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**THE UNIVERSITY OF CALGARY**

**Relational Values in Women's Career Role**

by

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**A THESIS**

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## ABSTRACT

The study described in this thesis explored the selection and prioritization of relational and other values overall and specifically in the career role of two groups of undergraduate female university students, those in typically male dominated faculties (Nontraditional) and typically female dominated faculties (Traditional). Two other factors that have been suggested to influence values, gender role orientation and age, were also examined.

The findings of the present research demonstrate that women, particularly in the Traditional group, do desire to have relational values fulfilled in the career role. Achievement was also a very important value for all women in the present study overall and in the career role. No significant differences were found between Traditional and Nontraditional women in the career role. Feminine women valued Concern for the Environment overall more so than did Masculine women. Younger women valued Financial Prosperity more so than did Older women.

Relational themes such as helping others, developing friendships with co-workers, and contributing to society through one's career emerged from the qualitative data. The findings of the qualitative data suggest that some values not typically believed to be relational, such as Achievement and Financial Prosperity, carried relational connotations for some women. The present study's findings support the inclusion of a relational component in theories of career development. The results of the present study also have implications for career counsellors. Elucidating the personal meanings of values and discussing the ways relational and other values can be satisfied in various careers would be useful activities in which career counsellors should engage.

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## DEDICATION

To Jules, my best friend, my soulmate.

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## Chapter One

### Introduction

One of the most salient criticisms of the state of career development theory today is that it is ill-equipped to explain the vocational behavior of women (Brooks, 1990). Career theory has traditionally been a domain entrenched with male ways of being (Marshall, 1989). Although some theories have been revised and expanded to more adequately capture women's career development (for example Super and Holland), many of the major career theories were originally formulated based on the career experiences of men (Gallos, 1989). Due to this male bias in career theory, the possible differential applicability of various constructs to explain the career behavior of women versus that of men has not been considered, nor have the variables and dimensions unique to women's career development been explored (Betz & Fitzgerald, 1987). Thus, much of women's career behavior has previously been interpreted using a male perspective (Gallos, 1989).

Relational aspects of women's identities have been noted and examined by several feminist researchers who suggest that this factor has been neglected in the traditional theories of human development. Gilligan (1982) found that women tend to define themselves in the context of intimate relationships whereas men define themselves in terms of nonrelationships, which focus on separation and autonomy. Women in her studies used words such as "caring," "giving," "being kind," and "not hurting others" to describe themselves, suggesting a value system deeply influenced by a genuine concern for others. Belenky, Clinchy, Goldberger, and Tarule (1986) researching women's cognitive development found that women develop a "connected" way of knowing which can be described as contextual, values experience, and connects concepts to personal

knowledge and events. The “self-in-relation” model (Jordan, Kaplan, Miller, Stiver, & Surrey, 1991) posits that for women particularly, psychological well being is enhanced by connections and relationships with others. It is recognized that relational ways of being are not gender-specific, but gender-related whereby women are more likely than men to endorse them (Gilligan & Attanucci, 1988).

These new ways of understanding women’s psychological, cognitive, and moral development within a relational context have implications for comprehending women’s career experience (Crozier, in press). Despite the fact that research on the career development of girls and women has grown exponentially in the last decade (Phillips & Imhoff, 1997), there has been a lack of attention paid to this construct. It has been suggested that women view their careers through the “lens of relationships” (Cook, 1993, p. 229) and place great importance on relational aspects of their work (Chester & Grossman, 1990).

There are many ways identity can be expressed and understood. According to Josselson (1987) what we value forms the core of our sense of identity, thus values can be considered a component of identity. Values are conceptualized as enduring beliefs that are central to one’s self-concept and greatly influence behavior (Feather, 1992; Rokeach, 1973). Brown (1996) has developed a model that accords values a central position in the examination of career and other life roles. Brown proposes that values motivate decision making and behavior in all life roles. Furthermore, because values develop as a result of inherited characteristics and socialization processes, factors such as gender, culture, socioeconomic status, and age can all exert influence on personal values.

Brown and Crace (1996a) developed the Life Values Inventory (LVI) designed to facilitate decision making in career and other life roles through the clarification of significant values. The LVI differs from other career values scales in a number of ways, namely its purposeful sensitivity to cultural variables and women's perspective (Brown & Crace, 1996b) through the inclusion of unique relational values. Relational values can be defined as those values that embody themes such as connectedness, concern for others, and interdependence.

Work values signify "the degree of worth, importance, and desirability of what happens at work" (Knoop, 1991). Career decision-making is influenced by an individual's work related values (Judge & Bretz, 1992). Research has revealed some evidence that women's relational values are expressed and fulfilled in their career roles, however there has been a lack of attention paid to this component (Marshall, 1989). Women bring their "ethic of care" into the workplace by helping others perform difficult tasks, encouraging someone who is having a bad day, or sharing information and resources to assist others (Judge & Bretz, 1992). Schuster (1990) in her study of gifted women found their definitions of success and achievement in their work centered on relationships, responsiveness to others, and sensitivity.

Some researchers have suggested that gender role orientation rather than simply gender is a more accurate measure of "masculine" and "feminine" worldviews (Fouad & Post-Kammer, 1989). This dimension of identity has been noted to influence career choice and development. Stoltz-Loike (1993) proposes that gender role identity, "interacts with career choices and expectations and may distinguish between career paths of different groups of women" (p. 113). The Bem Sex Role Inventory (Bem, 1978) is a

commonly used instrument for gender role classifications. Various studies have suggested that women in nontraditional fields such as science and engineering tend to possess masculine gender role orientations (Chusmir, 1983; Chatterjee & McCarrey, 1991). Chatterjee and McCarrey (1991) found that women in traditional training programs possessed more “expressive” sex role attitudes and valued altruism and social interaction in their work role, whereas women in the nontraditional training programs possessed more “instrumental” sex role attitudes and valued autonomy and risk.

These findings have the potential to pigeonhole women in traditional and nontraditional occupations. Because men have so successfully dominated certain professions, society has ascribed a whole range of stereotypic masculine characteristics to individuals in those professions regardless of whether they are men or women (Cook, 1993). The reverse has been noted for women entering traditional professions (Fouad & Post-Kammer, 1989). There seems to be an underlying assumption in the literature that women in traditional and nontraditional careers either hold relational values or values such as independence and achievement, but not both. These values have commonly been conceptualized as opposite ends of the same continuum whereby if one is high in one, they are low in the other. Fouad and Post-Kammer (1989) suggest looking at the range of values within women’s career role to fully appreciate the complexity of women’s values and identities.

Age is also a variable purported to influence life and career values. According to Bokemeier and Lacy (1986) age is a factor that leads to “systematic differences in job values and job rewards” (p. 191). The theorizing of Gilligan (1982) suggests that as women age, they advance from a state of other focus to a more balanced view of caring

for self and others. The research on age in this respect is inconsistent. In a study of university students classified as adults, those students at least 25 years old, and traditionally aged learners, Gianakos (1996) found no differences between the groups on factors such as achievement, autonomy, and altruism. On the contrary, McConatha and Schnell (1997) found that younger adults, under 25 years of age, possessed more individualistic values than older adults. Other research has shown that younger individuals under 24 years of age were less achievement oriented than individuals in older age groups (Nunn, 1994).

The purpose of the present study was to explore and compare the placement, priority, and expectation of satisfaction of relational and other values overall, and in the career roles of post-secondary women in faculties that are considered “traditional” and “nontraditional” for women. Two additional variables, gender role orientation and age will also be assessed as to their relationship to values.

#### Summary of Introduction

Traditional career theories have been criticized for drawing upon models of human development that are male focused. Feminist researchers and writers have suggested that women possess a more connected, interdependent self as opposed to the autonomous, individualistic model of the self as proposed in many of the traditional models. Hence, there have been calls to incorporate a relational construct into the theories used to understand women’s career development.

Values, a component of identity, play a major role in career development. Some research has shown that women, regardless of career choice, desire to have relational values satisfied in their career. Brown and Crace (1996) have developed an instrument,

the Life Values Inventory that measures values in different life roles. Gender role is another variable believed to influence career choice. In the literature, there has been a tendency to stereotype women who enter traditional and nontraditional careers based on gender role orientation. It has also been suggested that age influences values. The research pertaining to age and career choice is inconclusive, however Gilligan's (1982) developmental model suggests that as women grow older, they move from a primarily other focus to a more balanced view of care for self and other.

The next chapter, Chapter Two reviews the literature, focusing on the male bias in traditional career theories, women's relational identities, and relational values in the career role. The chapter concludes with the specific research questions to be addressed in the study. Chapter Three describes the research methods including participant recruitment, data collection procedures and instruments, as well as the procedures used to analyze each of the research questions. Chapter Four focuses on the results of the study. Chapter Five consists of a detailed discussion of the results in the context of the literature reviewed in Chapter Two. Chapter Five additionally considers the limitations of the present study, directions for future research in the area, as well as implications of the findings for theory and practice.

## Chapter Two

### Literature Review

Women in the workplace are no longer considered exceptions to the rule. In fact, in Canada, the labour force participation rate for women has increased from 29% in 1962 to 57.4% in 1997 (Statistics Canada, 1997). Not surprisingly, the study of women's career development has become one of the fastest growing areas in vocational psychology today (Fitzgerald & Weitzman, 1992). The unique circumstances and challenges that women face in the world of work such as the inequality with men in terms of job selection, promotion, and compensation, and the balancing of multiple roles render women's career development a complex phenomenon (Betz & Fitzgerald, 1987; Fitzgerald & Crites, 1980).

Existent career theories have been heavily influenced by the major theories in psychology as proposed by Freud, Erikson, Maslow, and the behaviorists (Brown & Brooks, 1990). Historically, the discipline of psychology has been imbued with male values, views, and experiences rendering women's experiences and identities unheard and undervalued (Sherif, 1992). Bohan (1992) notes that the discipline of psychology has throughout its history marginalized women, and continues to do so today. She proposes that this has occurred through the exclusion of women's issues in the formulation and content of psychological research, the gender bias in theory and practice, and the male bias that depicts women's experience as deviant from the male norm. Weisstein (1992) suggests that psychological theorizing about women has been informed by negative stereotypes of what women "should" be like. Her central argument is that,

“psychology has nothing to say about what women are really like, what they need and want, essentially because psychology does not know” (p. 63).

Research and theorizing about women’s career choice and development has not been as prolific as it is today. Historically, theorizing about career choice and development meant postulating about the career behavior of men as many women did not engage in paid employment up until the women’s movement in the 1960’s (Betz & Fitzgerald, 1987; Brown & Brooks, 1990). Prior to that time, women working outside of the home was considered unusual or exceptional, such as women’s work during the Second World War. Accordingly, men were most often the subjects of research about career behavior. Despite this gender imbalance, theorists often discussed the results of their studies of career choice and development as if they applied to all populations regardless of gender, ethnicity, social class, and so forth. Women often were merely a “footnote” in the study of career development (Fitzgerald, Fassinger & Betz, 1995, p. 67). Whether or not women’s careers could be explained by this theorizing was not considered an important issue, as homemaking was viewed as women’s primary role. Marshall (1989) comments that traditional career theories are rooted in “patriarchal values” (p. 281), based on male models of success and achievement, and thus represent a limited view of human development (Brown & Brooks, 1990; Gallos, 1989;).

From the birth of formal career theorizing in the early 1900’s up to the late 1970’s the models that were developed were better suited to account for the career functioning of men than women. Numerous researchers have noted the inadequacy of the current state of career theories to adequately explain the career development of women (Forrest & Mikolaitis, 1986; Gallos, 1989; Marshall, 1989). Some have gone as far as declaring the

present status of literature pertaining to women's careers as "dismal" (Powell & Mainiero, 1992). However, progress has been made through the addition of new concepts to established theories and the development of new theoretical perspectives to better account for women's career experiences.

### Historical Perspective

Frank Parsons (1909) is credited with having developed the first conceptual framework for career choice and development (Brown & Brooks, 1996). A cornerstone for trait and factor theory, Parson's three part "matching" model posited that in choosing a career individuals should: (1) gain a clear understanding of themselves in terms of abilities, interests, and so forth, (2) acquire facts about different occupations, and finally (3) use "true reasoning" to facilitate the career decision making process. The Parsonian approach, particularly step two (identification of individual traits) was very influential to the practice of vocational guidance during the period of time from 1930 to 1950. For example, the Depression created a need to retrain and assist dislocated male workers find employment (Sharf, 1992). There was also a need to assess, select, and train mainly male personnel during World War II (Sharf, 1992). The vocational guidance activities during this time, inspired by Parson's model, established the foundation of the trait and factor approach to career development.

Ginzberg, Ginzburg, Axelrad and Herma (1951) proposed a psychologically based developmental theory of career choice that broke away from the dominant trait and factor theorizing of the day (Brown & Brooks, 1990). They proposed that occupational choice is a largely irreversible process inevitably involving compromise between interests, values, capacities, and opportunity. The sample upon which the original theory

was based consisted mainly of white males from upper middle class families. There were only ten women in a sample of 91 participants. Although acknowledging that the sample was not representative of society, Ginzberg et al. (1951) ultimately referred to their work as a “general theory of occupational choice.” Considered “revolutionary” in its time, the theory formulated by Ginzberg et al. (1951) has lost its influence on current career theory development, however it remains a “landmark contribution” to the field (Brown & Brooks, 1990, p. 4).

A very popular and heuristic theory in its current form, Super’s developmental model has undergone several revisions over the decades. His original theorizing focused mainly on the career development of men (Super, 1951, 1953, 1954). One of Super’s major contributions, the Career Pattern Study (CPS), designed to observe and describe vocational behavior, maturity, and adjustment (Super & Overstreet, 1960) charted the careers of 105 ninth grade boys over a twenty year period. This study was regarded as a benchmark to explain all career development. The CPS data lead to the publishing of numerous books and journal articles on career theory, as well as the development of three psychometric inventories (Super, Savickas & Super, 1996).

