work values is important in identifying jobs that will provide satisfaction.

You are given a list of 15 work values which you rank in order of importance from 1 (highest in importance) to 15 (lowest). Afterwards...

**Option 1:** You use a computerized program which gives you descriptions of work environments focusing on different sets of work values. You rate your preferences among these, and the computer prioritizes your values. Then you compare the results to your original ordering of the 15 items and see if you need to reconsider any of them. This method allows you to develop a clear understanding of your own work values without the influence of others.



Option 2: You participate in a group in which people discuss their ranking of the 15 work values. The objective of this exercise is to explore other people's experiences to understand their ranking of their work values. In helping each other explore how they have developed their work values, you clarify your own work values.

**To what extent is Vocational Resource Option 1 representative of:**

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**To what extent is Vocational Resource Option 2 representative of:**

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**Scenario 2: Your objective is to develop good interviewing skills.**

You are told to read through a written guide on how to interview for jobs. You practice a job interview with a peer, and you are videotaped. You and the person who interviewed you observe the videotape. Afterwards...

Option 1: In an "interactive" style, the person who played the interviewer asks you about your feelings and reactions to the interview, and the interviewer actively attempts to understand how you felt. You in turn ask about the interviewer's feelings and reactions to you as an interviewee. You then interactively discuss ways of improving your interview style.

Option 2: Each of you emotionally distance yourselves from the interview situation and become "impartial observers" in viewing the videotape. Based on criteria listed in the written guide, you and the person who interviewed you write out a checklist containing an objective list of strengths and weakness of your performance along with recommendations.

100  
100  
100  
100

**To what extent is Vocational Resource Option 1 representative of:**

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**To what extent is Vocational Resource Option 2 representative of:**

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)

**Scenario 3: You are working in a group that is considering career options.**

An expert directs a group of 6 people. One of the participants is extremely worried about making a good career choice because in 3 days he must make a final decision between two job offers.

Option 1: Because this one person appears to be in great need of assistance, the group decides to spend more time helping him work on his problems than on the problems of other members of the group. If others' needs are stronger in later sessions, more time will then be spent on their problems. Eventually all persons' needs will be dealt with. However, within each session, the time spent will be allocated based on each person's degree of need.

Option 2: Although this one person is in great need of assistance, the group decides that they will spend an equal amount of time at every session on each person's problems. They feel it would be unfair to spend more time on one person because all group members need assistance on their vocational choices. Everyone obtains an equal proportion of time within each counseling session, no matter how much their immediate needs for assistance differ.

**To what extent is Vocational Resource Option 1 representative of:**

- a) the "separate" self? 1 2 3 4 5 (Circle one number)
- b) the "connected" self? 1 2 3 4 5 (Circle one number)





**To what extent is Vocational Resource Option 2 representative of:**

- a) the "separate" self? 1    2    3    4    5    (Circle one number)
- b) the "connected" self? 1    2    3    4    5    (Circle one number)

**Scenario 4: You are taking a course on Careers at the University to aid you in making future career choices.**

Students have been told to look through career literature and interview people in various careers to prepare an individual presentation about a specific vocation.

Option 1: You are told to collect information separately, despite the fact that your topic may overlap with other students. The professor gives a fixed proportion of A's, B's, C's, D's, and F's. You must do better on your presentation than others to obtain a good grade and stand out in the class.

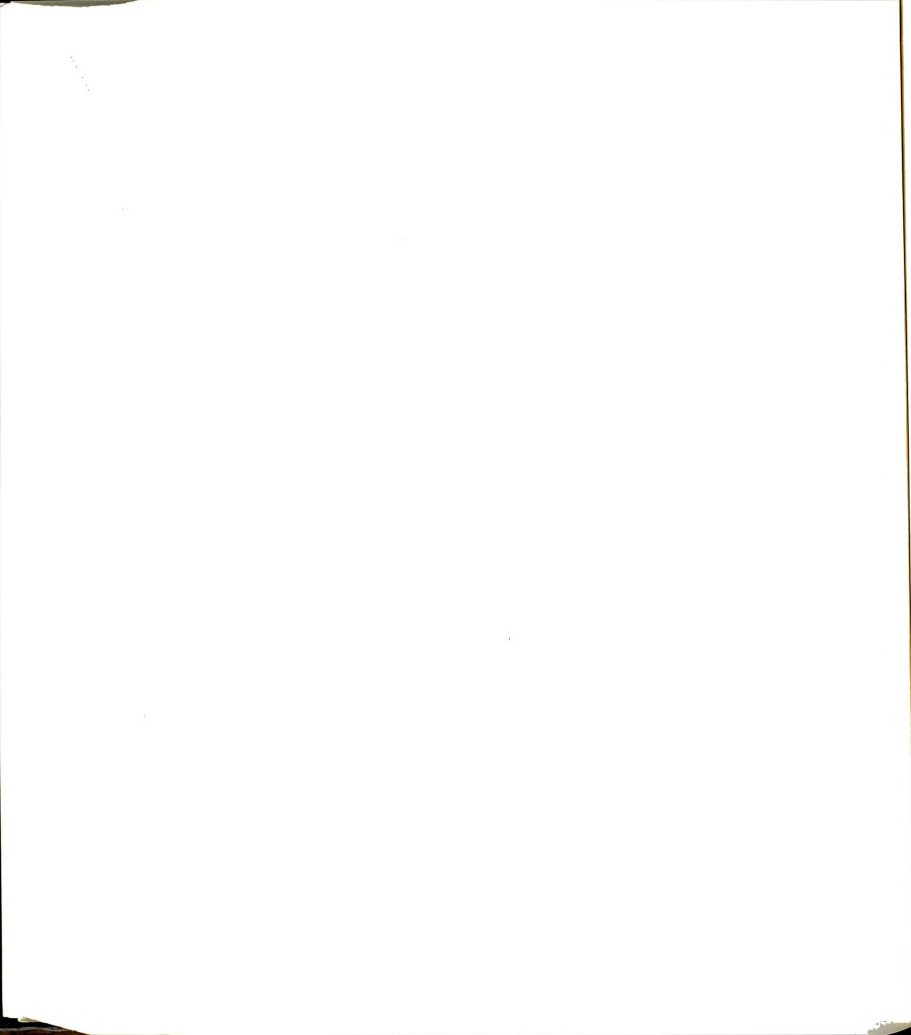
Option 2: You are told you can cooperate with others in getting information, even though you are giving individual presentations. Unlike the professor in Option 1, this professor does not give a specific proportion of A's, B's, C's, D's, and F's, so it is possible that everyone could obtain the same grade. Through interacting cooperatively with others in the class, it would be easier to get information for your class presentation, but in this setting you are not as likely to stand out for your individual accomplishments.

**To what extent is Vocational Resource Option 1 representative of:**

- a) the "connected" self? 1    2    3    4    5    (Circle one number)
- b) the "separate" self? 1    2    3    4    5    (Circle one number)

**To what extent is Vocational Resource Option 2 representative of:**

- a) the "connected" self? 1    2    3    4    5    (Circle one number)
- b) the "separate" self? 1    2    3    4    5    (Circle one number)



**Scenario 5: You consult a career counselor as you decide on possible career paths.**

The career counselor gives you a variety of materials to help you through each step of assessing your career values, career interests, career aptitudes and viable career choices.

**Option 1:** After carrying out each task (eg. use of a questionnaire to assess work values), you return to see the counselor. Although you have not yet decided on a career path, you talk with the counselor about your progress, and you discuss your thoughts and impressions. The counselor never advises you to choose specific careers, but instead asks questions to help you clarify your thoughts at each stage of the assessment. Your continued interaction with the career counselor helps you develop definite ideas about a potential career direction to follow.

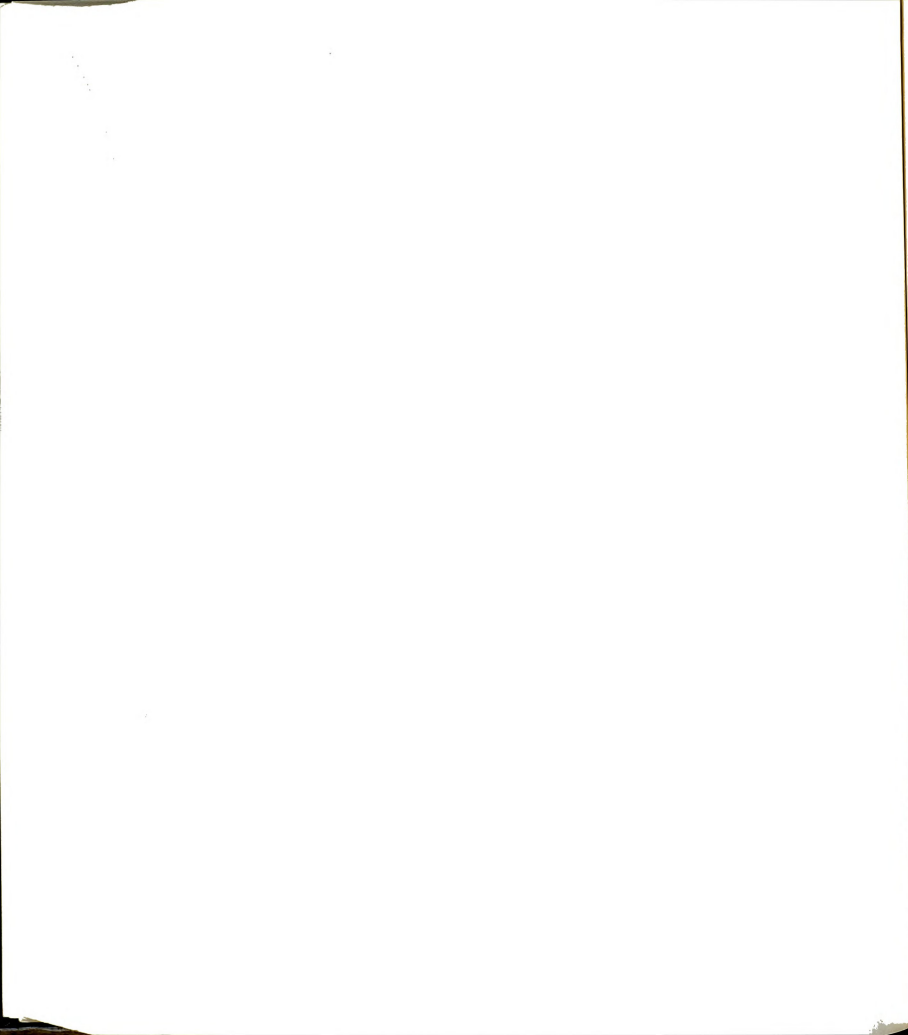
**Option 2:** In contrast to Option 2, you do not meet with the career counselor while in the process of clarifying your career direction. You meet with the counselor only after you have carried out all the steps and after you have formed some definite ideas about career paths that interest you. When you finally meet with the counselor, you discuss the career path you plan to follow and why your career choices are right for you. The counselor never advises you to choose specific careers, but the two of you discuss whether your career plans are realistic. In this situation, you have worked on your own so that the career counselor has not influenced your initial decisions about your career direction.

**To what extent is Vocational Resource Option 1 representative of:**

- a) the "connected" self? 1    2    3    4    5    (Circle one number)
- b) the "separate" self? 1    2    3    4    5    (Circle one number)

**To what extent is Vocational Resource Option 2 representative of:**

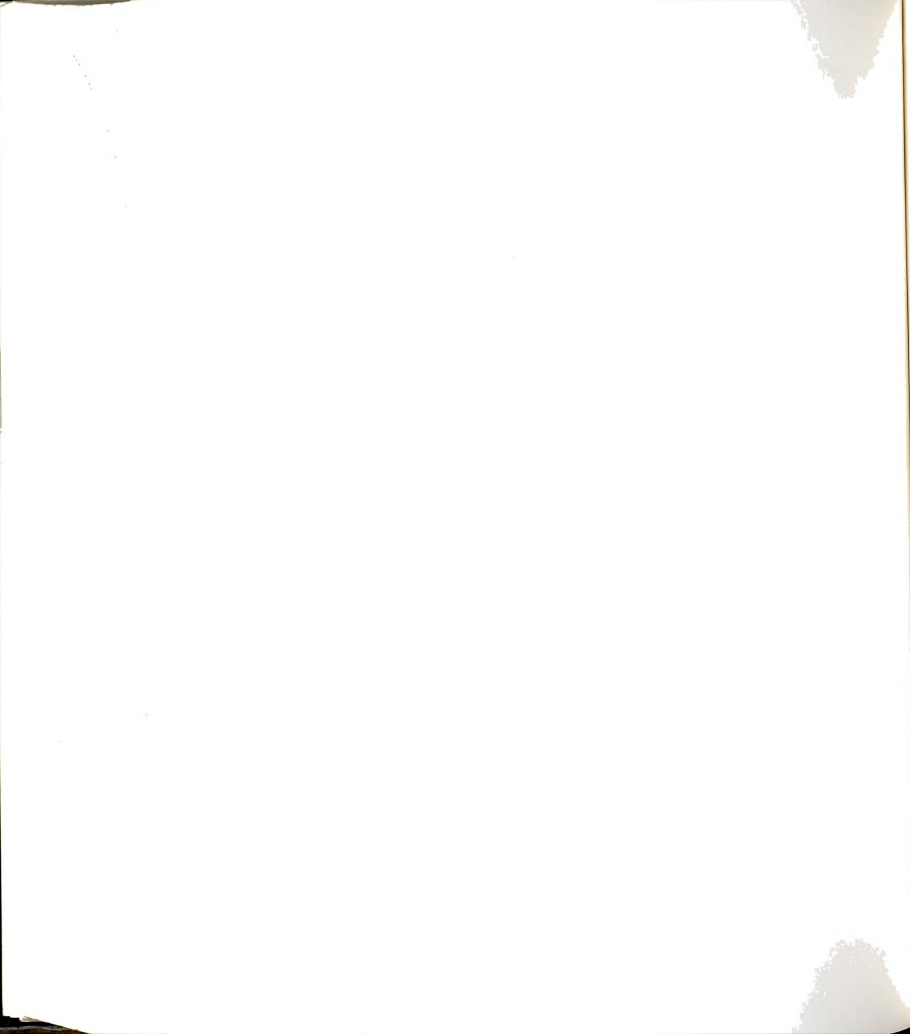
- a) the "connected" self? 1    2    3    4    5    (Circle one number)
- b) the "separate" self? 1    2    3    4    5    (Circle one number)



I am very appreciative of your providing rating on these work values and vocational resource options. Although my dissertation will not be completed until next year, after I have completed it, I will send you a copy of the summary of my study findings. Thanks in advance for your assistance.

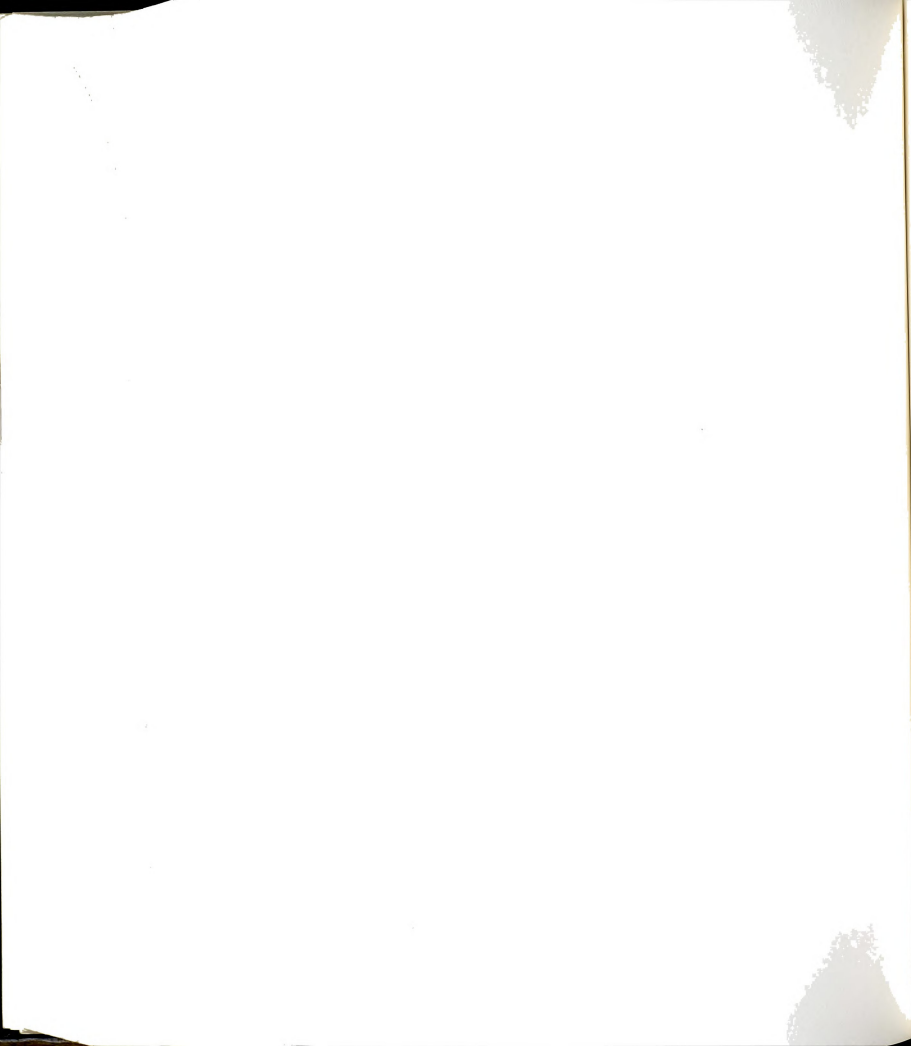
Sincerely,

Loren J. Adams



## APPENDIX J

ITEMS FROM THE SCALES OF THE WVI, RSI, AND VROQ





## APPENDIX J

### ITEMS FROM THE SCALES OF THE WVI, RSI, AND VROQ

#### Classification of Work Value Items From the Work Values Inventory (WVI)

##### Connected Work Value Items

Work in which you...

- Work Value #2 ...help others.
- Work Value #8 ...are one of the gang.
- Work Value #27 ...form friendships with your fellow employees.
- Work Value #30 ...feel you have helped another person.
- Work Value #31 ...add to the well-being of other people.
- Work Value #34 ...have good contacts with fellow workers.

##### Separate Work Value Items

Work in which you...