Super (1957) also discussed career patterns, the general career behavior of individuals recognized as predictable and regular. Super (1957) proposed different career patterns for women and men, hypothesizing that homemaking and various combinations with homemaking were viable for women but not for men, as homemaking has been an “incidental rather than a major life-career role for men” (Super, 1984, p. 216). Super (1980) did comment however that no life roles were necessarily sex-linked, and in contemporary households, household tasks are equally shared. The career patterns

identified for women were: “stable homemaking; conventional (working followed by marriage); stable working; double track (working while homemaking); interrupted (working, homemaking, and working either while homemaking or having given up homemaking); unstable (recycling); and multiple trial” (Super, 1984, p. 215-216).

Holland’s theory, reputed as being one of the most widely used and extensively researched theories in the study of career development today (Weinrach & Srebalus, 1990) has been criticized on the basis that it does not take into account gender role socialization or the reality of multiple role obligations in the lives of women (Fitzgerald et al., 1995). Due to these factors, women often do not have the freedom to choose an occupation as Holland’s theory assumes, thus impacting the congruence of the person and the work environment (Fitzgerald et al., 1995). Holland himself admitted that his theory was largely based on the male experience stating, “a special but closely related theory for women is desirable, but at this point I have none to offer” (1966, p. 13).

Fortunately, many of the major career theories are not static entities. For example, over the years both Super and Holland’s theories have evolved through new research, incorporating new information thus making the theories more comprehensive. Women began to be and continue to be included in the research that informs the revised forms of the theories.

### Women’s Inclusion in Career Theorizing

Career theorizing designed to address the career development of women began in the 1980’s (Fitzgerald et al., 1995). Some researchers also focused on variables that affect both men and women but had not been included in previous career conceptualizations such as sex role socialization. While some researchers doubt the

efficacy of applying what they see as the current “male” theories of career to the lives of women (Forrest & Mikolaitis, 1986; Gallos, 1989; Larwood & Gutek, 1987; Powell & Mainiero, 1992), others have applauded the revisions which they believe more adequately, albeit not entirely, capture women’s career experience (Fitzgerald & Weitzman, 1992). For example, the addition of the life space component of Super’s (1980) theory allowed for the recognition and appreciation of the multiple interacting roles that are involved in the career development of women. The life span, life space formulations of Super’s theory, note Fitzgerald and Weitzman (1992) “offer useful and heuristic ways of thinking about women’s lives” (p.135).

There is no consensus in the literature as to whether separate career theories are needed for the genders. Fitzgerald and Crites (1980) suggest that women’s career development is more complex than men’s, due to such factors as socialization and role expectations. However, they state that the career development of women is not “fundamentally *different* than that of men” (p. 45) thus not advocating a separate theory. Similarly, Astin (1984) while acknowledging that men and women make different career choices due to different early socialization experiences and “structural opportunities,” she proposes that basic work motivation is the same for both (p. 118). Osipow (1983) on the other hand, stated of career theories that “substantial differences exist to warrant attempts to develop distinctive theories for each gender” (p. 263). Larwood and Gutek (1987) also believe a separate theory for women is needed, listing five components that need to be given attention in women’s careers; career preparation, the opportunities available in society, the influence of marriage, pregnancy and children, and timing and age. Most of these theorists agree that women are faced with unique circumstances in their career

development. The dissention arises when considering whether the uniqueness warrants an entirely new theory or whether the modification of existing theories will suffice.

Gottfredson's (1981) theory of circumscription and compromise postulated that individuals will narrow job choice alternatives through a process of interaction between self concept and perceptions of job characteristics, specifically sex type, prestige, and field of work. Individuals will select occupations that society has deemed appropriate for their gender. According to Gottfredson, when compromises must be made between preferences and employment realities, field of work (vocational interests) will be sacrificed first, prestige second, and lastly preferred sex type. This tenet highlights the potential restrictive effects of occupational sex role stereotyping on women's career aspirations.

Astin's (1984) sociopsychological model described the psychological variables (work motivation and expectations) and the "cultural-environmental" variables (sex role socialization and the structure of opportunity) and the interaction of these factors that results in career choice and behavior. While men and women have the same motivations to work, career choice differs between the genders due to sex role socialization and the different structure of opportunity (job market, occupational structure, and other factors) for men and women. Although Astin's model has not stimulated much research to date and has received "mixed responses" (Patton & McMahon, 1999), it has been lauded for recognizing both the individual factors, such as values and expectations, socialization factors, such as family, and the impact of the structure of opportunity (Fitzgerald et al., 1995).

Several theories have been proposed that attempt to account for the unique circumstances that women face in their careers. Betz and Fitzgerald's model (1987) proposed that career intentions and career choice realism for women are influenced by individual factors (such as ability and self concept), background variables (such as parental support and work experience), educational variables (such as continuation in mathematics and higher education) and adult lifestyle variables (such as number of children and timing of marriage). This model was tested and refined by Fassinger (1985; 1990) who found that ability, achievement orientation, sex role attitudes, and personal agency also influenced women's career aspirations and choices. Farmer's (1985) framework proposed that background, personal, and environmental factors had direct and indirect influences on career achievement and motivation (specifically aspiration, mastery strivings, and career commitment). The gender differences in Farmer's research suggest that environmental factors and competing role priorities greatly impact women's career motivation. Eccles' (1987) model of "achievement related choices" found that choice of occupation was linked to expectations for success, subjective task value, gender role socialization, self schemas, and anticipated role and task demands.

It cannot be denied that advances have been made in the study of women's career development. Crucial factors to the career experiences of women such as gender role socialization, home and family roles, and social and environmental forces are now being considered in the conceptualization of career development and choice. The models of women's career experiences have significantly expanded the knowledge base in area of career development.

### Relational Identity and Career

Despite the improvements in theorizing about women's careers, several researchers have noted the virtual absence of the "relational component of identity" in models of women's career experience, and have called for the inclusion of this construct in the development of career theory (Cook, 1993; Forrest & Mikolaitis, 1986; Gallos, 1989; Marshall, 1989). The relational dimension of identity has emerged as a construct central to women's sense of self, brought to the fore through the research and theorizing of feminist scholars in the area of women's development (Baker, 1976; Belenky, Clinchy, Goldberger & Tarule, 1986; Chodorow, 1978; Gilligan, 1982; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991). According to these theories, the self is experienced within a framework of interdependence and connection, fostering such values as concern and care for others (Forrest & Mikolaitis, 1986; Gallos, 1989; Marshall, 1989). Forrest and Mikolaitis (1986) note that the relational construct is significant to the self-definition of both men and women, albeit defined and understood differently.

The constructs of identity and self-concept have been incorporated into many of the major career development theories to some extent (Blustein & Noumair, 1996). The emphasis or importance of identity in career differs between the theories. On one end of the continuum, Super (1980) places self concept at the heart of his theory. Occupational choice is conceptualized as the process of implementing a self-concept whereby work is considered "a manifestation of selfhood" (Super, Savickas & Super, 1996, p. 139). Super also described role specific self concepts (for example self as parent or self as partner) that were part of a larger self concept system (Super, Savickas, & Super, 1996). To a lesser extent, identity has been incorporated into the trait and factor theories of career.

Holland (1985) incorporates some of Erikson's (1968) theorizing about personal identity, defining it as "the possession of a clear and stable picture of one's goals, interests, and talents" (p. 5). In Dawis and Lofquist's (1984) theory of work adjustment, self image is viewed as an individual's perception of his or her personality which entails needs and values, and one's perception of how these factors can be satisfied in different environments such as family, work, educational, and so forth.

The conceptualization of identity in traditional career theories has generally been oriented toward the masculine definition of the separate, disconnected self (Forrest & Mikolaitis, 1986; Gallos, 1989). This view of identity in career has been criticized on the grounds that it does not consider the notion of a relational self, which is believed by some theorists to more adequately characterize women's identity development (Forrest & Mikolaitis, 1986; Gallos, 1989). A significant challenge has been to incorporate female values into career theories (Marshall, 1989).

#### Relational Identity Theorizing in Psychology

Over the last couple of decades, new models of women's identity development have come to the fore that emphasize and legitimize the relational strengths of women (Enns, 1991; Jordan, 1995). Feminist scholars have criticized the traditional models of development in psychology, noting that they are entrenched with male values and experiences yet upheld as the norm for all human development (Nelson, 1996). Because women's experience does not always fit the "norm" it has often been pathologized, devalued, and dismissed as "deviant" (Gallos, 1989).

Traditional psychological paradigms of identity development tend to enshrine Western, male, middle-class notions of the self (Nelson, 1996; Rude & Burnham, 1995).

Healthy adult development is viewed as a process of psychological separation and individuation, facing painful crises along the way, with the ultimate goal being autonomy and independence from others (Doherty & Cook, 1993; Jordan, 1991; Miller, 1991; Nelson, 1996). Freud's theory provides the basis for much of the current emphasis on the individualistic conceptions of the self (Gallos, 1989; Gilligan, 1982; Jordan, 1997). Intrapsychic development is of primary importance whereas relationships are viewed as secondary to the satisfaction of primary impulses (Jordan, 1997). Relational self development has often been negatively interpreted as fostering dependency and passivity thereby neglecting the many positive aspects of it, such as capacity for empathy and receptivity (Doherty & Cook, 1993; Enns, 1991).

Gallos (1989) notes that influential developmental theorists such as Kohlberg (1976), Perry (1968), and Levinson (1978) relied on the observation of men's lives for the formulation of their models. Fitting women's experiences into the prevailing models has been difficult (Miller, 1991). This androcentric bias has fostered the belief that "women's development could be understood as merely a logical derivative from explorations of the male experience" (Gallos, 1989, p. 112). Feminists are not alone in their critique of individualistic models. Theorists in the areas of attachment, object relations, and non-Western psychologies have also called into question the universal applicability of these models (Guisinger & Blatt, 1994).

Recognizing the deficiencies in the existing theories, a number of feminist researchers have proposed new models of development which attempt to more accurately describe the lives of women (Jordan, 1995). These new models highlight and normalize the centrality of relationships in women's identity development. Each is rooted in the

belief that in order to formulate theory about women, women's voices must be heard (Jordan, 1995). The early work of Miller (1976) and Chodorow (1978) served as the catalyst for the recent movement "toward a new psychology of women" (Enns, 1991). Chodorow (1978) offers an explanation for the themes of connectedness and interdependence woven into women's sense of self. She notes that women are most often the primary caregivers in families and as such serve as role models for daughters who more closely identify with their mothers than do boys. Boys, she proposes, are encouraged to differentiate and separate from their mothers. As a result, girls possess a self that develops in connection with their mothers whereas boys develop a sense of self through disconnecting with their mothers.

In her influential book, *In a Different Voice* (1982), Carol Gilligan describes the role that concern for others plays in the moral development of women. Gilligan challenges the applicability to the lives of women of Kohlberg's (1976) male-derived stage model of moral development. She observes that not only were women not utilized in the conceptualization of the model, but that women typically reach the third stage of the model and "advance" no further. Thus, they are judged as lacking in moral maturity. In the third stage, goodness is typified by a concern for pleasing or helping others. Moving up the ladder of moral development in Kohlberg's model, care and concern for others are replaced by the application of rules, and in the highest stage, universal principles. Gilligan notes that the morality of rights and the morality of responsibility differ in that the former emphasizes separation and the individual, and in the latter, relationships are of primary concern. Women, according to Gilligan, approach moral

dilemmas in ways that carefully considers context as opposed to the universal application of laws and rules.

Drawing on an empirical base, Gilligan (1982) asserts that women's sense of self is defined from a relational standpoint. Here, growth occurs in the context of close relationships and mature moral decision making is fueled by responsibility to, and care for, others balanced with care for oneself. This distinctly "different voice" of women came to be known as the ethic of care, in contrast to the ethic of justice of Kohlberg's model. As an alternative to Kohlberg's model, Gilligan developed her own model of moral development.

A group of prominent feminists from the Stone Center in Wellesley College has also collectively challenged the traditional psychological ideas regarding the process of self development. Described as "phallogocentric" the popular notion of the self was viewed as incongruous with women's experience (Miller, 1991). Jordan (1991) speculates that the popular masculine conceptualization of self in psychology evolved from a number of different influences. These include the modeling of psychology on Newtonian physics within which discrete objects act on each other in measurable ways, the Western ideals of the virtue and freedom of the individual, and the task of transforming the "helpless" dependent infant into an autonomous individual. The self-in-relation theory was developed as a more descriptive account of women's development. The relational perspective contains two main themes: the recognition of relationships as the main factor in development as opposed to separation and disconnection, and the valuing of women's "typical" characteristics as strengths (Doherty & Cook, 1993).

Basically, the self in relation theory recognizes that women experience their sense of self in a relational manner, whereby “the self is organized and develops in the context of important relationships” (Surrey, 1991, p. 52). Relationships occupy a central position in the worldview of women. This view of human development is unique in a number of respects. As opposed to the traditional idea of “separation-individuation” whereby disconnection from others is encouraged early in life and continues to be the goal throughout life, the process is re-conceptualized as “relationship-differentiation” whereby individual complexity and structure increases, however it does so within the bounds of relationship (Surrey, 1991). In “relationship-differentiation,” the self is not threatened or diminished by connection and intimacy with others. In fact, the self in this model, gains zest and vitality as a result of being in relationship (Miller, 1976).

Unfortunately, the tenets of this theory are occasionally misinterpreted and misconstrued as conceptualizing women as dependent beings who cannot or do not have the desire to act in ways that benefit themselves. However, Miller (1991) stresses that the self in relation theory does not incorporate the traditional notion of altruism, which connotes sacrifice. Furthermore, aspects of the self such as creativity, assertiveness, and achievement are all thought to be present in development in the context of relationship. The Stone Center theorists admit the difficulty in conveying ideas of differentiation and assertion within their framework without eliciting the traditional masculine connotations of those words (Miller 1991). This issue is an important one in the realm of women’s careers. Gallos (1989) notes that we have “neither the adequate language, models, nor illustrative teaching cases to talk about what does a career look like that is simultaneously high on achievement and high on relationship” (p. 124). Josselson (1987) notes that

researchers all too often make the “sharp” distinction between woman as worker and woman as “relator to others” as if these were entirely separate domains. She suggests that women, “do not leave their ‘relating’ selves behind when they go to work” (p. 183).