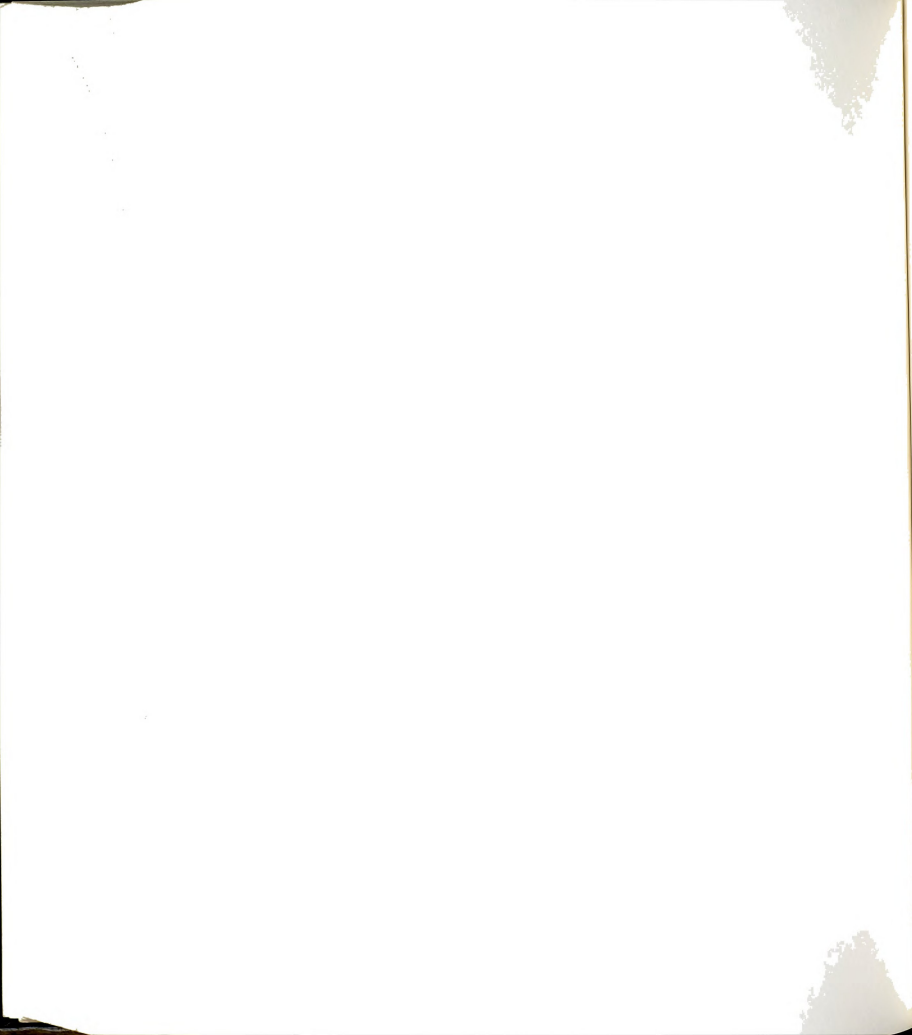
- Work Value #5 ...have freedom in your own area.
- Work Value #6 ...gain prestige in your field.
- Work Value #14 ...have authority over others.
- Work Value #21 ...make your own decisions.
- Work Value #40 ...are your own boss.

##### Total Work Value Items

Work in which you...

- Work Value #2 ...help others.
- Work Value #5 ...have freedom in your own area.
- Work Value #6 ...gain prestige in your field.
- Work Value #8 ...are one of the gang.
- Work Value #14 ...have authority over others.
- Work Value #21 ...make your own decisions.
- Work Value #27 ...form friendships with your fellow employees
- Work Value #30 ...feel you have helped another person.
- Work Value #31 ...add to the well-being of other people.
- Work Value #34 ...have good contacts with fellow workers.
- Work Value #40 ...are your own boss

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**Classification of Identity Items  
From the Relationship Self Inventory (RSI)**

Connected Identity Items

Item #12--I believe that one of the most important things that parents can teach their children is how to cooperate and live in harmony with others.

Item #15--Activities of care that I perform expand both me and others.

Item #18--I am guided by the principle of treating others as I want to be treated.

Item #20--Being unselfish with others is a way I make myself happy.

Item #27--Relationship are a central part of my identity.

Item #36--I like to see myself as interconnected with a network of friends.

Item #37--Those about whom I care deeply are a part of who I am.

Item #41--It is necessary for me to take responsibility for the effect my actions have on others.

Item #49--Doing things for others makes me happy.

Item #54--If someone does something for me, I reciprocate by doing something for them.

Item #55--Caring about other people is important to me.

Item #60--I like to acquire many acquaintances and friends.

Separate Identity Items

Item #3---I cannot choose to help someone else if it will hinder my self-development.

Item #6---I find it hard to sympathize with people whose misfortunes I believe are due mainly to their own shortcomings.

Item #9---Loving is like a contract: If its provisions aren't met, you wouldn't love the person any more.

Item #10--In my everyday life I am guided by the notion of "an eye for an eye and a tooth for a tooth".



Separate Identity Items (continued)

- Item #13--I try not to think about the feelings of others when there is a principle at stake.
- Item #14--I don't often do much for others unless they can do some good for me later on.
- Item #19--I believe that I have to look out for myself and mine, and let others shift for themselves.
- Item #21--When a friend traps me with demands and negotiation has not worked, I am likely to end the friendship.
- Item #26--People who don't work hard to accomplish respectable goals can't expect me to help when they're in trouble.
- Item #33--What it all boils down to is that the only person I can rely on is myself.
- Item #34--Even though I am sensitive to others' feelings, I make decisions based upon what I feel is best for me.
- Item #43--The feelings of others are not relevant when deciding what is right.
- Item #45--I make decisions based upon what I believe is best for me and mine.
- Item #46--Once I've worked out my position on some issue, I stick to it.
- Item #47--I believe that in order to survive I must concentrate more on taking care of myself than on taking care of others.
- Item #52--You've got to look out for yourself or the demands of circumstances and other people will eat you up.
- Item #53--I cannot afford to give attention to the opinions of others when I am certain I am correct.
- Item #58--I try to approach relations with the same organization and efficiency as I approach my work.
- Item #60--I like to acquire many acquaintances and friends.



**Classification of Vocational Resource Options  
from the Vocational Resource Options Questionnaire (VROQ)**

Connected Vocational Resource Options

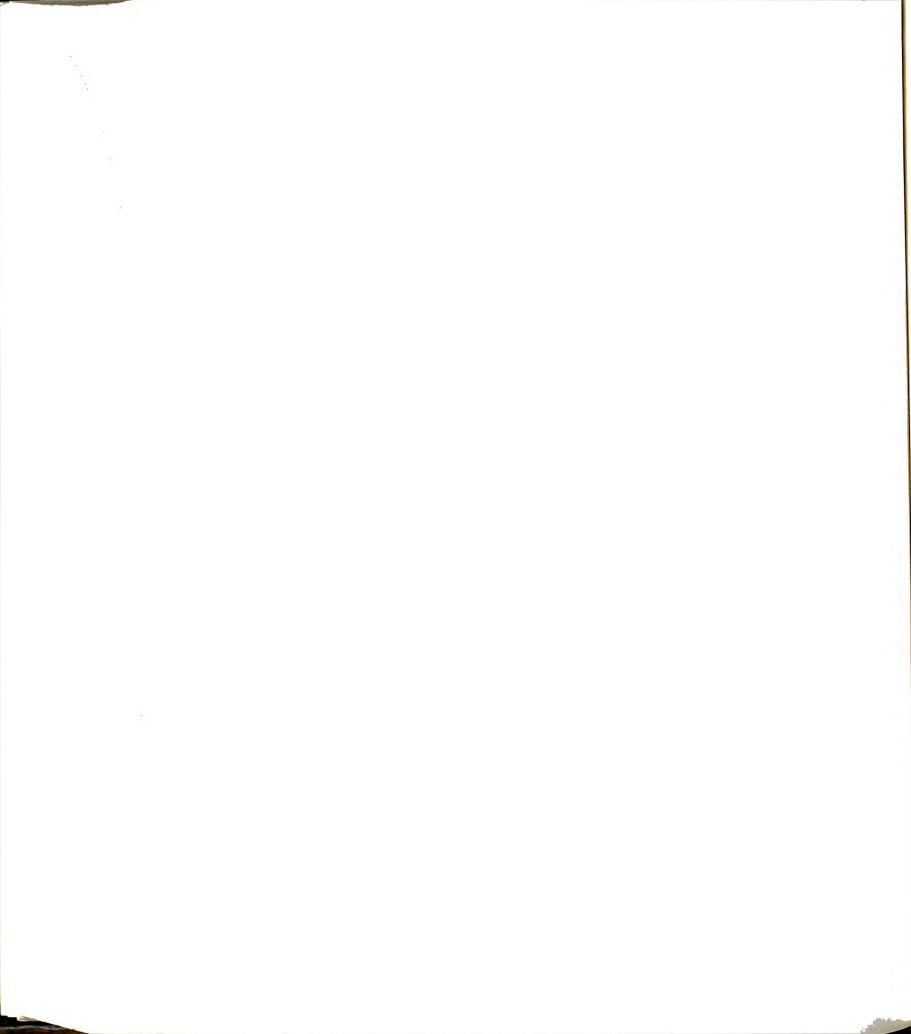
Scenario 1--Option #2  
Scenario 2--Option #1  
Scenario 3--Option #2  
Scenario 4--Option #1

Separate Vocational Resource Options

Scenario 1--Option #1  
Scenario 2--Option #2  
Scenario 3--Option #1  
Scenario 4--Option #2

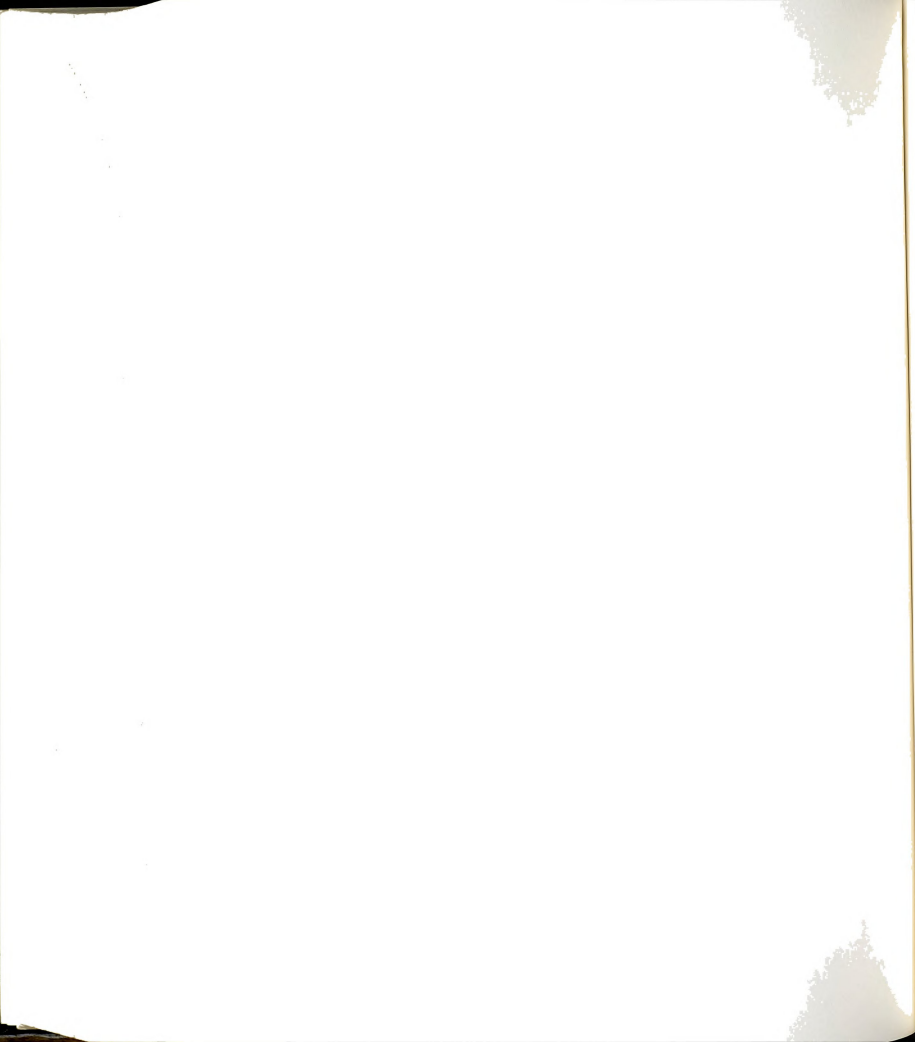
Total Vocational Resource Options

Scenario 1--Option #1  
Scenario 1--Option #2  
Scenario 2--Option #1  
Scenario 2--Option #2  
Scenario 3--Option #1  
Scenario 3--Option #2  
Scenario 4--Option #1  
Scenario 4--Option #2





**APPENDIX K**  
**COVER LETTER FOR PILOT STUDY**



## APPENDIX K

### COVER LETTER FOR PILOT STUDY

#### WHAT HELPS YOU GET A GOOD CAREER???

Dear Student,

I need your help! You are being asked to fill out a questionnaire on your attitudes towards different kinds of vocational resources as part of a pilot study.

As you probably know, many students have a difficult time deciding on a career to enter. Presently Career Resource Centers have not identified all factors that may be important in determining the types of vocational resources individuals may best learn from. The research that I am undertaking will attempt to identify how an individual's characteristic correspond to preferences for different types of vocational resources. Findings will provide information that is valuable to consider in designing vocational services at University Career Resource Centers.

Your responses to the questionnaire will be very valuable in providing me with preliminary information prior to conducting a larger research study. Also, you may find in responding to this questionnaire that you learn more about yourself and how you prefer to deal with vocational issues.

You are probably wondering "Well, what is a vocational resource?" A vocational resource is a tool that helps you accomplish vocational activities, such as writing a good resume or deciding on a career. Examples of vocational resources are computerized vocational guidance programs, or discussions with a vocational counselor or business representative.

In completing the survey, you are being asked to fill out a questionnaire in which you will rate the degree that you endorse different vocational resources. This questionnaire takes approximately 15 minutes to complete.



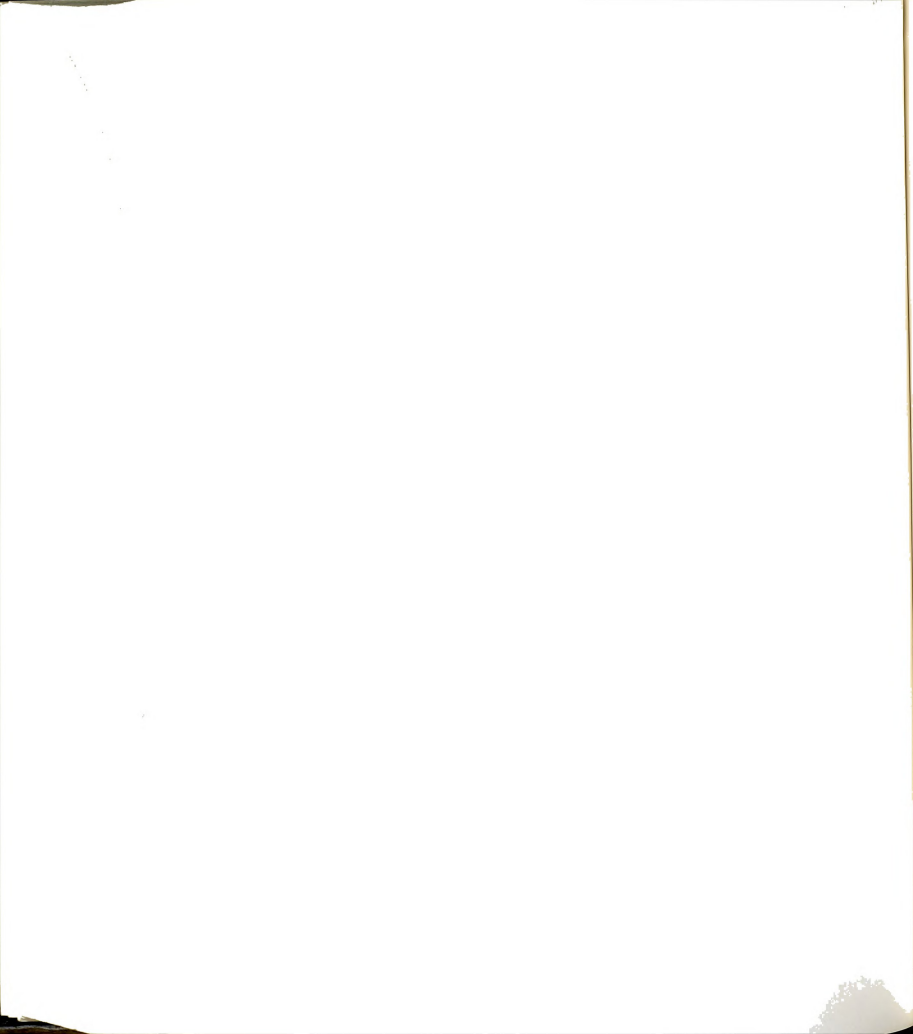
Your responses to the survey are completely anonymous. You will sign a sheet that indicates that you participated in the research study, but no identifying information will be asked on the survey. Thus, no one will know your individual responses to the questionnaire. By completing and returning this questionnaire to me, you indicate your voluntary agreement to participate in this pilot study.

Please note that you may decide not to participate, or refuse to answer specific questions without negative consequences. Still I consider your responses very valuable, and I am very appreciative of your help in advance.

If you have any questions or concerns, or would like to receive a summary of the final research study results, please call me at (517) 355-2753. (Please realize that results will not be ready until several months from now).

Sincerely,

Loren Adams



**APPENDIX L**

**VOCATIONAL RESOURCE OPTIONS QUESTIONNAIRE FOR PILOT STUDY**





## APPENDIX L

### THE VOCATIONAL RESOURCE OPTIONS QUESTIONNAIRE FOR PILOT STUDY

Five scenarios follow. In each scenario, two vocational resource options are given that can be used to aid people in dealing with different vocational issues or problems.

**Scenario 1:** You are assessing the importance of work values (satisfactions you obtain from your career, such as feeling "mentally challenged" or "forming friendships with fellow employees", etc.). Learning about your work values is important in identifying jobs that will provide satisfaction.

You are given a list of 15 work values which you rank in order of importance from 1 (highest in importance) to 15 (lowest). Afterwards...

**Option 1:** You use a computerized program which gives you descriptions of work environments focusing on different sets of work values. You rate your preferences among these, and the computer prioritizes your values. Then you compare the results to your original ordering of the 15 items and see if you need to reconsider any of them. This method allows you to develop a clear understanding of your own work values without the influence of others.

**Option 2:** You participate in a group in which people discuss their rankings of the 15 work values. The objective of this exercise is to explore other people's experiences to understand their ranking of their work values. In helping each other explore how they have developed their work values, you clarify your own work values.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are you to feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you evaluate your work values?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you evaluate your work values?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	

If you consistently rated one option higher than the other, why? \_\_\_\_\_



**Scenario 2: Your objective is to develop good interviewing skills.**

You are told to read through a written guide on how to interview for jobs. You practice a job interview with a peer, and you are videotaped. You and the person who interviewed you observe the videotape. Afterwards...

**Option 1:** In an "interactive" style, the person who played the interviewer asks you about your feelings and reactions to the interview, and the interviewer actively attempts to understand how you felt. You in turn ask about the interviewer's feelings and reactions to you as an interviewee. You then interactively discuss ways of improving your interview style.

**Option 2:** Each of you emotionally distance yourselves from the interview situation and become "impartial observers" in viewing the videotape. Based on criteria listed in the written guide, you and the person who interviewed you write out a checklist containing an objective list of strengths and weaknesses of your performance along with recommendations.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are to you feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you develop good interviewing skills?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you develop good interviewing skills?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	

If you consistently rated one option higher than the other, why? \_\_\_\_\_

10/10/10

10/10/10

10/10/10

**Scenario 3: You are working in a group that is considering career options.**

An expert directs a group of 6 people. One of the participants is extremely worried about making a good career choice because in 3 days he must make a final decision between two job offers.

**Option 1:** Because this one person appears to be in great need of assistance, the group decides to spend more time helping him work on his problems than on the problems of other members of the group. If others' needs are stronger in later sessions, more time will then be spent on their problems. Eventually all persons' needs will be dealt with. However, within each session, the time spent will be allocated based on each person's degree of need.

**Option 2:** Although this one person is in great need of assistance, the group decides that they will spend an equal amount of time at every session on each person's problems. They feel it would be unfair to spend more time on one person because all group members need assistance on their vocational choices. Everyone obtains an equal proportion of time within each counseling session, no matter how much their immediate needs for assistance differ.