### Incorporating Relational Identity Theorizing into Career Theory

The new ways of thinking about identity women’s development have definite implications for career theory development. The advances that have been made in the realm of women’s development and in developmental psychology in general, have not been effectively integrated into theories of career development (Giordano, 1995; Richardson, 1993). The increased attention given to home and family roles in the models of career development for women implies the relational component to career but is only a small component of it (Gallos, 1989). Powell and Mainiero (1992) proposed a new model of conceptualizing women’s career development that gives credence to the notion of relationships with others. Their model suggests that women are concerned with both career and others at all times, placing primary emphasis on, and achieving success in, one or the other dimension at different points in time. Even though the relational component is recognized, the positioning of these two domains at the opposite ends of the same continuum, neglects the possibility of the two existing in the same domain. Specifically, it does not consider ways in which women can express their relation identities through their careers.

As increasing numbers of women enter the workforce, recognition of, and respect for, women’s relational identity development is needed in career research, theorizing, and understanding. Gallos (1989) notes that viewing women’s careers through a traditionally male career identity lens may result in women’s career experience appearing deviant,

deficient, or immature. Forrest and Mikolaitis (1986) describe the relational component of identity in career theorizing as, “a missing theoretical construct” (p. 79). In order for a career theory to adequately reflect women’s reality, it must address the interaction of a relational orientation and career (Cook, 1993). Further research into the relationship between women’s identity and career development is needed (Hackett, 1997).

### Values

A value can be defined as a deeply entrenched belief that influences cognitions and emotions, and guides behavior (Rokeach, 1973; Feather, 1992; Brown, 1996).

Values are inextricably linked with an individual’s sense of self (Feather, 1992), are a basic component of personality (Segal, 1992) and are representations of the core of one’s sense of identity (Josselson, 1987). Thus, while values cannot be equated with identity, values can be considered as one channel of identity expression.

Values are extremely influential in decision making and goal setting in various life domains (Brown 1996; Rokeach, 1973; Feather, 1992). It can be inferred then, that values play a central role in career choice and development. Work values are considered to be a subset of an individual’s broader range of values (Brown, 1996) and can be conceptualized as, “the degree of importance personally given to modalities of being and behaving that are relevant to the work context and activities” (Perron & St. Onge, 1991, p. 80). Work values have been incorporated in varying degrees and permutations into various theories of career development.

Donald Super introduced the concept of work values to the field of career theory over 40 years ago advocating for their inclusion in vocational appraisal which had for so long been limited to measures of abilities and interests (Super, Savickas & Super, 1996).

Super (1957, 1980, 1990) noted that people differ in their values and that values partly contribute to a person's career pattern (sequence, frequency and duration of jobs, and occupational level attained). He also proposed that work and life satisfaction is partially dependent on a participation in a way of life and type of work that provides adequate outlets for one's values. Super acknowledged the influence of values on goal setting and noted that they provide a sense of purpose in life (Super, 1970). Super's belief in the centrality of values in the career domain lead to the development of two inventories, the Work Values Inventory (Super, 1970) designed to measure the values that motivate work behavior and career goals, and the Values Scale (Super & Nevill, 1985) which measures the values expected to be satisfied in various life roles, such as studying, working, home and family, community service, and leisure activities.

In her model of women's achievement related decisions, Eccles (1987) discusses values in two different ways. "Personal values" are conceived of as one component of the "subjective task value" or importance attached to the different career options individuals believe are available to them. She suggests that gender role socialization could lead men and women to develop different core values (interest in people versus interest in things, for example). As a result, tasks involving different characteristics would have different values for women and men. More specifically, self schema and "personal values" will influence the "value" one places on various career options.

Brown's (1996) values-based holistic model of career and life role choices and satisfaction, is the only model that places values at the center of the career decision making process. It was strongly influenced by the work of Rokeach (1973) and to a lesser extent the work of Super (1953, 1990). Brown differentiates his conceptualization

of values from Super's (1980, 1990) in terms of the emphasis placed upon them in his theory (Brown & Crace, 1996c). Brown notes that Super has accorded values a place in his theory as a personality characteristic alongside self concept, needs, and interests. However, despite the time Super devoted to studying values, Brown suggests that they were never "elevated to a central place" (Brown & Crace, 1996c, p. 218) as they are in his theory. Like Super, Brown developed a values based inventory. The Life Values Inventory (1996a) was designed to assist individuals to prioritize and crystallize their values in career and other life roles.

Brown (1996) asserts that values are the primary, but by no means the only, basis for decision making. According to this model, each person develops a small number of values, which are prioritized and arranged in hierarchical order. Behavior will be most strongly guided by the values ranked most highly. Values transcend situations and tend to be relatively stable over time (Brown, 1996; Rokeach, 1973). Values also act as standards against which one's own behavior and the behavior of others is judged.

In Brown's framework, factors such as culture, gender, and socioeconomic level have an impact on the development of values as well as on the opportunity to satisfy those values. Brown noted that other life roles such as family, student, and leisure, all reciprocally interact with the career role. The salience of a role is dependent upon the perceived degree that it satisfies values. Life satisfaction is dependent on the fulfillment of one's values in array of life roles. Brown also recognizes the limiting effects that social structures can have on the availability of opportunities in which people can satisfy their values.

Borrowing from Holland's (1985) work which proposes that the "personality" of the environment reflects the personalities of the individuals in that environment, Brown (1996) suggests that a matching process occurs between the values of the occupational field and the values of the individual. Specifically, he implies that the perceived values of an occupation will be a powerful determinant of whether or not an individual desires to be employed there. Brown (1995) also notes that accurate values based information about an occupation or environment must be available for the most effective decision making. Unfortunately, this type of information is not always readily accessible, and furthermore the stereotypes that people, especially young people, have about various occupations are "typically ill-informed" (Eccles, 1994, p. 143).

#### Life Values – Empirical Evidence

Research in the area of women and life values has generally yielded results that suggest that women not only possess relational values but also rank them very highly. Relational values as defined here refer to those values that suggest interdependence, connectedness, collaboration, and responsiveness to the feelings and needs of others. Skoe and Diessner (1994) found support for Gilligan's (1982) model in their study of moral reasoning, identity and gender using the newly developed Ethic of Care Interview (Skoe & Marcia, 1991). Their results revealed that while women employ both justice and care value systems, they tend to focus more on caring values and are influenced more in their everyday lives by these values. Examining the themes of separateness and connectedness in men and women, Lang-Takac and Osterweil (1992) found that women scored highest on empathy and connectedness variables, and valued emotional intimacy. Recent research using the Rokeach Value Survey (1973) of college and non-college

adults in the United States and Canada showed that women placed the most importance on “collectively oriented values” such as equality, harmony, and friendship (Di Dio, Saragovi, Koestner & Aube, 1996; McConatha & Schnell, 1997).

There is some empirical evidence that a relational value orientation exists in women across cultures. Stimpson, Jensen, and Neff (1992) conducted a study with female and male participants from Korea, Thailand, People’s Republic of China, and the United States. The results revealed a significant effect for gender whereby the women rated values pertaining to a caring morality, such as sensitive to the needs of others, compassionate, and loyal, as socially desirable traits.

#### Age and Values

Although age has been identified as a factor that significantly influences values over the life span in general and in the career role, (Bokemeier & Lacy, 1986) it has not been sufficiently studied by researchers (McConatha & Schnell, 1997). Bardwick’s (1980) model of the life phases of women suggests that younger women (ages 17-28) are most concerned with establishing a committed relationship or marriage, compared to women in their 40’s who are characterized as being more assertive and seeking professional accomplishment. Gilligan’s (1982) developmental model suggests that as women grow older, they will move through the levels of care from self preservation (in childhood) to self sacrifice to a balance of concern for others and concern for self. This implies that “younger” women in adolescence and young adulthood, will be more concerned with caring for others, and “older” women will have a more balanced view of caring for themselves and others.

Gilligan's (1982) ethic of care model consists of three levels interspersed with transition phases. Stage one is characterized by self-preservation and self care to ensure psychological survival. During the first transition, the intensive focus on self believed necessary to survive in stage one is then criticized by the individual as selfish resulting in movement toward recognizing and valuing connections with others. Level two brings about responsibility and concern for others, to the point of self-sacrifice. Personal concerns and needs are lost in the attempt at meeting the needs of others. A realization occurs in the second transition that neglecting the self but caring for others is not ideal, and that concern for self is also necessary. Stage three, the stage of highest moral development in Gilligan's model, is one in which self-nurturing is balanced with concern for others. Gilligan (1982) proposes that women's identity develops in the context of relationship and that morality is viewed by women as, "arising from connection and conceived as a problem of inclusion rather than one of balancing claims" (p. 160).

Skoe and Diessner (1994) tested aspects of Gilligan's (1982) theory and found relationship between age and care based morality as measured on the Ethic of Care Interview (Skoe & Marcia, 1991). In their sample of 17 to 29 year old women and men, it was found that older participants tended to be at the higher ECI levels, meaning that they had a more balanced view of caring for self and others. A study of male and female undergraduate students by Nunn (1994) revealed that younger students, aged 17-24, were less achievement oriented than older students aged 25-30, 31-40, and over 40. Not all research however has been supportive of this age - level of care association. In a cross-generational study of value priorities of adults living in the United States, McConatha and

Schnell (1997) found that the younger age group (17-25) rated more individualistic values higher than did the older age groups.

### Work Values – Empirical Evidence

Values play a significant role in career choices and satisfaction. Fitzgerald and Weitzman (1992) argue that the implications of examining and making statements about women's work values are "unfortunate" because it portrays women as "fundamentally different" (p. 126). However, there has been some research that supports the notion that women possess relational values in their career and other life roles.

Two studies examined the job values of female and male students in high school and college over time. Fiorentine's (1988) time series analysis of college freshmen from 1969 to 1984 showed a steady increase in the value that women placed on "status attainment goals" in their careers such as authority, recognition, and responsibility. However, during that time period, relational values such as "helping others in difficulty" and "raising a family" remained relatively unchanged and were rated as very important. The women in Marini, Fan, Finley, and Beutel's (1996) study of high school seniors from 1976 to 1991, placed the most importance on jobs that offered altruistic or social rewards that would allow the fulfillment of such as values as doing a job that is "worthwhile to society" or that "gives you an opportunity to be directly helpful to others."

Some research in the area of work values has focused on the comparison of men and women on this dimension. Two hundred and fifty three female and two hundred and thirty five male first-year university students were compared on predictors of intent to take math or science courses in Lips' (1992b) study. One of the measures administered was a work related values rating scale. It was discovered that when considering career

choices the women in the sample valued people related concerns such as combining career and family, being helpful to others, and working with people rather than things, more so than did men. Neil and Snizek (1987) used regression analysis to examine the impact of gender on work values. Their study of men and women in a large Australian government agency found that as predicted, the odds for women rating the value “good personal relations” as “very important” were 1.65 times greater than for men. Elizur (1994) used a 24 item questionnaire to examine the work values of female and male managers, employees, and students in Hungary, Israel, and the Netherlands. While some of the values were ranked similarly (achievement and interest) the women were found to be more “people oriented” ranking values such as co-workers, opportunity for interaction with people, and fair and considerate supervisor, as more important than did men.

Bridges (1989) studied the sex differences in occupational values in a sample of 98 female and 62 male university students (introductory psychology or communication science). She found that more females (23%) than males (11%) ranked the opportunity to help others as one of the most important aspects of career choice. However, the women in this sample rated seven other job values such as salary, personal challenge, and opportunity for advancement, as more important than the opportunity to help others. This finding suggests that although women rank relational values as important, they may not always be the most important values to be satisfied in the career role.

There is some evidence to suggest that women and men may enter the same profession but expect to have different values fulfilled. For example, in a study of Gilligan’s (1982) ethic of care considerations in male and female nursing and medical students, Peter and Gallop (1994) found that a caring orientation was more related to

gender than to intended profession. Women in this study were found to be more care oriented. Davey (1992) found in a study of career aspirations and values of high school seniors that of those female students who expressed an interest becoming a physician, 88% indicated that their main motive was to “help others.” Sixty percent of the boys in the study cited wealth and status as primary motivators for their aspirations to be a physician.

Recent qualitative research studies in the area of women’s career development have revealed the centrality of relational values to women’s career identity (Jones, 1997; Lalande, Crozier, & Davey, 1998; Richie, Fassinger, Linn, Johnson, Prosser & Robinson, 1997; Schuster, 1990; Young & Richards, 1992). Some researchers have described relational ways of being as comprising the “core” or “essence” of the reported career experiences of the women in their samples (Lalande et al., 1998; Schuster, 1990; Richie et al., 1997). Career plans of women are about more than just finding a “satisfying” career (Schuster, 1990). The opportunity to maintain relationships and connections with others on the job is a very important factor for women. When asked to discuss the most salient aspects of their work, distinct themes suggestive of relational values emerge in the career stories of women, such as teaching, giving to others, helping others, and communication. The support of others such as mentors is also mentioned (Richie et al., 1997; Young & Richards, 1992). More global relational values also emerge pertaining to working for social change to improve the human condition, advocating for others, community involvement, and generally making the world a better and more equitable place to live. Interestingly, the samples utilized in these studies are not homogenous. In fact they were very diverse, incorporating women of different ethnicities (Jones, 1997;

Richie et al., 1997); ages (Richie et al., 1997; Young & Richards, 1992); fields of study (Jones, 1997; Lalande et al., 1998); sexual orientations, (Jones, 1997) and professions (Richie et al., 1997; Schuster, 1990).

### Values in Traditional and Nontraditional Careers

A long line of research has focused on the characteristics of women in male dominated careers (nontraditional) versus female dominated careers (traditional) (Brown, Eisenberg, & Sawilowsky, 1997). The research concerning which values women in these two groups desire to have satisfied in their careers is inconclusive. Some empirical evidence suggests that women in nontraditional fields expect to satisfy more “masculine” values such as autonomy and risk in their careers whereas women in traditional careers expect to satisfy more “feminine” values such as altruism and social interaction in their careers (Chatterjee & McCarrey, 1991). Ben-Shem & Avi-Itzhak (1991) compared men and women in programs leading to helping professions (such as nursing and library studies) and programs that did not involve a direct helping role (such as accounting and engineering). They found that women and men in helping fields placed more value on associations with other people and altruism than the men and women in non-helping fields. Other research shows some similarities in the expectation of satisfaction of relational values of women in traditional and nontraditional fields (Schuster, 1990).