**Circle the number that best describes your endorsement of Options 1 and 2.**

- |                                                                                             | Very<br>Unlikely | 1 | 2 | 3 | 4 | 5 | Very<br>Likely |
|---------------------------------------------------------------------------------------------|------------------|---|---|---|---|---|----------------|
| 1. How likely are you to feel comfortable with Option #1?                                   |                  | 1 | 2 | 3 | 4 | 5 |                |
| 2. How likely are to you feel comfortable with Option #2?                                   |                  | 1 | 2 | 3 | 4 | 5 |                |
| 3. To what extent would Option #1 be likely to help you evaluate your vocational decisions? |                  | 1 | 2 | 3 | 4 | 5 |                |
| 4. To what extent would Option #2 be likely to help you evaluate your vocational decisions? |                  | 1 | 2 | 3 | 4 | 5 |                |
| 5. How likely would you be to use Option #1?                                                |                  | 1 | 2 | 3 | 4 | 5 |                |
| 6. How likely would you be to use Option #2?                                                |                  | 1 | 2 | 3 | 4 | 5 |                |

If you consistently rated one option higher than the other, why? \_\_\_\_\_



**Scenario 4: You are taking a course on Careers at the University to aid you in making future career choices.**

Students have been told to look through career literature and to interview people in various careers to prepare an individual presentation about a specific vocation.

**Option 1:** You are told to collect information separately, despite the fact that your topic may overlap with other students. The professor gives a fixed proportion of A's, B's, C's, D's, and F's. You must do better on your presentation than others to obtain a good grade and stand out in the class.

**Option 2:** You are told you can cooperate with others in getting information, even though you are giving individual presentations. Unlike the professor in Option 1, this professor does not give a specific proportion of A's, B's, C's, D's, and F's, so it is possible that everyone could obtain the same grade. Through interacting cooperatively with others in the class, it will be easier to get information for your class presentation, but in this setting you are not as likely to stand out for your individual accomplishments.

**Circle the number that best describes your endorsement of Options 1 and 2.**

- |                                                                                                                 | Very<br>Unlikely | 1 | 2 | 3 | 4 | 5 | Very<br>Likely |
|-----------------------------------------------------------------------------------------------------------------|------------------|---|---|---|---|---|----------------|
| 1. How likely are you to feel comfortable with Option #1?                                                       |                  | 1 | 2 | 3 | 4 | 5 |                |
| 2. How likely are you to feel comfortable with Option #2?                                                       |                  | 1 | 2 | 3 | 4 | 5 |                |
| 3. To what extent would Option #1 be likely to help you learn about careers to make good future career choices? |                  | 1 | 2 | 3 | 4 | 5 |                |
| 4. To what extent would Option #2 be likely to help you learn about careers to make good future career choices? |                  | 1 | 2 | 3 | 4 | 5 |                |
| 5. How likely would you be to use Option #1?                                                                    |                  | 1 | 2 | 3 | 4 | 5 |                |
| 6. How likely would you be to use Option #2?                                                                    |                  | 1 | 2 | 3 | 4 | 5 |                |

If you consistently rated one option higher than the other, why? \_\_\_\_\_





**Scenario 5: You consult a career counselor as you decide on possible career paths.**

The career counselor gives you a variety of materials to help you through each step of assessing your career values, career interests, career aptitudes and viable career choices.

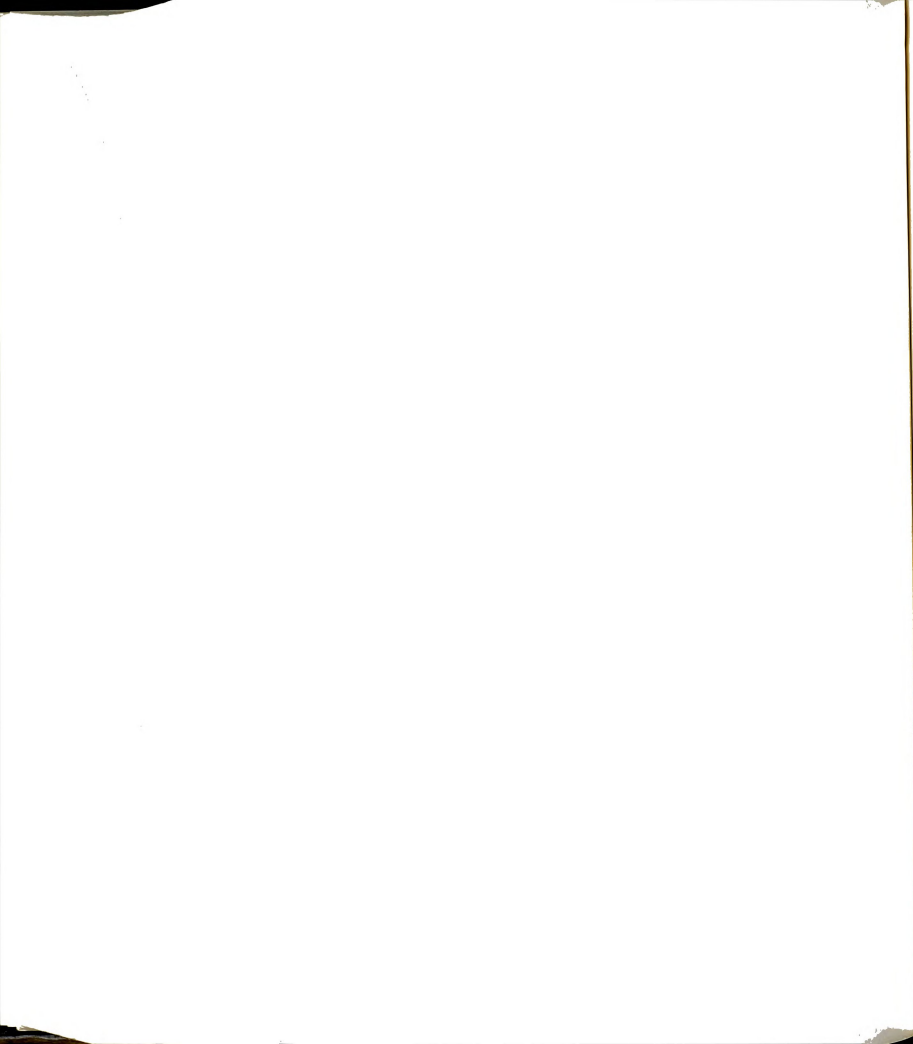
**Option 1:** After carrying out each task (eg. use of a questionnaire to assess work values), you return to see the counselor. Although you have not yet decided on a career path, you talk with the counselor about your progress, and you discuss your thoughts and impressions. The counselor never advises you to choose specific careers, but instead asks questions to help you to clarify your thoughts at each stage of the assessment. Your continued interaction with the career counselor helps you develop definite ideas about a potential career direction to follow.

**Option 2:** In contrast to Option 1, you do not meet with the career counselor while in the process of clarifying your career direction. You meet with the counselor only after you have carried out all the steps and after you have formed some definite ideas about career paths that interest you. When you finally meet with the counselor, you discuss the career path you plan to follow and why your career choices are right for you. The counselor never advises you to choose specific careers, but the two of you discuss whether your career plans are realistic. In this situation, you have worked on your own so that the career counselor has not influenced your initial decisions about your career direction.

**Circle the number that best describes your endorsement of Options 1 and 2.**

	Very Unlikely	1	2	3	4	5	Very Likely
1. How likely are you to feel comfortable with Option #1?		1	2	3	4	5	
2. How likely are you to feel comfortable with Option #2?		1	2	3	4	5	
3. To what extent would Option #1 be likely to help you decide on possible career paths?		1	2	3	4	5	
4. To what extent would Option #2 be likely to help you decide on possible career paths?		1	2	3	4	5	
5. How likely would you be to use Option #1?		1	2	3	4	5	
6. How likely would you be to use Option #2?		1	2	3	4	5	

If you consistently rated one option higher than the other, why? \_\_\_\_\_



APPENDIX M

RELIABILITY OF THE RSI, WVI, AND VROQ



APPENDIX M

RELIABILITY OF THE WVI, RSI, AND VROQ

Table M1

Item-Scale Correlations and  
Cronbach's Alpha on the WVI

Connected Work Value Items	Females	Males	Total
Work in which you....			
...feel you have helped another person.	.63	.76	.71
...add to the well-being of other people.	.60	.70	.66
...form friendships with your fellow employees.	.54	.67	.61
...help others.	.45	.55	.52
...have good contacts with fellow workers.	.41	.49	.47
...are one of the gang.	.23	.40	.31
Cronbach's Alpha(a)=	.72	.79	.79

Separate Work Value Items	Females	Males	Total
Work in which you...			
...are your own boss.	.40	.54	.47
...have freedom in your own area.	.51	.41	.46
...make your own decisions.	.38	.52	.45
...gain prestige in your field.	.42	.45	.43



Table M1 (cont'd)

Separate Work Value Items (cont.)	Females	Males	Total
...have authority over others.	.43	.38	.41
Cronbach's Alpha (a)=	.66	.79	.68

Total Work Value Items	Females	Males	Total
Work in which you...			
...form friendships with your fellow employees.	.47	.66	.57
...have good contacts with fellow workers.	.51	.60	.56
...feel you have helped another person.	.38	.63	.52
...add to the well- being of other people.	.42	.56	.40
...gain prestige in your field.	.39	.46	.41
...have authority over others.	.31	.41	.34
...help others.	.20	.44	.34
...are one of the gang.	.25	.40	.32
...have freedom in your own area.	.36	.28	.31
...make your own decisions.	.25	.37	.31
...are your own boss.	.13	.43	.27
Cronbach's Alpha (a)=	.67	.79	.75





Table M2

Item-Scale Correlations and  
Cronbach's Alpha on the RSI

Connected Identity Items	Females	Males	Total
Caring about other people is important to me.	.65	.67	.65
Doing things for others makes me happy.	.53	.58	.56
Those about whom I care deeply are part of whom I am.	.57	.52	.55
I believe that one of the most important things that parents can teach their children is how to cooperate and live in harmony with others.	.50	.50	.50
I like to see myself as interconnected with a network of friends.	.40	.45	.42
Relationships are a central part of my identity.	.43	.41	.41
Being unselfish with others is a way I make myself happy.	.41	.40	.40
I like to acquire many acquaintances and friends.	.39	.31	.35
Activities of care that I perform expand both me and others.	.35	.33	.35
I am guided by the principle of treating others as I want to be treated.	.29	.40	.34
If someone does something for me, I reciprocate by doing something for them.	.37	.14	.24
It is necessary for me to take responsibility for the effect my actions have on others.	.29	.13	.22
Cronbach's Alpha (a)=	.78	.76	.84