The desire to fulfill values such as relatedness, connectedness or concern for others in one’s career is not exclusive to women in traditional careers. Some research has revealed that when given the opportunity to discuss and elaborate on this matter, women in both types of fields mention relational values. Women in science or engineering fields have been known to express the desire to use their talents in their career to “serve the

greater good” or create something useful that will help people (Ambrose, Lazarus, & Nair, 1997; Subotnik & Arnold, 1996). Women classified as “gifted” and “high-achieving” in addition to valuing the prestige and recognition that their careers bring, consider their sense of well-being and achievement in their professional lives to be closely tied to interacting with and helping others (Richie et al., 1997; Schuster, 1990). Moreover, unlike the usual portrayal of “powerful” women, the women in the Richie et al. (1997) study were not found to be competitive and unsupportive. They did not “mute their femininity in order to succeed in their careers” (p.145), displaying a relational orientation which is in contrast with the individualism depicted in the historically masculine version of achievement and success.

#### Gender Role Orientation in Traditional and Nontraditional Women

Much of the research and theorizing regarding women in traditional and non-traditional careers has utilized gender role identity as a measurement variable. Gender role identity and values cannot be equated, however, Feather’s (1984) research findings led him to conclude that, “self-descriptive measures of masculinity and femininity are related to the value systems people hold” (p. 616). Eccles (1987) proposes that gender roles influence educational and career choices through their impact on the beliefs regarding the availability of various options. Betz and Fitzgerald (1987) suggest, given the results of previous research on gender role orientation, that instrumentality or masculinity is strongly related to the nature and extent of women’s career endeavors. While acknowledging that there is a less clear relationship between the possession of traditionally feminine characteristics and career involvement, Betz and Fitzgerald (1987) state, “the possession of characteristics associated with traditional masculinity appears to

be importantly and positively related to career innovation and achievement in women” (p. 123).

A popular instrument used to measure gender identity is the Bem Sex Role Inventory (BSRI) (1978) designed to measure the extent to which individuals believe culturally defined positive attributes ascribed to men and women are descriptive of themselves. Research testing Fassinger’s (1990) causal model of career choice for women has shown that women who select non-traditional careers tend to have “strong agentic characteristics” as measured by the masculinity scale of the BSRI (O’Brien & Fassinger, 1993, p. 466). Other research in this area has supported Fassinger’s (1990) research regarding the masculinity characteristics of women who select non-traditional careers (Jagacinski, 1987; Jones & Lamke, 1985; Metzler-Brennan, Lewis & Gerrard, 1985). Wolfe and Betz (1981) also found in their study that women who were masculine were more likely to select a nontraditional career. In a study by Clarey and Stanford (1982) it was concluded that “feminine” women tend to limit themselves to careers that offer low pay, few advancement opportunities, and low status, which tend to be in the traditional arena. Another research study found that women in female-dominated majors described themselves as more feminine than did women in male-dominated majors (Dawson-Threat & Huba, 1996). Hawks and Spade (1998) suggest that contrary to “gender stereotypes” women who enter nontraditional careers such as engineering, do not consider helping others or society as an important factor in career decision making.

There has been less attention focused on traditionality of career choice and Androgynous or Undifferentiated women. Bem (1974) notes that undifferentiated individuals (scoring low on both Masculinity and Femininity) have a very limited

repertoire of behavioral choices. In a study aimed at exploring how sex role may be related to men's and women's college major choice using Holland's typology for classification of majors, it was discovered that Undifferentiated women were underrepresented in Enterprising-type and Investigative-type majors (selected by many men) and overrepresented in Artistic-type majors (selected by more women than men) (Gianakos & Subrich, 1988). The authors suggest that the Undifferentiated women's selection of the Artistic-type major is consistent with "the introspective focus and poorer socialization attributed to this sex role" (Gianakos & Subrich, 1988, p. 265). In the same study, Androgynous women were found to be underrepresented in the Artistic-type majors. It has been suggested by some authors that women who are Androgynous have been found to explore a variety of different career possibilities but ultimately chose a career in a traditional area (Clarey & Sanford, 1982; Dawson-Threat, & Huba, 1996; Wolfe & Betz, 1981).

Despite these similar findings, the empirical evidence using the BSRI in this area is not conclusive. In a study comparing gender identity between high school girls from a college preparatory upper-level mathematics class and a vocational track cosmetology class using the BSRI, the unpredicted results showed that there were more Feminine-type girls in the former than the latter (Wulff & Steitz, 1997). Countering the hypothesis that women with feminine values (as measured on the BSRI) enter traditional careers and women with masculine values enter nontraditional careers, Fouad and Post-Kammer (1989) found that women in graduate courses in counselling were evenly split between Androgynous and Feminine gender type with a substantial number also scoring as Masculine.

In sum, the research with women in traditional and nontraditional careers examining relational factors has had mixed results. Investigations focusing on gender role orientations have tended to reveal more evidence that concludes that women who enter nontraditional careers such as science and engineering score higher on measures of Masculinity than Femininity and vice versa for women who enter traditional careers. However, some research, particularly of the qualitative variety, has found less stark distinctions, suggesting that both groups of women possess relational values and wish to have them fulfilled in their career role.

#### Summary of Literature Review

Many of the major theories of career choice and development were formulated based on the experiences of men. These theories have been critiqued by some feminist scholars, for not adequately accounting for the career experiences of women. Despite the fact that new career theories have emerged and existing theories have been modified to be inclusive of women, a relational component of identity has not been incorporated. Feminists such as Gilligan (1982) and Jordan et al. (1991) have proposed alternate theories of human development based on the notion of a relational self that they feel are more reflective of women's development.

Values are strongly held beliefs that influence behavior and decision making and are thus influential in career development. The Life Values Inventory (Brown & Crace, 1996a) explores values in various life roles. Empirical evidence, particularly qualitative research, exists that suggests women possess relational values and desire to have them satisfied in their career role regardless of the type of career they are in. Research involving gender role orientation, a variable also noted to be influential in values and

career choice, has tended to show that women who choose nontraditional careers possess masculine gender orientations whereas women who choose traditional careers possess feminine gender orientations. The Bem Sex Role Inventory (Bem, 1978) is often used to measure the construct of gender role orientation. Values and career choices are also shaped by an individual's age. The research into age and career development is not conclusive, however models of women's development such as those of Gilligan (1982) and Bardwick (1980) suggest that as women age, their value systems shift from a primary concern for others when they are younger, to a more balanced position of caring for themselves and others.

#### Present Research

The current research attempts to explore the existence and importance of relational values in women's career role. While the main focus is on the relationship between traditionality of career choice and relational values, the relationship between age and gender role orientation and relational values in the career role is also examined. The research and theorizing of such feminist writers as Miller (1976), Gilligan (1982), and the Stone Center Group (Jordan, Kaplan, Miller, Stiver, & Surrey, 1991) suggests that women possess relational worldviews, valuing connections and interdependence. Thus, "women's vocational identity may be organized around perceptions of their workplace self as responsive, interdependent, and empathic" (Giordano, 1995, p. 5).

There are many different ways that women express relational values on the job regardless of which type of career they have chosen. McGowen and Hart (1992) suggest that in their careers, women adopt a "double agenda of accomplishing a task while at the same time sustaining social relationships" (p.725). One of the difficulties of fully

appreciating women's values in the workplace is that they are often examined through a traditional male lens. The ways that women define achievement and success in their careers may differ from the commonly accepted definitions of those constructs.

While there have been numerous calls to examine relational ways of being in the career roles of women, (Forrest & Mikolaitis, 1986; Gallos, 1989) there has been little research conducted in this area. Age and gender role orientation, factors that have the potential to influence values in career and other life roles, have also not been sufficiently researched. Therefore, it was deemed of value to conduct an exploration into the relational dimension of women's career choices, particularly in traditional and nontraditional fields.

#### Research Questions

1. How do women rank relational and other values both a) overall and b) in their career role?
2. How do women in a) Traditional and b) Nontraditional faculties rank relational and other values both i) overall and ii) in their career role?
3. How do women rank Level A and Level B Relational values compared with the ranking of other values both a) overall and b) in their career role?
4. How do women in a) Traditional and b) Nontraditional faculties rank Level A and Level B Relational values compared with the ranking of other values both i) overall and ii) in their career role?
5. What is the relationship between a) relational and b) other values and faculty (Traditional and Nontraditional) both i) overall and ii) in their career role?

6. What is the relationship between a) relational and b) other values and gender role orientation both i) overall and ii) in their career role?
7. What is the relationship between a) relational and b) other values and age both i) overall, and ii) in their career role?
8. What are the significant values, particularly those that are relational, that women want to have satisfied in their career role?

## Chapter Three

### Method

This chapter consists of four sections. The first addresses the characteristics of the research participants. Sections containing discussions of the research instruments and the data collection procedures, including participant recruitment follow. The chapter closes with the procedures used to analyze the data, as they pertain to the research questions in the present study.

#### Research Participants

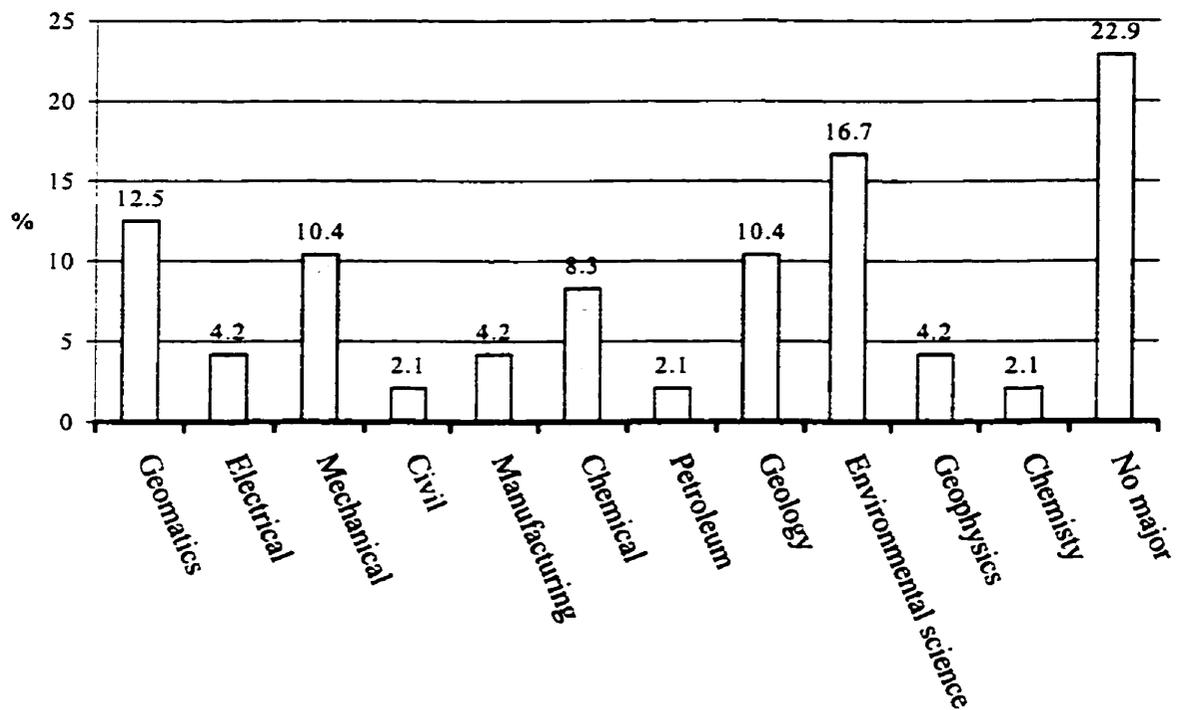
Participants were 98 female undergraduate students drawn from four different faculties at the University of Calgary (U of C). The U of C, located in Southwestern Alberta serves 22,000 students. Thirty-one participants were from the faculty of Engineering, seventeen were from Science (except the department of Biology), eighteen were from Social Work, and thirty-two were from Nursing. It should be noted that although recruiting efforts took place only on the U of C campus, some participants in Nursing were students of Mount Royal College (MRC) as this is a conjoint degree program with students studying on both campuses. Separate ethics approval was obtained for these students through the Faculty of Nursing Research and Scholarly Development Committee at MRC.

For the purposes of this study, the faculties of Social Work and Nursing comprised the group defined as “Traditional” and the faculties of Engineering and Science comprised the group defined as “Nontraditional.” These definitions were based on the enrollment data listed in the 1997-98 University of Calgary Fact book published by the Office of Institutional Analysis. A faculty was considered nontraditional for

women if thirty percent or less of the total enrollees were women. Similarly, a faculty was considered traditional for women if seventy percent or more of the total enrollees were women. The cutoff percentages used in the present study were based on those utilized in previous research in the area of traditional and nontraditional faculties and careers for women (Lavallee & Pelletier, 1992). The following is a listing of the percentages of undergraduate women in the four relevant faculties at the U of C: Social Work 84.6%, Nursing 92.4%, Engineering 20%, Science 15.3% (excluding Biology). It should be noted that women in the Biological Sciences were not recruited for the present study, as it was the only department within the Faculty of Science in which the number of women exceeded the number of men. Biology is not as much of a nontraditional career area for women as it once was. In fact, Nevitte, Gibbins, and Coddling (1990) consider biology a “female domain” noting that female students generally outnumber males by a ratio of 2:1.

Demographic information was obtained through the administration of the Participant Information Sheet (Appendix E). The departmental composition of the Nontraditional group can be seen in Figure 1 (p. 41). The same analysis was not relevant for the Traditional group, as these faculties are nondepartmentalized. The age of the participants ranged from 18 to 52 years (Mean = 24.87, S.D = 6.14). Two age categories, “Younger” and “Older” were determined using a median split method thereby allowing the sample to determine what was to be considered “younger” and “older.” Participants over 23 years of age were classified as “Older” and those 23 years of age and younger were classified as “Younger.” In the Traditional group, 62% of the women were Older, compared to 27.1% in the Nontraditional group.

**Figure 1. Percentage of Nontraditional Participants by Department**



The majority of the participants were single (79.6%) and 20.4% were either married or living with an intimate partner. A small percentage of the sample had children (11.2%) with the majority of those with children having two children (63.6%). One hundred percent of the participants were full time students at the time of their participation in the study. Fifty one percent have had a break in their education with the mean length of the break being 4.4 years and a range of 0.5 years to 25 years.

In terms of ethnicity, the majority of the sample identified themselves as Canadian 70.3%, followed by European Canadian 17.6%, and Asian or Asian Canadian 17.6%. The remaining ethnicities were represented by only 1% of the sample. Just over 55% (55.6%) stated that they have a religious affiliation, while 44.4% stated that they did not. Of those who stated that they had a religious affiliation, 52% said that they were

Protestant and 38% stated they were Catholic. Other religious affiliations each represented fewer than 3% of the sample.

Fifty-eight percent of the one hundred and seventy women surveyed responded. This response rate can be considered as “adequate” to “good” in social research (Babbie, 1992). Initially, it was expected that 200 women would participate in the study, fifty from each of the four relevant faculties. However, due to constraints on time and opportunities of the researcher, this number was not attained. Therefore, for the purposes of statistical viability, the two traditional faculties were collapsed to form one category labeled Traditional, and the same procedure was implemented for the two nontraditional faculties to form the one category labeled Nontraditional.

### Research Instruments

#### Life Values Inventory

Permission was granted by Dr. Duane Brown, co-author of the Life Values Inventory (LVI), to make copies of the inventory for the purposes of this study. The LVI is an attempt to bridge the gap between general values inventories and work values by promoting holistic thinking through the incorporation of a variety of life roles (Brown & Crace, 1996b). It is designed to help individuals with decision making in their work, education, relationship, and leisure roles (Brown & Crace, 1996b). There were two main reasons for the selection of the LVI for the present study. One was for its incorporation of values such as belonging, spirituality, loyalty to a family or group, and concern for the environment which tap into the relational dimension in unique ways not evident in other values inventories. The other reason was that the items and directions of the inventory

were reviewed specifically to determine “whether they were sensitive to the unique concern of women” (Brown & Crace, 1996b, p. 5).

The LVI measures an individual’s endorsement of the following 14 major life values: Achievement, Belonging, Concern for the Environment, Concern for Others, Creativity, Financial Prosperity, Health and Activity, Humility, Independence, Loyalty to Family or Group, Privacy, Responsibility, Scientific Understanding, and Spirituality. The definitions of these values as they appear in the instrument can be seen in Appendix A. The LVI was designed to be self-administered and self scored. It takes approximately 30 minutes to complete.

There are four sections in the LVI. Both quantitative and qualitative components are incorporated. The first section consists of 42 items. The participant is asked to rate on a Likert scale from one to five the response that best describes how that belief guides their behavior, one being “Almost never guides my behavior” and five being “Almost always guides my behavior.” The ratings of the items are summed, providing the scores for the 14 life values. Section two is the qualitative section consisting of five short answer questions. Questions such as, “Who do you most admire?” are designed to help the individual further explore and crystallize their values. It should be noted that an instruction was given pertaining to one question in the qualitative section to “Canadianize” the example provided and make it more relevant to women (see Appendix B). Section three asks the individual to rank in importance all of the values that guide their behavior considering both the quantitative and qualitative assessments. The fifth and final section involves the ranking of the values the individual feels are most

important to have satisfied in each of four life roles: job or career, student, family and important relationships, and leisure and community activities.

In the present study, only the ranked data from sections three and four of the LVI was analyzed. The rationale for this was partially based on Brown's (1996) theoretical perspective that emphasizes the importance of prioritizing and crystallizing values. The rating component in section one and the qualitative component in section two aid in the prioritization and crystallization process. Moreover, in a ranking situation ties are not permitted as they are in rating, further facilitating value prioritization.

Brown and Crace (1996b) report coefficient alphas for both high school ( $n=334$ ) and adult ( $n=342$ ) samples. For high school students, coefficients range from .51 on the Independence scale to .81 on the Concern for the Environment scale. For adults, coefficients ranged from .55 on the Independence scale to .88 on the Spirituality scale. Furthermore, in the adult sample, ten of the coefficients exceeded .70 and in the high school sample 12 of the coefficients were at or above .70, suggesting adequate internal consistency for these samples (Brown & Crace, 1996b).

Test-retest reliability coefficients from subsamples of 51 high school students and 72 adults are reported by Brown and Crace (1996b). For the high school students, coefficients ranged from .49 on the Privacy scale to .75 on the Belonging scale. For the adult sample coefficients ranged from .57 on the Concern for Others scale to .90 on the Spirituality scale. The retest coefficients for both samples on all scales were significant at  $p<.0001$  over an 18 day period.

A series of factor analytic studies were used to select the scales on the LVI (Brown & Crace, 1996b). In the adult sample, principal axis extraction resulted in a 14

factor solution that reached convergence in 27 iterations and accounted for 73.2% of the variance. The result was a stable factor structure that supported the predicted 14 scale model. For the high school sample, principal axis extraction resulted in a 14 factor solution that reached convergence in 29 iterations and accounted for 72.2% of the variance. A stable factor structure resulted that supported the predicted 14 scale model with one exception, Independence. Independence also proved problematic in the adult sample, showing significant cross loading on other factors.

Convergent validity was assessed through a comparison of the LVI scales to the items on the Rokeach Values Survey (RVS, Rokeach, 1973), a popular values inventory, using Pearson product moment correlations. Of thirty predictions made regarding the relationship between the scales on these two instruments, 27 were significant for the adult sample and in the expected direction, and for the high school sample, 24 predictions were supported.

The LVI scales for the adult sample were correlated with the Crowne-Marlowe Social Desirability Scale to assess the discriminant validity of the LVI. The range of the correlations was from  $-.035$  to  $.277$ . The small sizes of the correlations is suggestive of a minimal impact of the social desirability response set, accounting for a small amount of variance in the LVI scores (Brown & Crace, 1996b).

In an attempt to establish criterion related validity, Brown and Crace (1996b) requested that the individuals who completed the LVI ask an individual who knew them well to complete a Behavioral Rating Scale designed to assess behaviors related to the LVI values. This activity was performed to assess whether the results on the LVI

actually correspond to observed behaviors. Some form of criterion validity was demonstrated at a statistically significant level ( $p < .05$ ) on eight of the scales on the LVI.

### Bem Sex Role Inventory

Permission to make copies of the Bem Sex Role Inventory (BSRI) for the purposes of this study was granted to the researcher by Mind Garden, the distributor of the inventory. The BSRI was designed to measure “the extent to which the culture’s definitions of desirable female and male attributes are reflected in an individual’s self-description” (Bem, 1979, p. 1048). Since its initial publication, the BSRI has been utilized in several hundred research studies (Lippa, 1985). In fact, Schmitt and Millard (1988) state that it is the most commonly used instrument of its kind. The inventory is labeled the “Bem Inventory” to reduce the chance that responses might be influenced by a knowledge of the purpose of the scales (Bem, 1981). There is no time limit for completing the BSRI, however, most people complete the original form within 15 minutes.

The BSRI is a self-administered, paper and pencil test. The original form contains 60 personality characteristics presented on a single piece of paper. The respondent is asked to indicate how well the item describes them on a seven-point scale (one indicating “never or almost never true,” and seven indicating “always or almost always true”). Twenty items are stereotypically feminine, and twenty items are stereotypically masculine. The remaining 20 items are “fillers” thought not to represent either feminine or masculine characteristics. Masculinity and Femininity scale scores are calculated based on the averages of the individual’s ratings of the feminine and masculine items in the inventory. Individuals are then defined as: Androgynous if they score above

the median on both the Femininity and Masculinity scales; as Undifferentiated if they score below the median on both scales; as sex typed (either Masculine or Feminine) if only one of the scores exceeds the median with the other score below the median.

The median split half method was used in the present study to classify participants as one of four types: Masculine, Feminine, Androgynous, or Undifferentiated. The medians of Bem's normative sample (1978) were used to facilitate the categorization process. These medians were chosen as per Bem's (1981) suggestion that "if one is working with a small sample of subjects or with a sample containing one sex only, it might be desirable to utilize the medians of the normative sample" (p.10). Considering the small number of participants in the current sample, and the gender composition, the normative medians were utilized. Seven participants obtained scores that landed exactly on the normative median for either Masculinity or Femininity. As the test manual did not provide instructions to accommodate this situation, the cases in question were randomly and equally divided into two groups. All of the cases in one group were bumped above the median, and those in the other group were bumped below the median.

The BSRI is said to display "good internal consistency and reliability" (Lippa, 1985, p. 177). The following coefficient alphas are reported by Bem: for females, .75 for the Femininity scale and .87 for the Masculinity scale; for males, .78 for the Femininity scale and .87 for the Masculinity scale. Bem reports the following test-retest reliabilities: for females .82 for the Femininity scale, .94 for the Masculinity scale; for males, .89 for the Femininity scale and .76 for the Masculinity scale.

Experiments have been performed that have suggested that individuals classified as a particular BSRI type choose behaviors consistent with that type (Bieger, 1985). The findings of these studies support the construct validity of this instrument (Bieger, 1985). Schmitt and Millard (1988) provide further construct validity through factor analyses performed on the feminine, masculine, and neutral items of the BSRI for sex-typed and nonsex-typed individuals. The results indicated that this instrument is valid for distinguishing these two types of individuals, showing that the two types responded differently to the items.

A central theoretical assumption in the construction of the BSRI is that Masculinity and Femininity are separate and distinct traits (Bieger, 1985). Correlation coefficients were calculated between male and female scores and were found to vary from  $-.14$  to  $.33$ . In all cases these were not statistically significant, supporting the assertion that Masculinity and Femininity are independent of each other (Bieger, 1985).

#### Procedure

Participation in the study was voluntary. As an enticement to partake in the study, each potential participant was informed that a draw would be made randomly from the pool of participants to win a \$150 gift certificate to the University of Calgary bookstore. Dr. Elizabeth Cannon, who is the NSERC/ Petro-Canada Chair for Women in Science and Engineering (Prairie Region), funded this draw. Also as an incentive to participate, each potential participant was informed that if requested she would receive a one-page summary of her responses to one of the research instruments, the Life Values Inventory. Information from the test developers regarding the nature of values and their relation to various careers, activities, and educational majors was placed in the Career Resource

Centre at the University of Calgary Counselling Centre and made available to study participants for their perusal, with permission of the Director.

Participants were recruited using numerous methods. The assistance of undergraduate clubs in the four pertinent faculties was enlisted to inform their members of the study and encourage participation. Widely distributed e-mail messages about the study were sent to various relevant groups. Other recruiting efforts included: the placing of posters in various buildings on campus; being interviewed by a U of C newspaper for an article regarding the study; and going into various relevant classes to introduce the study and solicit participation.

Each participant received a research package containing the following items:

- 1) an "Instruction Sheet" (Appendix B), which provided some general directions for completing the materials as well as instructions for the return of the completed package;
- 2) a "Participant Letter of Information" (Appendix C), which provided information on the purpose and procedure of the study;
- 3) Two copies of a "Research Participant Letter of Consent" (Appendix D);
- 4) a demographic questionnaire entitled, "Participant Information Sheet" (Appendix E);
- 5) a Bem Sex Role Inventory ;
- 6) a Life Values Inventory;
- 7) an open ended question entitled "Researcher Generated Question<sup>1</sup>," which provided

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<sup>1</sup> It should be noted that the Researcher Generated Question was pilot tested on a small sample of women to ensure clarity and comprehension.

information on how the participant expected to satisfy her values in their career role (Appendix F);

- 8) a blank sheet of extra writing paper to use if writing exceeded the designated space; and,
- 9) a return envelope (postage provided if needed).

Participants obtained research packages in various ways. In classes, packages were distributed to those who indicated interest. Participants could also pick up packages at various designated offices on campus. Some received packages in the mail and other participants were met by the researcher on campus. It was requested that participants complete and return the package within 15 days of receiving it. Depending on what was agreed to with the researcher, participants returned the packages either through the postal system (postage provided by the researcher) or dropped them off to designated offices on campus. Participants who had not returned a completed research package within the specified timeframe received one reminder letter (Appendix G). It took approximately one hour to complete the materials.

#### Data Analysis

Both quantitative and qualitative methods were used to analyze the data in the present study. While some “purist” researchers would argue that these two methods represent completely incompatible paradigms (Rossman & Wilson, 1985), others note the utility and benefit of combining the two in what has been labeled “multimethod” research (Cobb & Hagemaster, 1987; Polit & Hungler, 1999). Regarding quantitative and qualitative paradigms, Cobb and Hagemaster (1987) state not only that “the distinction

between the two approaches are not absolute” but that “both types of methods can and, in some cases, should be included in the same study” (p. 138).

Polit and Hungler (1999) take a “pragmatist” stance on the integration of the two methods, recognizing the obstacles but arguing the many advantages of the approach. They suggest that qualitative and quantitative approaches possess complementary strengths and weaknesses, thus “mutually supplying each others lack” (p. 271). Further, they believe that the multimethod approach may lead to substantive and theoretical insights into the complexities of reality not otherwise attainable.

Descriptive statistics in the form of means, medians, modes, and standard deviations were used to analyze the demographic information from the Participant Information Sheet. Initially, data pertaining to the participants’ ethnicities was going to be used in the analysis as an independent variable. However, due to the very small variation in ethnicity across the sample, it was decided that comparisons using this variable would not be statistically meaningful, and therefore was not included.

In the analysis of relational values, a distinction was made between “Level A” relational values, and “Level B” relational values. “Level A” values were considered more intuitively or directly relational, and “Level B” values while also considered relational were more indirectly relational. This split was based on both previous research (Lalande, Crozier, & Davey, 1998) and on an informal consultation with five professional counsellors and researchers, each familiar with the self-in-relation theory. The Level A category consists of three values: Belonging, Concern for Others, and Loyalty to Family or Group. The Level B category consists of two values: Concern for the Environment, and Spirituality. The mean of the rankings for each of the individual values in Levels A

and B were used to determine the overall rankings for Level A relational values and Level B relational values. The three Level A and two Level B values were also analyzed individually.