Table M2 (cont'd)

Separate Identity Items	Females	Males	Total
I believe that I have to look out for myself and mine, and let others shift for themselves.	.62	.58	.61
I believe that in order to survive I must concentrate more on taking care of myself than on taking care of others.	.59	.54	.57
You've got to look out for yourself or the demands of circumstances and other people will eat you up.	.63	.49	.55
People who don't work hard to accomplish respectable goals can't expect me to help when they're in trouble.	.58	.40	.52
I don't often do much for others unless they can do some good for me later on.	.52	.43	.49
I make decisions based upon what I believe is best for me and mine.	.49	.55	.49
Even though I am sensitive to others' feelings, I make decisions based upon what I feel is best for me.	.51	.51	.49
The feelings of others are not relevant when deciding what is right.	.41	.50	.48
I cannot choose to help someone else if it will hinder my self-development.	.41	.49	.45
I cannot afford to give attention to the opinions of others when I am certain I am correct.	.37	.51	.45
In my everyday life I am guided by the notion of "an eye for an eye and a tooth for a tooth".	.34	.49	.43
I find it hard to sympathize with people whose misfortunes I believe are due mainly to their own shortcomings.	.48	.32	.42

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Table M2 (cont'd)

Separate Identity Items (continued)	Females	Males	Total
Once I've worked out my position on some issue I stick to it.	.30	.52	.40
Loving is like a contract: If its provisions aren't met, you wouldn't love the person any more.	.45	.17	.34
When a friend traps me with demands and negotiation has not worked, I am likely to end the relationship.	.36	.27	.32
What it all boils down to is the only person I can rely on is myself.	.34	.26	.29
I try not to think about the feelings of others when there is a principle at stake.	.24	.25	.28
I try to approach relationships with the same organization and efficiency as I approach my work.	.21	.30	.26
Cronbach's Alpha (a)=	.84	.83	.84

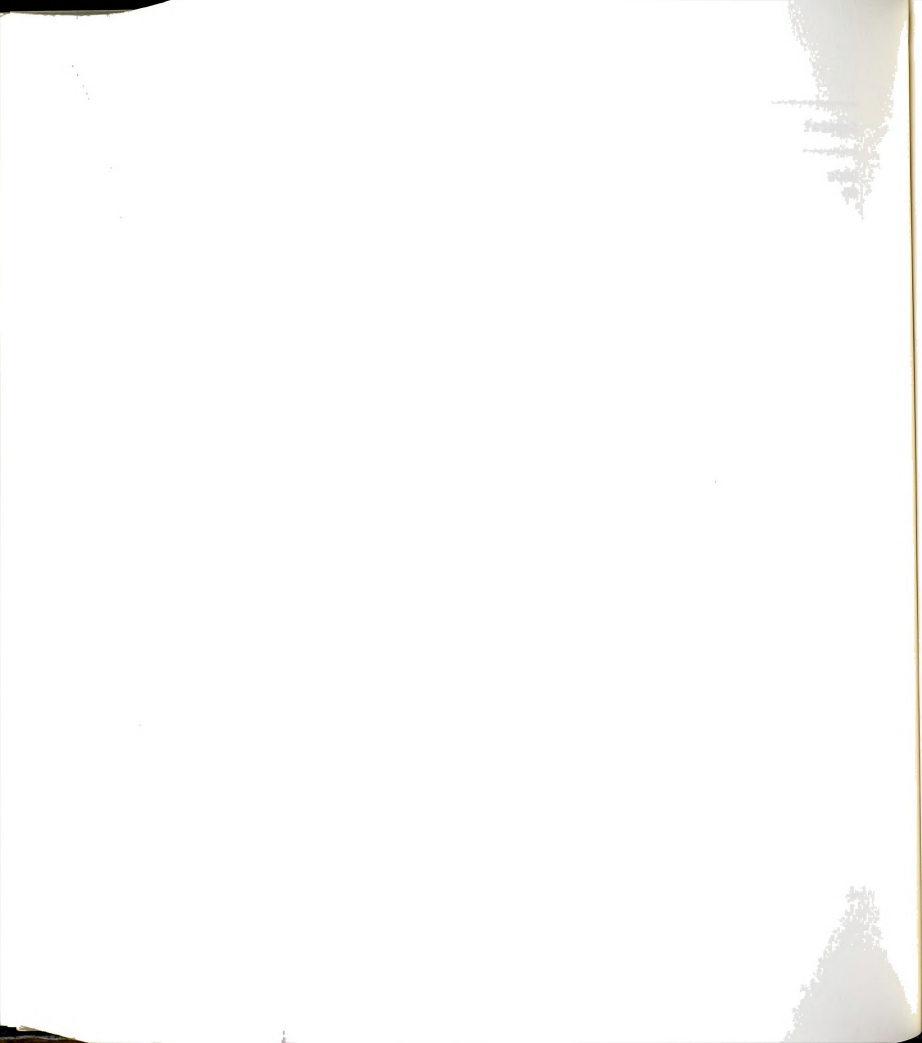


Table M3

Item-Scale Correlations and  
Cronbach's Alpha on the VROQ

Connected Option Items	Females	Males	Total
Scenario 2--Question 5: How likely would you be to use Option #1?	.58	.69	.63
Scenario 4--Question 1: How likely are you to feel comfortable with Option #1?	.57	.54	.58
Scenario 2--Question 3: To what extent would Option #1 be likely to help you evaluate your vocational decisions?	.50	.69	.57
Scenario 4--Question 5: How likely would you be to use Option #1?	.49	.57	.55
Scenario 2--Question 1: How likely are you to feel comfortable with Option #1?	.50	.62	.55
Scenario 3--Question 2: How likely are you to feel comfortable with Option #2?	.47	.59	.54
Scenario 3--Question 6: How likely would you be to use Option #2?	.48	.52	.51
Scenario 1--Question 4: To what extent would Option #2 be likely to help you evaluate your work values?	.39	.63	.51
Scenario 4--Question 3: To what extent would Option #1 be likely to help you decide on possible career paths?	.44	.45	.47
Scenario 3--Question 4: To what extent would Option #2 be likely to help you learn about careers to make good future career choices?	.32	.54	.46





Table M3 (cont'd)

Connected Option Items (continued)	Females	Males	Total
Scenario 1--Question 6: How likely would you be to use Option #2?	.31	.53	.44
Scenario 1--Question 1: How likely are you to feel comfortable with Option #1?	.29	.51	.40
Cronbach's Alpha (a)=	.80	.88	.85

Separate Vocational Options	Females	Males	Total
Scenario 4--Question 2: How likely are you to feel comfortable with Option #1?	.57	.40	.50
Scenario 4--Question 6: How likely would you be to use Option #2?	.54	.35	.46
Scenario 3--Question 1: How likely are you to feel comfortable with Option #1?	.42	.42	.45
Scenario 4--Question 4: To what extent would Option #2 be likely to help you decide on possible career paths?	.45	.39	.42
Scenario 1--Question 3: To what extent would Option #1 be likely to help you evaluate your work values?	.31	.56	.40
Scenario 1--Question 1: How likely are you to feel comfortable with Option #1?	.36	.46	.40
Scenario 1--Question 5: How likely would you be to use Option #1?	.32	.51	.40

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Table M3 (cont'd)

Separate Option Items (continued)	Females	Males	Total
Scenario 2--Question 4: To what extent would Option #2 be likely to help you evaluate your vocational decisions?	.35	.47	.39
Scenario 3--Question 5: How likely would you be to use Option #1?	.35	.42	.37
Scenario 2--Question 2: How likely are you to feel comfortable with Option #2?	.31	.46	.37
Scenario 2--Question 6: How likely would you be to use Option #2?	.32	.42	.36
Scenario 3--Question 3: To what extent would Option #1 be likely to help you learn about careers to make good future career choices?	.30	.40	.34
Cronbach's Alpha (a)=	.75	.80	.77

Total Vocational Options	Females	Males	Total
Scenario 4--Question 3: To what extent would Option #1 be likely to help you decide on possible career paths?	.30	.39	.37
Scenario 4--Question 1: How likely are you to feel comfortable with Option #1?	.33	.35	.36
Scenario 4--Question 5: How likely would you be to use Option #1?	.28	.40	.36
Scenario 2--Question 5: How likely would you be to use Option #1?	.23	.38	.32