### Summary of Method

Participants in the present study were 98 female undergraduate students at the U of C, drawn from four different faculties: Engineering, Science, Nursing and Social Work. The response rate was 58%. Recruitment efforts included 5 minute presentations in relevant classes, widely distributed e-mails, and advertising through undergraduate clubs. For the purposes of the present study the faculties of Engineering and Science were collapsed to form one group labeled, Nontraditional and Nursing and Social Work were collapsed for form one group labeled, Traditional. The categories “Older” and “Younger” were determined using a median split method resulting in those aged 23 years and younger being defined as “Younger.”

Both qualitative and quantitative methods were employed. Two research instruments were employed in the present research, the Life Values Inventory (Brown & Crace, 1996a) and the Bem Sex Role Inventory (Bem, 1978). The former is a relatively new instrument that measures the endorsement of 14 major life values using both quantitative and qualitative methods. The latter is a popular instrument that measures gender role identity (Masculine, Feminine, Androgynous or Undifferentiated) through the respondents selection of stereotypical masculine and feminine items. A researcher generated open-ended question was also utilized. Both descriptive and inferential statistical analyses were performed in the present study.

The data analyses are outlined below. For the purpose of clarity, the various analyses are organized by the research question they address.

### Research Questions and Associated Analyses

1. **How do women rank relational and other values both a) overall and b) in the career role?**
2. **How do women in a) Traditional and b) Nontraditional faculties rank relational and other values both i) overall and ii) in the career role?**

One of the main purposes of the study was to describe the ranking of life values both overall and specifically in the career role for all of the women in the sample. The first two research questions addressed these points. Descriptive statistics in the form of frequencies, means, modes, and standard deviations were performed on sections three and four (career role only) of the LVI. Using data from the same source, the same descriptive statistical analyses allowed for the examination of the aforementioned categories of values for women in Traditional and Nontraditional faculties.

3. **How do women rank Level A and Level B Relational values compared with the ranking of other values both a) overall and b) in the career role?**

Spearman rank-order correlations were calculated to assess the degree of relationship between the ranking of the two levels of Relational values and the ranking of the other values. The data generated from sections three and four (career role only) of the LVI was utilized for this analysis.

4. **How do women in a) Traditional and b) Nontraditional faculties rank Level A and Level B Relational values compared with the ranking of other values both i) overall and ii) in the career role?**

Spearman rank-order correlations were calculated to assess the degree of relationship between the ranking of the two levels of Relational values and the ranking of the other values for women in Traditional and Nontraditional faculties. The data generated from sections three and four (career role only) of the LVI was utilized for this analysis. Information on the faculty of the participants was gathered from the Participant Information Sheet, and the designation of the label Traditional or Nontraditional was made using the rationale outlined in the Literature Review.

**5. What is the relationship between a) relational and b) other values and faculty (Traditional and Nontraditional), both i) overall and ii) in the career role?**

The Mann-Whitney U-test was also performed to analyze this question, using the ranked data from sections three and four (career role only) of the LVI, and the faculty variable, which can assume either one of two levels, Traditional or Nontraditional. The faculty of the participant was gathered from the Participant Information Sheet and deemed as Traditional or Nontraditional using the rationale stated in the Literature Review.

**6. What is the relationship between a) relational and b) other values and gender role orientation both i) overall and ii) in the career role?**

This question was addressed using the Kruskal-Wallis test, a nonparametric counterpart of the one-way ANOVA, using the ranked data from sections three and four (career role only) of the LVI, and the gender role classifications generated by the BSRI.

**7. What is the relationship between a) relational and b) other values and age both i) overall and ii) in the career role?**

The Mann-Whitney U-test, the nonparametric analog of the independent groups t-test, was performed using the ranked data from sections three and four (career role only) of the LVI, and the age variables, which can assume either one of two levels, Younger or Older. Ages of the participants were gathered from the Participant Information Sheet.

**8. What are the significant values, particularly those that are relational, that women want to have satisfied in their career role?**

Qualitative analysis was undertaken using the data from the Researcher Generated Question. The data were analyzed using a computer software program entitled HyperQual (Padilla, 1990), designed specifically for the qualitative analysis of text-based data. The qualitative analysis process, according to Dey (1993) consists of three parts: describing the phenomenon under study, classifying the data, and finally making connections within the data. This simple model was followed in the present study. The first step, describing, involves activities such as summarizing the data, and pulling it together through relating central characteristics. Ultimately, description provides the basis for interpretation. Classification entails, “organizing data into categories or classes and identifying formal connections between them” (p. 275). Finally, connecting categories involves, “identifying substantive connections by associating categories or linking data” (p. 275).

## Chapter 4

### Results

This chapter provides the analyses of the study's research questions. Each question is presented with the analyses performed for that particular question. An alpha level of .05 was employed for all statistical analyses. It should be noted that "Overall" values refer to those values originating from section three of the LVI in which spaces are provided for the ranking of the six highest values. Values "in the career role" refer to those originating from section four of the LVI in which spaces are provided for the ranking of the four highest values.

#### Question 1

**How do women rank relational and other values both a) overall and b) in their career role?**

Descriptive statistics in the form of frequencies, means, modes, and standard deviations were performed on both the relational and other value rankings for all of the women in the sample both overall and in the career role. Only values that were ranked by at least 30% of the participants were considered in the descriptive statistical analyses. It should be noted that a lower numerical value in the values ranking indicates a higher rank.

#### Overall Values

Table 1 (p. 57) presents the results of the descriptive statistical analysis for values ranking overall of all women in the sample. An inspection of the means of the rankings overall indicated that Achievement had the highest mean ranking, followed by Spirituality, and Concern for Others. Responsibility and Loyalty to Family or Group

Table 1.

Means, Modes, and Standard Deviations of Value Rankings Overall

	Mean	Mode	S.D
Achievement	2.69	1.00	1.53
Spirituality <sup>RB</sup>	2.73	1.00	1.97
Concern Others <sup>RA</sup>	2.99	2.00	1.50
Responsibility	3.03	2.00	1.38
Loyalty Fm/Grp <sup>RA</sup>	3.09	1.00	1.72
Independence	3.46	3.00	1.70

<sup>RA</sup> denotes a Level A Relational value

<sup>RB</sup> denotes a Level B Relational value

received similar mean rankings. Independence rounded out the top six ranked values.

The frequencies of values ranking overall for women in the sample can be seen in Table 2 (p. 58).

As the table illustrates, slightly less than a quarter of the participants indicated that Achievement was the most important value to them, making it the value selected most often as the most important. Spirituality was selected as the most important value by the second highest number of participants, followed by Concern for Others and Loyalty to Family or Group. Responsibility and Independence were tied, rounding out the top six most important values.

Table 2.

Frequencies of Values Ranking Overall

Values	Rank						
	1	2	3	4	5	6	Unranked
Achievement	24.5	21.4	14.3	10.2	12.2	3.1	14.3
Spirituality <sup>RB</sup>	18.4	3.1	2.0	3.1	7.1	4.1	62.2
Concern Others <sup>RA</sup>	13.3	18.4	11.2	15.3	8.2	4.1	29.6
Loyalty Fm/Grp <sup>RA</sup>	11.2	9.2	6.1	8.2	6.1	5.1	54.1
Responsibility	9.2	16.3	15.3	12.2	9.2	2.0	35.7
Independence	9.2	11.2	12.2	7.1	11.2	9.2	39.8

<sup>RA</sup> denotes a Level A Relational value

<sup>RB</sup> denotes a Level B Relational value

Values in the Career Role

The mean value rankings in the career role for all of the participants, as seen in Table 3 (p. 59), shows that Concern for Others received the highest mean ranking, followed by Achievement, Responsibility, and Financial Prosperity. Table 4 (p. 59) illustrates the frequencies of values ranking in the career role for all women in the sample. Achievement was ranked as the most important value in the career role, followed by Concern for Others, and a tie between Financial Prosperity and Responsibility.

Table 3.

Means, Modes, and Standard Deviations of Value Rankings in the Career Role

	Mean	Mode	S.D.
Concern Others <sup>RA</sup>	1.65	1.00	0.86
Achievement	2.03	1.00	1.05
Responsibility	2.56	3.00	0.85
Financial Pros.	2.76	4.00	1.17

<sup>RA</sup> denotes a Level A Relational value

Table 4.

Frequencies of Values Ranking in the Career Role

	Rank				
	1	2	3	4	Unranked
Achievement	35.7	17.3	21.4	8.2	17.3
Concern Others <sup>RA</sup>	28.6	17.3	4.1	3.1	46.9
Responsibility	7.1	22.4	27.6	8.2	34.7
Financial Pros.	7.1	10.2	6.1	15.3	61.2

<sup>RA</sup> denotes a Level A Relational value

**Question 2**

**How do women in a) Traditional and b) Nontraditional faculties rank relational and other values both i) overall and ii) in their career role?**

Descriptive statistics in the form of frequencies, means, modes, and standard deviations were performed on both the relational and other value rankings for women in Traditional and Nontraditional faculties, both overall and in the career role.

Overall Values for Traditional Women

As Table 5 (p. 60) indicates, in terms of overall values ranking, Concern for Others had the highest mean ranking for women in the Traditional group, followed by Spirituality and Loyalty to Family or Group. Achievement was next, followed by Responsibility and Independence.

Table 5.

Means, Modes, and Standard Deviations of Value Rankings Overall for Traditional Women —

	Mean	Mode	S.D.
Concern Others <sup>RA</sup>	2.62	2.00	1.43
Spirituality <sup>RB</sup>	2.64	1.00	1.89
Loyalty Fm/Grp <sup>RA</sup>	2.72	1.00	1.57
Achievement	2.86	1.00	1.52
Responsibility	3.19	2.00	1.43
Independence	3.72	3.00	1.51

<sup>RA</sup> denotes a Level A Relational value

<sup>RB</sup> denotes a Level B Relational value

Table 6 (p. 61) presents the frequencies of values ranking overall for women in the Traditional group. The women in the Traditional group ranked three values, Concern for Others, Achievement, and Spirituality as the most important value to them, leading to a

three-way tie for the value selected most often as most important for this group. This was followed by Loyalty to Family or Group, Responsibility, and Independence.

Table 6.

Frequencies of Values Ranking Overall for Traditional Women

	Rank						
	1	2	3	4	5	6	Unranked
Concern Others <sup>RA</sup>	22.0	26.0	10.0	16.0	8.0	2.0	16.0
Spirituality <sup>RB</sup>	22.0	2.0	4.0	6.0	6.0	4.0	56.0
Achievement	22.0	18.0	18.0	12.0	16.0	2.0	12.0
Loyalty Fm/Grp <sup>RA</sup>	14.0	12.0	8.0	10.0	2.0	4.0	50.0
Responsibility	8.0	18.0	18.0	12.0	12.0	4.0	28.0
Independence	4.0	6.0	14.0	10.0	8.0	8.0	50.0

<sup>RA</sup> denotes a Level A Relational value

<sup>RB</sup> denotes a Level B Relational value

Values in the Career Role for Traditional Women

As Table 7 (p. 62) illustrates, in the career role, Concern for Others had the highest mean ranking for the Traditional group. Achievement had the second highest mean ranking for this group, followed by Responsibility and Financial Prosperity. Table 8 (p. 62) indicates that women in the Traditional group most often named Concern for Others as their most important value in their career role. This was followed by the values of Achievement, Financial Prosperity, and Responsibility.

Table 7.

Means, Modes and Standard Deviations of Value Rankings in the Career Role for Traditional Women

	Mean	Mode	S.D.
Concern Others <sup>RA</sup>	1.50	1.00	0.71
Achievement	2.13	1.00	0.98
Responsibility	2.65	3.00	0.73
Financial Pros.	3.05	4.00	1.22

<sup>RA</sup> denotes a Level A Relational value

Table 8.

Frequencies of Values Ranking in the Career Role for Traditional Women

	Rank				
	1	2	3	4	Unranked
Concern Others <sup>RA</sup>	50.0	28.0	4.0	2.0	16.0
Achievement	26.0	22.0	24.0	6.0	22.0
Responsibility	4.0	22.0	36.0	6.0	32.0
Financial Pros.	8.0	2.0	8.0	20.0	62.0

<sup>RA</sup> denotes a Level A Relational value

Overall Values for Nontraditional Women

Table 9 (p. 63) presents the results of the descriptive statistical analyses for values overall for Nontraditional women. As the table illustrates, in the Nontraditional group,

Achievement had the highest mean ranking for values overall. Responsibility had the next highest mean ranking followed closely by Spirituality. This was followed by Independence, Privacy, and Loyalty to Family or Group with the two latter values receiving close mean ranks. As Table 10 (p. 64) shows, Achievement was the value

Table 9.

Means, Modes, and Standard Deviations of Value Rankings Overall for Nontraditional Women

	Mean	Mode	S.D.
Achievement	2.50	1.00	1.54
Responsibility	2.82	2.00	1.30
Spirituality <sup>RB</sup>	2.87	1.00	2.13
Independence	3.27	2.00	1.81
Privacy	3.50	3.00	1.55
Loyalty Fm/Grp <sup>RA</sup>	3.55	5.00	1.82

<sup>RA</sup> denotes a Level A Relational value

<sup>RB</sup> denotes a Level B Relational value

ranked most frequently as the most important value. This was followed by a tie between Independence and Spirituality. Responsibility was next, followed by Loyalty to Family or Group and Privacy.

Table 10.

**Frequencies of Values Ranking Overall for Nontraditional Women**

	Rank						
	1	2	3	4	5	6	Unranked
Achievement	27.1	25.0	10.4	8.3	8.3	4.2	16.7
Independence	14.6	16.7	10.4	4.2	14.6	10.4	29.2
Spirituality <sup>RB</sup>	14.6	4.2	0	0	8.3	4.2	68.8
Responsibility	10.4	14.6	12.5	12.5	6.3	0	43.8
Loyalty Fm/Grp <sup>RA</sup>	8.3	6.3	4.2	6.3	10.4	6.3	58.3
Privacy	4.2	2.1	14.6	2.1	6.3	4.2	66.7

<sup>RA</sup> denotes a Level A Relational value

<sup>RB</sup> denotes a Level B Relational value

**Career Values for Nontraditional Women**

As Table 11 (p. 65) indicates, in the career role, Achievement received the highest mean ranking for women in the Nontraditional group, followed by a tie between Responsibility and Financial Prosperity. Independence rounded out the top four values. Table 12 (p. 65) presents the frequencies of values ranking in the career role for Nontraditional women. As the table indicates, Achievement was selected most often as the most important value for the Nontraditional group in their career role, followed distantly by the tied values of Responsibility and Independence. Financial Prosperity rounded out the top four values for women in this group.