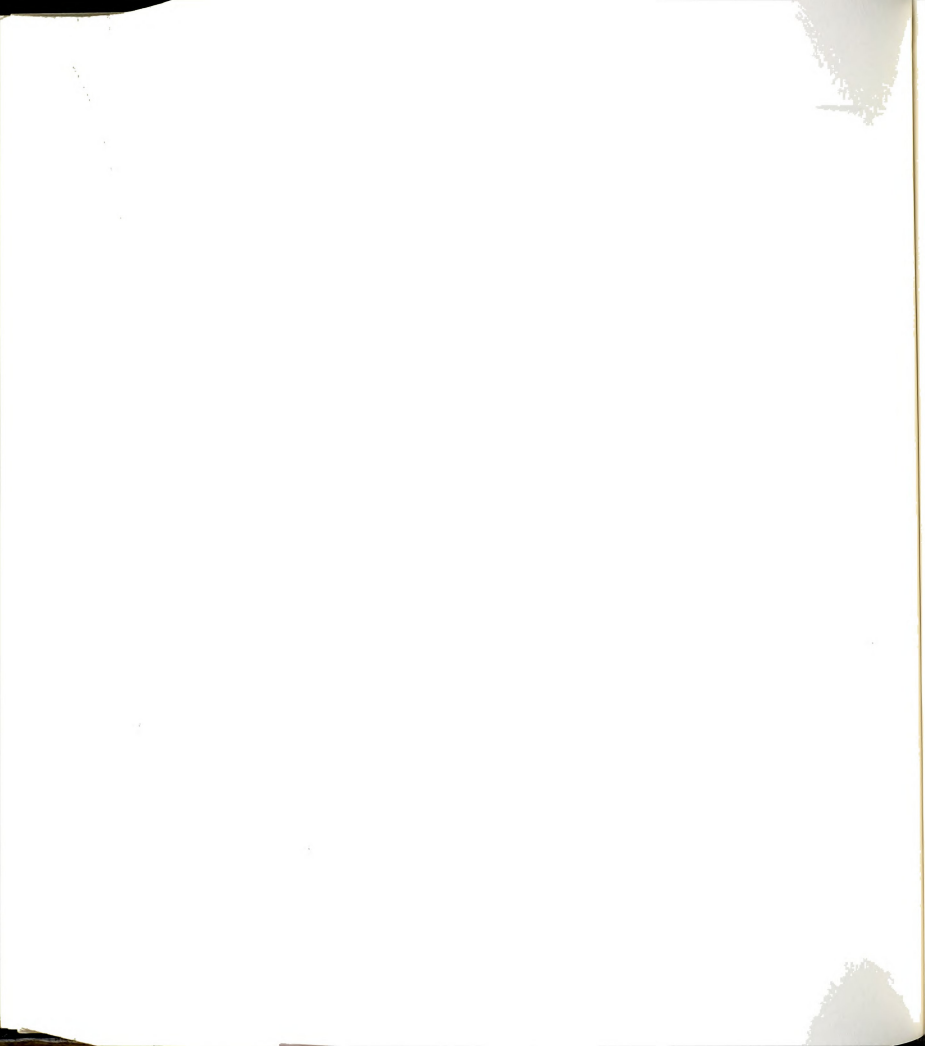
Table M3 (cont'd)

Total Option Items (continued)	Females	Males	Total
Scenario 1--Question 4: To what extent would Option #2 be likely to ehlp you evaluate your vocational decisions?	.16	.40	.29
Scenario 4--Question 2: How likely are you to feel comfortable with Option #2?	.35	.14	.26
Scenario 3--Question 4: To what extent would Option #2 be likely to help you learn about careers to make good future career choices?	.04	.42	.26
Scenario 3--Question 3: To what extent would Option #1 be likely to help you learn about careers to make good future career choices?	.31	.26	.26
Scenario 1--Question 1: How likely are you to feel comfortable with Option #1?	.30	.18	.24
Scenario 3--Question 2: How likely you to feel comfortable with Option #2?	.14	.30	.24
Scenario 3--Question 6: How likely would you be to use Option #2?	.08	.36	.24
Scenario 4--Question 4: To what extent would Option #2 be likely to help you decide on possible career paths?	.28	.18	.23
Scenario 4--Question 6: How likely would you be to use Option #2?	.27	.15	.23
Scenario 1--Question 5: How likely would you be to use Option #1?	.17	.30	.22
Scenario 2--Question 3: To what extent would Option 1 be likely to help you evaluate your vocational decisions?	.17	.29	.22



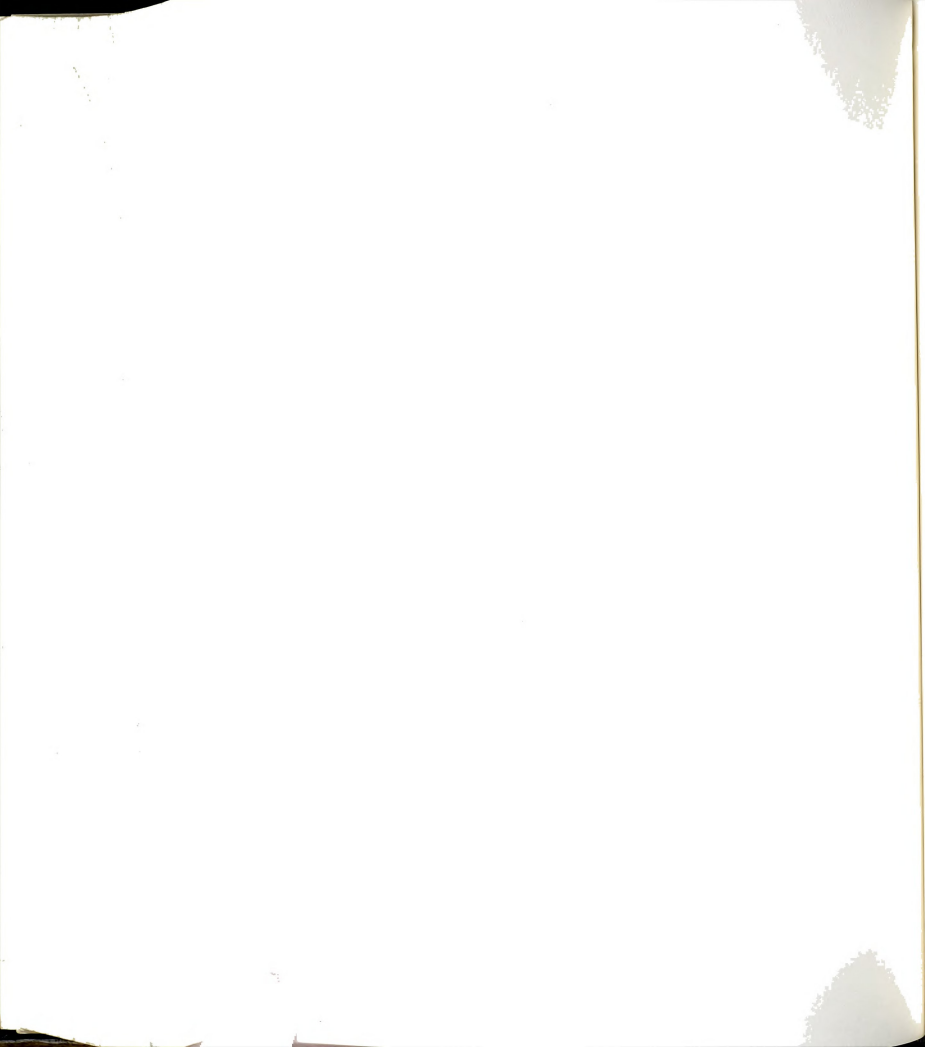
Table M3 (cont'd)

Total Option Items (continued)	Females	Males	Total
Scenario 1--Question 3: To what extent would Option #1 be likely to help you evaluate your work values?	.14	.26	.20
Scenario 2--Question 1: How likely are you to feel comfortable with Option #1?	.12	.25	.19
Scenario 2--Question 4: To what extent would Option #2 be likely to help you evaluate your vocational decisions?	.08	.28	.18
Scenario 3--Question 1: How likely are you to feel comfortable with Option #1?	.19	.26	.17
Scenario 1--Question 6: How likely would you be to use Option #2?	-.05	.32	.15
Scenario 1--Question 2: How likely are you to feel comfortable with Option #2?	.07	.16	.12
Scenario 3--Question 5: How likely would you be to use Option #1?	.23	.11	.09
Scenario 2--Question 6: How likely would you be to use Option #2?	-.06	.19	.06
Scenario 2--Question 2: How likely are you to feel comfortable with Option #2?	-.06	.12	.03
Cronbach's Alpha (a)=	.55	.72	.65





## **LIST OF REFERENCES**

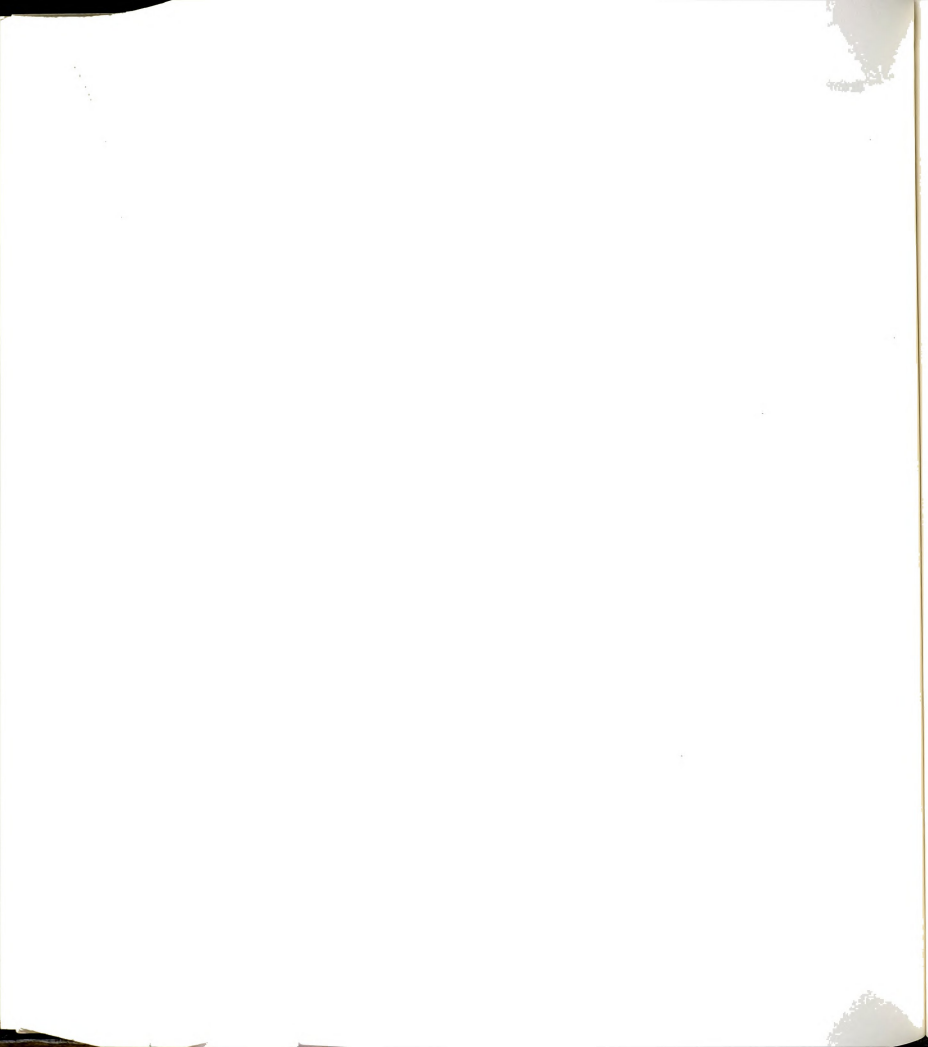


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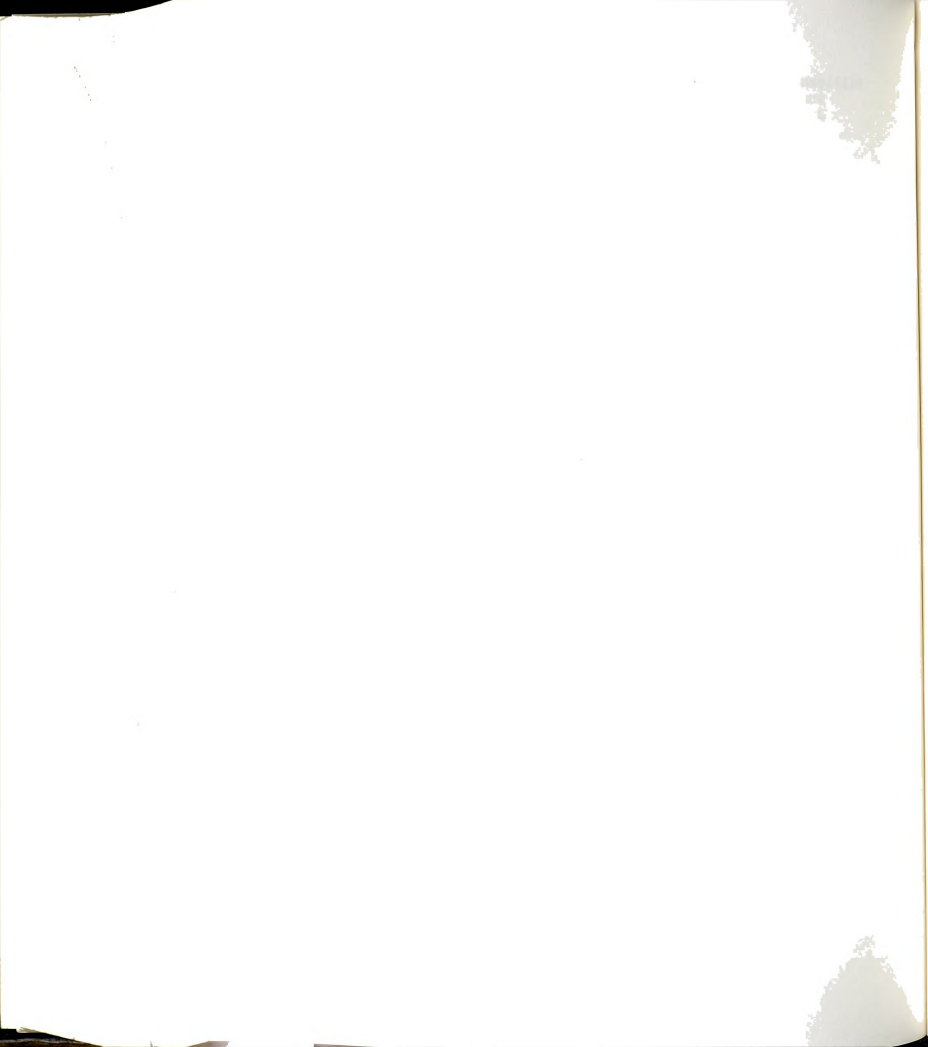


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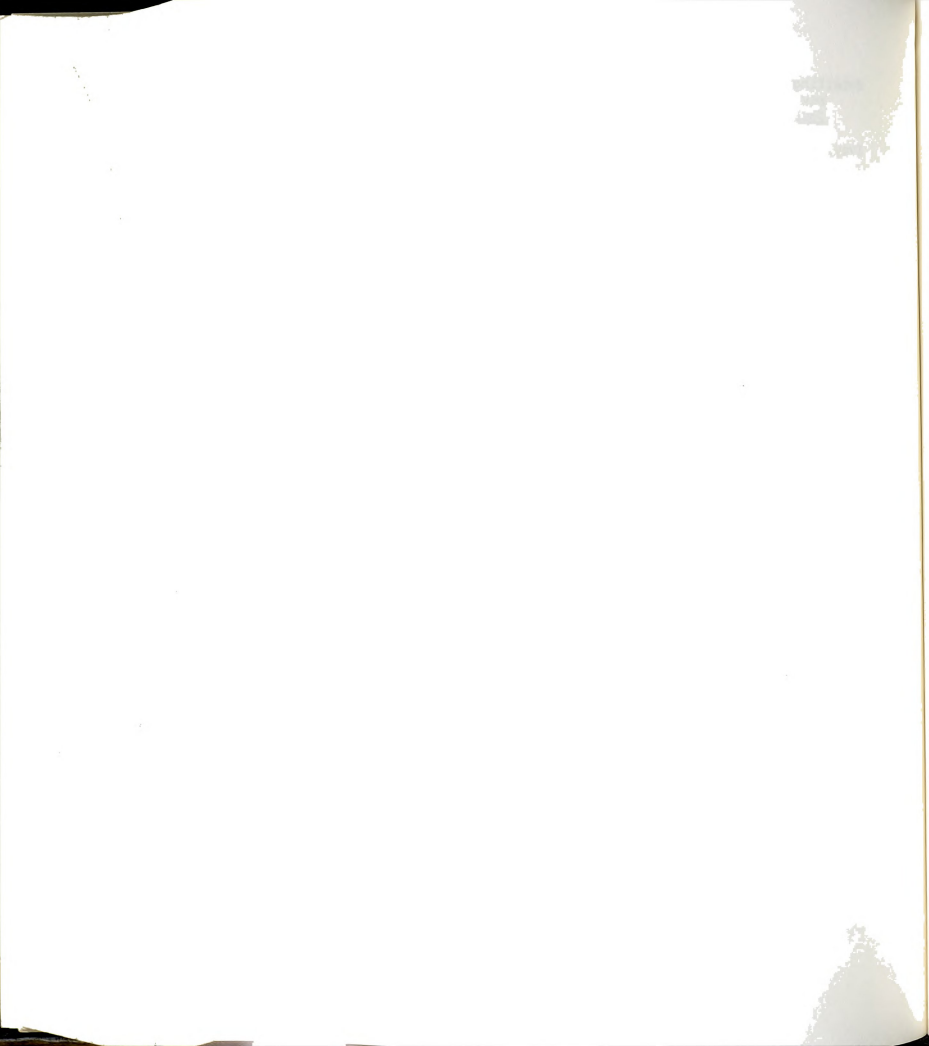




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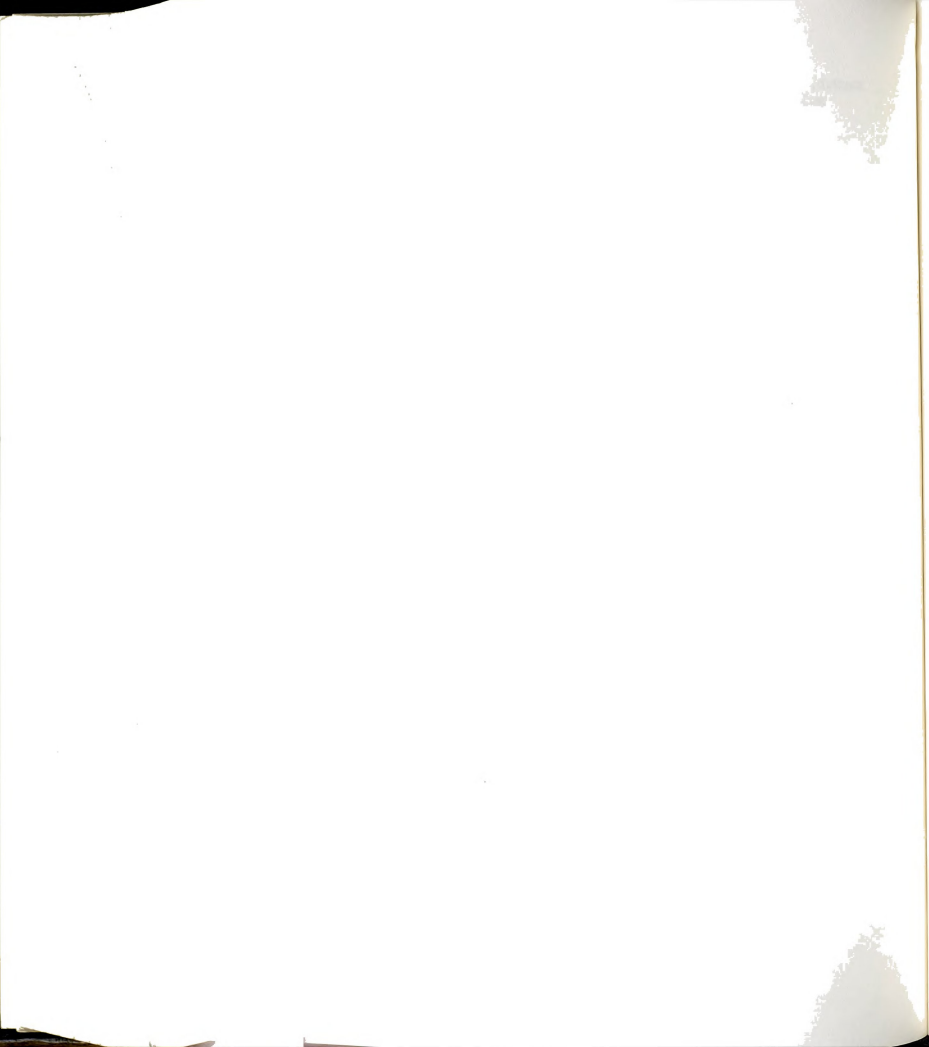
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