Table 11.

**Means, Modes, and Standard Deviations of Value Rankings in the Career Role for Nontraditional Women**

	Mean	Mode	S.D.
Achievement	1.93	1.00	1.11
Responsibility	2.47	2.00	0.97
Financial Pros.	2.47	2.00	1.07
Independence	2.73	3.00	1.16

Table 12.

**Frequencies of Values Ranking in the Career Role for Nontraditional Women**

	Rank				
	1	2	3	4	Unranked
Achievement	45.8	12.5	18.8	10.4	12.5
Responsibility	10.4	22.9	18.8	10.4	37.5
Independence	10.4	6.3	14.6	14.6	54.2
Financial Pros.	6.3	18.8	4.2	10.4	60.4

**Question 3**

**How do the women rank Level A and Level B relational values compared with the ranking of other values both a) overall and b) in their career role?**

Spearman rank-order correlations were computed to assess degree of relationship between Level A and Level B relational values and all other values for each pairwise comparison.

#### Comparison of Relational Values to Other Values Overall

Table 13 (p. 67) presents the results of the Spearman rank-order correlations for the comparison of relational values to other values overall. As the table indicates, significant inverse relationships were found for rankings of Level A Relational values (which includes Concern for Others, Belonging, and Loyalty to Family or Group) and rankings for three other values: Financial Prosperity, Privacy, and Responsibility. Significant inverse relationships were also found for rankings of Level B Relational values (which includes Concern for the Environment and Spirituality) and Achievement. Significant at the .1 level but not at the .05 level was the inverse relationship between the rankings of Level B Relational values and Health and Activity.

#### Comparison of Relational Values to Other Values in the Career Role

In the career role, as Table 14 (p. 67) indicates, significant inverse relationships were found for rankings of Level A Relational values and rankings of three other values: Achievement, Financial Prosperity, and Independence. One significant inverse relationship was also found between Level B Relational values and Responsibility.

Table 13.

Comparison of Levels A and B Relational Values to Other Values Overall

	Achieve.	Creat.	Fin. Pros.	Health & Act.	Hum.	Indep.	Priv.	Respons.	Scient. Under.
A Rel.	r=-.16 p=.18 n=74	r=-.15 p=.55 n=18	r=-.62 p=.002** n=23	r=-.13 p=.46 n=34	--	r=-.21 p=.14 n=49	r=-.66 p=.002** n=20	r=-.31 p=.02* n=55	r=-.26 p=.43 n=11
B Rel.	r=-.56 p=.0001*** n=42	r=-.21 p=.45 n=15	r=-.53 p=.22 n=7	r=-.48 p=.07 n=15	--	r=.06 p=.79 n=24	r=-.23 p=.52 n=10	r=-.14 p=.42 n=32	r=-.35 p=.31 n=10

Note: Dashes indicate that there were not enough cases to compute the statistic

\*p≤.05 \*\*p≤.01 \*\*\*p≤.001

Table 14.

Comparison of Levels A and B Relational Values to Other Values in the Career Role

	Achieve.	Creat.	Fin. Pros.	Health & Act.	Hum.	Indep.	Priv.	Respons.	Scient. Under.
A Rel.	r=-.45 p=.001** n=51	r=-.36 p=.35 n=9	r=-.49 p=.02* n=22	r=-.82 p=.18 n=4	--	r=-.56 p=.02* n=17	--	r=-.24 p=.13 n=42	r=-.36 p=.34 n=9
B Rel.	r=-.27 p=.27 n=18	--	r=-.50 p=.67 n=3	--	--	r=-.61 p=.11 n=8	--	r=-.59 p=.03* n=14	r=-.38 p=.46 n=6

Note: Dashes indicate that there were not enough cases to compute the statistic

\*p≤.05 \*\*p≤.001

#### **Question 4**

**How do the women in a) Traditional and b) Nontraditional faculties rank Level A and Level B relational values compared with the ranking of other values both i) overall and ii) in their career role?**

Spearman rank-order correlations were computed to assess the degree of relationship between Level A and Level B relational values and all other values for each pairwise comparison for women in the Traditional and Nontraditional faculties.

#### **Traditional Faculty Comparison of Relational Values to Other Values Overall**

Table 15 (p. 69) presents the results of the Spearman rank-order correlations for the comparison of relational values to other values overall for women in the Traditional group. As the table indicates, significant inverse relationships at the .1 level but not for the .05 level were found for Level A Relational values and Financial Prosperity, Independence, Responsibility, and Scientific Understanding. Significant negative correlations were also found between Level B Relational values and Achievement and Health and Activity. A significant direct relationship was found at the .1 level but not at the .05 level for Level B Relational values and Independence.

#### **Traditional Faculty Comparison of Relational Values to Other Values in the Career Role**

An inspection of Table 16 (p. 69) reveals that in the career role, significant inverse relationships were found for Level A Relational values and Achievement, Financial Prosperity, and Independence.

Table 15.

Traditional Faculty Comparison of Levels A and B Relational Values to Other Values Overall

	Achieve.	Creat.	Fin. Pros.	Health & Act	Hum.	Indep.	Priv.	Respons.	Scient. Under.
A Rel.	r=-.07 p=.68 n=41	r=-.06 p=.86 n=10	r=-.61 p=.08 n=9	r=-.02 p=.92 n=17	--	r=-.39 p=.07 n=22	r=-.29 p=.49 n=8	r=-.29 p=.09 n=34	r=-.94 p=.06 n=4
B Rel.	r=-.48 p=.01** n=25	r=-.04 p=.92 n=8	-- -- --	r=-.71 p=.03* n=9	--	r=-.54 p=.07 n=12	r=-.05 p=.93 n=5	r=-.33 p=.15 n=20	-- -- --

Note: Dashes indicate that there were not enough cases to compute the statistic  
\*p≤.05 \*\*p≤.01

Table 16.

Traditional Faculty Comparison of Levels A and B Relational Values in the Career Role

	Achieve.	Creat.	Fin. Pros.	Health & Act	Hum.	Indep.	Priv.	Respons.	Scient. Under.
A Rel.	r=-.53 p=.001** n=36	r=-.53 p=.22 n=7	r=-.62 p=.01* n=15	-- -- --	--	r=-.73 p=.004* n=13	-- -- --	r=-.01 p=.97 n=30	r=-.07 p=.90 n=6
B Rel.	r=-.22 p=.67 n=6	-- -- --	-- -- --	-- -- --	--	-- -- --	-- -- --	r=-.65 p=.24 n=5	-- -- --

Note: Dashes indicate that there were not enough cases to compute the statistic  
\*p≤.01 \*\*p≤.001

Table 17.

Nontraditional Faculty Comparison of Levels A and B Relational Values to Other Values Overall

	Achieve.	Creat.	Fin. Pros.	Health & Act.	Hum.	Indep.	Priv.	Respons.	Scient. Under.
A Rel.	r=-.17 p=.35 n=33	r=-.10 p=.81 n=8	r=-.59 p=.03* n=14	r=-.13 p=.61 n=17	--	r=-.07 p=.71 n=27	r=-.75 p=.005** n=12	r=-.26 p=.25 n=21	r=-.63 p=.13 n=7
B Rel.	r=-.64 p=.006** n=17	r=-.51 p=.24 n=7	r=-.61 p=.20 n=6	r=-.27 p=.61 n=6	--	r=-.14 p=.67 n=12	r=-.78 p=.12 n=5	r=-.13 p=.69 n=12	r=-.42 p=.26 n=9

Note: Dashes indicate that there were not enough cases to compute the statistic  
\*p≤.05 \*\*p≤.01

Table 18.

Nontraditional Faculty Comparison of Levels A and B Relational Values to Other Values in the Career Role

	Achieve.	Creat.	Fin. Pros.	Health & Act.	Hum.	Indep.	Priv.	Respons.	Scient. Under.
A Rel.	r=-.40 p=.14 n=15	--	--	--	--	r=-.33 p=.67 n=4	--	r=-.57 p=.05* n=12	r=-.87 p=.33 n=3
B Rel.	r=-.46 p=.14 n=12	--	r=-.50 p=.67 n=3	--	--	r=-.64 p=.18 n=6	--	r=-.69 p=.04* n=9	r=-.11 p=.87 n=5

Note: Dashes indicate that there were not enough cases to compute the statistic  
\*p≤.05

### Nontraditional Faculty Comparison of Relational Values to Other Values Overall

Table 17 (p. 70) indicates that in the overall values ranking for Nontraditional women, significant inverse relationships were found between Level A Relational values and Financial prosperity and Privacy. A significant inverse relationship was also found for Level B Relational values and Achievement.

### Nontraditional Faculty Comparison of Relational Values to Other Values in the Career Role

In the career role, as can be seen in Table 18 (p. 70), a significant inverse relationship was found between Level A Relational values and Responsibility for women in Nontraditional faculties. A significant inverse relationship also was found between Level B Relational values and Responsibility for this group.

### Question 5

**What is the relationship between a) relational and b) other values and faculty both i) overall and ii) in the career role?**

Multiple Mann-Whitney U tests were performed to explore the differences between women in Traditional and Nontraditional faculties in their selection and ranking of Level A and Level B Relational values and other values, overall and in the career role.

### Faculty Comparison for Relational Values Overall

Table 19 (p. 73) presents the Mann Whitney U results for relational values and other values overall. As the table indicates, significant differences were found between the groups for Level A Relational values. Women in the Traditional group ranked Level A Relational values significantly higher than did women in the Nontraditional group. Significant differences were also found for the value Concern for Others, which women

in the Traditional group ranked significantly higher than women in the Nontraditional group. Because no significant differences were found for either of the other two values that comprise Level A Relational values, it can be assumed that Concern for Others is responsible for the significant difference between the Traditional and Nontraditional groups. Mann-Whitney U tests exploring differences in ranking of Level B Relational values, the individual values that comprise Level B Relational values, and the individual values that comprise Level A Relational values were not significant.

#### Faculty Comparison for Relational Values in the Career Role

Table 20 (p. 74) presents the Mann Whitney U results for relational and other values in the career role. As the table indicates, in the career role, significant differences were found between the groups for Level A Relational values. Women in the Traditional group ranked Level A Relational values significantly higher than did the women in the Nontraditional group. The value Concern for Others was also ranked significantly higher by women in the Traditional group than the women in the Nontraditional group. As was the case in values ranking overall for women in the Traditional and Nontraditional groups, it can be assumed that Concern for Others is responsible for the significant difference found between the groups on Level A Relational values, as no other significant differences were found for either of the other two values that comprise Level A Relational values. No significant differences were found between the groups for Level B Relational values, or the individual values that comprise it.

Table 19.

**Mean Ranks, U Statistics, z Values, and Probability Levels for Relational and Other Values Overall for Women in Traditional and Nontraditional Groups**

<b>Relational Values</b>	<b>Mean Rank</b>		<b>n</b>	<b>U</b>	<b>Z</b>	<b>p</b>
	<b>Nontrad.</b>	<b>Trad.</b>				
Level A Rel.	49.49	37.50	85	644.00	-2.25	.02*
Concern Others	42.48	30.19	69	365.00	-2.54	.01**
Loyalty Fm/Grp	26.35	20.32	45	183.00	-1.56	.12
Belonging	15.17	19.34	34	107.50	-1.24	.21
Level B Rel.	28.18	24.34	51	271.00	-.94	.35
Spirituality	19.83	18.43	37	152.50	-.41	.68
Concern Environ	13.50	11.50	24	60.00	-.73	.47
<b>Other Values</b>						
Achievement	39.28	45.43	84	751.00	-1.18	.24
Creativity	10.04	15.41	24	39.50	-1.94	.05*
Financial Pros.	14.86	15.23	29	96.50	-.11	.91
Health and Act.	17.17	22.08	38	133.50	-1.40	.16
Humility	--	--	--	--	--	--
Independence	27.93	32.82	59	354.50	-1.10	.27
Privacy	10.63	17.22	25	34.00	-2.21	.03*
Responsibility	29.46	33.90	63	417.50	-.097	.33
Scientific Und.	8.92	9.20	17	29.00	-.11	.91

Note: Nontrad. = Nontraditional, Trad. = Traditional

\*p≤.05 \*\*p≤.01

Table 20.

**Mean Ranks, U Statistics, z Values, and Probability Levels for Relational and Other Values in the Career role for Women in Traditional and Nontraditional Groups**

<b>Relational Values</b>	<b>Mean Rank</b>		<b>n</b>	<b>U</b>	<b>Z</b>	<b>p</b>
	<b>Nontrad.</b>	<b>Trad.</b>				
Level A Rel.	42.17	27.93	63	222.00	-2.94	.003**
Concern Others	35.15	24.44	52	123.50	-2.23	.03*
Loyalty Fm/Grp	--	--	--	--	--	.32
Belonging	6.36	7.75	13	16.50	-.69	.49
Level B Rel.	12.34	12.81	24	61.50	-.16	.87
Spirituality	2.50	5.71	9	2.00	-1.56	.12
Concern Environm	8.43	9.50	16	6.50	-.23	.82
<b>Other Values</b>						
Achievement	38.44	43.76	81	711.50	-1.08	.28
Creativity	7.06	9.94	16	20.50	-1.30	.19
Financial Pros.	16.87	22.13	38	130.50	-1.53	.13
Health and Act.	2.67	4.33	6	2.00	-1.29	.20
Humility	--	--	--	--	--	--
Independence	17.91	21.69	38	141.00	-1.08	.28
Privacy	--	--	--	--	--	--
Responsibility	30.43	34.32	64	448.00	-.89	.37
Scientific Und.	10.46	10.58	20	41.50	-.04	.96

**Note:** Dashes indicate that there were not enough cases to compute the statistic

\*p≤.05 \*\*p≤.01

### Faculty Comparison for Other Values Overall

Table 19 (p. 73) reveals that there was a significant difference between the groups on Creativity. Women in the Nontraditional group ranked Creativity significantly higher than women in the Traditional group. Women in the Nontraditional group also ranked Privacy significantly higher than women in the Traditional group.

### Faculty Comparison for Other Values in the Career Role

As Table 20 (p. 74) indicates, no significant differences were found between the groups for any of the other values in the career role.

### Question 6

**What is the relationship between a) relational and b) other values and gender role orientation both i) overall and ii) in the career role?**

The descriptive statistical analyses revealed the following breakdown for gender role orientations in the Traditional group: Masculine 22%, Feminine 30%, Androgynous 28%, and Undifferentiated 20%. In the Nontraditional group the breakdown was as follows: Masculine 40%, Feminine 25%, Androgynous 15%, and Undifferentiated 21%.

Multiple Kruskal-Wallis one-way ANOVA's were performed to explore the differences among the groups in their selection and ranking of Level A and Level B Relational values and other values, overall and in the career role. Where significance was indicated, a series of individual Mann-Whitney U tests were performed to determine where significant differences existed. The Bonferroni correction was used to control the overall comparison error rate for multiple comparisons.

### Gender Role Comparison for Relational Values Overall

Table 21 (p. 77) presents the Kruskal Wallis one-way ANOVA results for gender role comparisons of relational and other values overall. As the table indicates, significant differences were found between the four gender role groups on Concern for the Environment. After conducting the Mann-Whitney U tests and performing the Bonferroni procedure, it was discovered that Feminine women (mean rank=4.07) were found to rank Concern for the Environment significantly higher than Masculine women (mean rank=10.42) ( $U=.5$ ,  $z=-3.04$ ,  $p=.002$ ). Significance was found between the gender role groups on Spirituality. However, after the post hoc procedures, it was discovered that Spirituality was no longer significant.

### Gender Role Comparison for Relational Values in the Career Role

Table 22 (p. 78) presents the Kruskal Wallis one-way ANOVA results for gender role comparisons for relational and other values in the career role. In the career role, significance was found among the four gender role groups on Belonging. However, after performing the Mann-Whitney U tests and the Bonferroni procedure, it was discovered that Belonging was no longer significant.

### Gender Role Comparison for Other Values Overall

As Table 21 (p. 77) indicates, there were no significant differences between the groups at the .05 level for other values overall. However, there was a significant difference among the groups on Independence at the .1 level.

Table 21.

**Mean Ranks, Kruskal-Wallis Statistics, df, and Probability Levels for Relational and Other Values Overall for Gender Role Groups**

Relational Values	Mean Rank				n	$\chi^2$	df	p
	1	2	3	4				
Level A Rel.	47.43	35.72	46.79	44.75	85	3.62	3	.31
Concern Others	38.96	30.78	35.53	38.15	69	2.07	3	.56
Loyalty Fm/Grp	25.18	20.89	21.75	24.00	45	0.90	3	.83
Belonging	17.80	17.13	22.36	14.40	34	2.78	3	.43
Level B Rel.	22.25	27.97	23.22	29.69	51	2.41	3	.49
Spirituality	15.85	24.50	9.50	21.40	37	8.28	3	.04*
Concern Environ	18.25	6.43	10.50	16.50	24	12.33	3	.006**
<b>Other Values</b>								
Achievement	41.30	43.35	43.72	41.53	84	.17	3	.98
Creativity	11.81	13.20	13.25	12.00	24	.24	3	.97
Financial Pros.	12.80	17.57	17.29	12.60	29	2.31	3	.51
Health and Act.	16.54	21.31	22.71	18.00	38	2.06	3	.56
Humility	--	--	--	--	--	--	--	--
Independence	24.85	41.05	26.75	32.79	59	7.46	3	.06
Privacy	12.06	15.36	15.25	7.38	25	3.96	3	.27
Responsibility	32.56	35.55	30.70	26.45	63	1.93	3	.59
Scientific Und.	11.44	8.50	8.75	4.63	17	5.16	3	.16

Note. 1=Masculine, 2=Feminine, 3=Androgynous, and 4=Undifferentiated

Note: Dashes indicate that there were not enough cases to compute the statistic

\*p≤.05 \*\*p≤.01

Table 22.

**Mean Ranks, Kruskal-Wallis Statistic, df, and Probability Levels for Relational and Other Values in the Career Role for Gender Role Groups**

Relational Values	Mean Rank				n	$\chi^2$	df	p
	1	2	3	4				
Level A Rel.	38.64	28.19	28.50	35.58	63	4.23	3	.24
Concern Others	27.50	23.88	27.72	28.05	52	.94	3	.82
Loyalty Fm/Grp	--	--	--	--	--	--	--	
Belonging	7.80	4.10	--	10.50	13	6.20	2	.05*
Level B Rel.	11.92	10.64	10.20	17.17	24	3.91	3	.27
Spirituality	4.50	4.33	2.50	8.00	9	4.01	3	.26
Concern Environ	11.33	6.80	7.50	9.50	16	2.38	3	.50
<b>Other Values</b>								
Achievement	41.27	43.98	39.33	38.21	81	.81	3	.85
Creativity	5.38	12.50	10.50	6.13	16	6.62	3	.08
Financial Pros.	14.23	19.14	28.36	19.50	38	7.61	3	.06
Health and Act.	6.00	3.50	2.67	--	6	3.33	2	.19
Humility	--	--	--	--	--	--	--	--
Independence	19.44	24.30	21.89	12.08	38	4.42	3	.22
Privacy	--	--	--	--	--	--	--	--
Responsibility	27.08	33.92	35.69	35.15	64	2.69	3	.44
Scientific Und.	10.30	13.10	9.50	6.50	20	2.26	3	.52

Note. 1=Masculine, 2=Feminine, 3=Androgynous, and 4=Undifferentiated

Note: Dashes indicate that there were not enough cases to compute the statistic

\*p $\leq$ .05

### Gender Role Comparison for Other Values in the Career Role

In the career role, as revealed in Table 22 (p. 78), there were no significant differences at the .05 level, however significant at the .1 level were Creativity and Financial prosperity.

### Question 7

**What is the relationship between a) relational and b) other values and age both i) overall and ii) in the career role?**

Multiple Mann-Whitney U tests were performed to explore the differences between “Older” and “Younger” in their selection and ranking of Level A and Level B Relational values and other values, overall and in the career role.

### Age Comparison for Relational Values Overall

Table 23 (p. 80) presents the Mann Whitney U results for the age comparison for relational and other values overall. As the table indicates, no significant differences were found between the Older and Younger groups in relational values overall.

### Age Comparison for Relational Values in the Career Role

Table 24 (p. 81) presents the Mann Whitney U results for the age comparison for relational and other values in the career role. As Table 23 indicates, in the career role, no significant differences were found between the Older and Younger groups on relational values.

Table 23.

**Mean Ranks, U Statistics, z Values, and Probability Levels for Relational and Other Values Overall for Age Groups**

<b>Relational Values</b>	<b>Mean Rank</b>		<b>N</b>	<b>U</b>	<b>z</b>	<b>p</b>
	<b>Younger</b>	<b>Older</b>				
Level A Rel.	43.52	42.32	85	863.00	-.22	.82
Concern Others	36.28	33.76	69	551.50	-.53	.59
Loyalty Fm/Grp.	22.45	24.35	45	190.50	-.45	.66
Belonging	17.13	17.97	34	135.50	-.25	.80
Level B Rel.	27.58	24.48	51	285.50	-.77	.44
Spirituality	18.76	19.20	37	166.00	-.13	.90
Concern Envirm.	14.08	10.92	24	53.00	-1.15	.25
<b>Other Values</b>						
Achievement	38.50	47.58	84	681.50	-1.74	.08
Creativity	12.38	12.63	24	70.50	-.09	.93
Financial Pros.	14.86	15.43	29	74.00	-.16	.88
Health and Act.	20.74	17.12	38	131.50	-.98	.33
Humility	--	--	--	--	--	--
Independence	29.54	30.62	59	409.50	-.24	.81
Privacy	11.68	14.04	25	62.50	-.82	.41
Responsibility	33.05	30.98	63	463.50	-.46	.65
Scientific Und.	9.41	8.25	17	28.50	-.46	.64

**Note:** Dashes indicate that there were not enough cases to compute the statistic

Table 24.

**Mean Ranks, U Statistics, z Values, and Probability Levels for Relational and Other Values in the Career Role for Age Groups**

<b>Relational Values</b>	<b>Mean Rank</b>		<b>N</b>	<b>U</b>	<b>z</b>	<b>p</b>
	<b>Younger</b>	<b>Older</b>				
Level A Rel.	33.34	30.70	63	454.50	-.60	.55
Concern Others	25.43	27.34	52	309.00	-.50	.62
Loyalty Fm/Grp	--	--	--	--	--	--
Belonging	7.36	6.58	13	18.50	-.38	.70
Level B Rel.	13.68	10.85	24	53.50	-.99	.32
Spirituality	5.38	4.70	9	8.50	-.39	.69
Concern Environ	9.50	6.83	16	20.00	-1.17	.24
<b>Other Values</b>						
Achievement	38.73	44.13	81	692.50	-1.08	.28
Creativity	7.36	9.39	16	23.50	-.91	.36
Financial Pros.	16.94	24.42	38	98.50	-2.06	.04*
Health and Act.	--	--	--	--	--	--
Humility	--	--	--	--	--	--
Independence	19.30	19.80	38	168.00	-.14	.89
Privacy	--	--	--	--	--	--
Responsibility	34.33	30.67	64	453.50	-.84	.40
Scientific Und.	10.35	10.79	20	43.50	-.17	.87

**Note:** Dashes indicate that there were not enough cases to compute the statistic

\*p≤.05

### Age Comparison for Other Values Overall

Table 23 (p. 80) reveals significance at the .1 level but not at the .05 level between the Older and Younger groups on Achievement. Younger women ranked Achievement higher than did Older women.

### Age Comparison for Other Values in the Career Role

As can be seen in Table 24 (p. 81), significant differences between the Younger and Older groups were found in the career role for Financial Prosperity. The Younger women ranked Financial Prosperity as significantly more important than did the Older women.

### Question 8

**What are the significant values, particularly those that are relational, that women want to have satisfied in their career role?**

Qualitative data analysis was performed on the data generated from the Researcher Generated question, using HyperQual (Padilla, 1990), a computer software package. This section will focus primarily on the relational components of the major themes discussed by the women in the sample. However, other themes found to be very prevalent in the data will also be mentioned, but in less detail. The question participants were asked to address was: "In the Life Values Inventory which you just completed, the last section on 'Values in Life Roles' asked you to rank order the values you hope to have satisfied in each of your life roles. Please review the values you ranked as important to be satisfied in your job and indicate in what ways do you hope to have these values satisfied in your job? If possible, provide specific examples."

## Achievement

Achievement was a very prominent theme apparent in the qualitative data. Within Achievement were several subthemes, some relational and some not, each representing the different ways Achievement could be satisfied in the career role of the women. One of the most common of the subthemes was "*Competence*." The women expressed a desire to use their knowledge, skills, and abilities to successfully accomplish tasks and reach their goals. An engineering student stated, "I have trained to work for 4 years now at the University of Calgary and want to apply my knowledge well." As well, the women wanted to be proficient at what they do, and valued within their profession. A nursing student felt she could fulfill the value of Achievement in her career by, "being the best in the profession." Similarly, a science student commented, "I want to be good at my job, whatever it will be and know that I am useful and valuable in my specialty."

Another subtheme within Achievement was "*Advancement*," or "working my way up to bigger and better things" as one engineering student phrased it. This theme encompassed not only advancing to a higher level of employment within one's profession, as stated by a social work student, "I want to be able to advance in my position – get greater responsibilities – maybe eventually supervise others" but also advancing one's skills and education. Interestingly, while several women discussed advancing their knowledge and skills, it was only nursing students who mentioned continuing on in university to obtain graduate degrees.

"*Challenge*" was another subtheme of Achievement. The women wanted to work hard and encounter novel and interesting situations in their careers. A science student wrote, "I hope I won't be stuck doing the same thing everyday" and "I need to be

challenged to stay motivated.” A nursing student commented on the “unique” opportunities that existed across the world to practice nursing noting “I see nursing as an incredible challenge and know that being a nurse will be very satisfying and rewarding. Stated simply by an engineering student, “In my job I hope to be academically challenged and to feel a sense of achievement in overcoming those hurdles.”

Other subthemes within Achievement included: “*Pride*” (feeling proud or good about what one does in one’s career); “*Innovation*” (thinking of new ways to solve problems or improve the status quo, or making a contribution to society); “*Recognition*” (being acknowledged and respected in one’s field of expertise) and “*Financial rewards*” (increased pay or bonuses).

The “*Relational*” subtheme within Achievement was evidenced in the desire to help others or connect with others in some way through the job. Only one woman in a Nontraditional faculty, an engineering student expressed Achievement in a relational way stating, “I want to do something that really affects the world. I want to help others, and push myself to my limit.” The other women, in nursing and social work, mentioned such things as “making a positive impact on people’s lives,” “achieve good relationships with patients and help them to lead happy, healthy lives,” and “relating to and understanding individuals.” One nursing student stated that, “If I am able to help only one person or an entire community, I will feel achievement.” A social work student mentioned that she would feel personal achievement through witnessing or learning of the achievements of her clients. Helping others to achieve their own goals and success seemed to be an important part of achievement for some women in the sample, particularly those in the Traditional group.

### Concern for Others

Concern for Others was another theme that appeared very frequently in the data. Mentioned by women in both the Traditional and Nontraditional group, it was more frequently discussed by the former. By definition, Concern for Others is a relational value, however, not all women conceptualized it in the same manner. Two nursing students expressed a "*Religious*" subtheme in that their concern for others was influenced by their belief system. One of these women noted that in light of her religious beliefs, "my desire is to go to an area of need with the proper skills to fill that need and extend that love in very practical ways." Two women in the Nontraditional faculties explained that concern for others in their career would mean "*Teaching*" or instructing others. A third subtheme was "*Responsibility to others.*" An engineering student stated that concern for others should be kept in mind because "a civil engineer's work is for the direct use of other people; safety and utility must be remembered in what an engineer constructs." Another engineering student had similar sentiments suggesting that "by entering the engineering profession, the welfare of the public and environment is the main priority; it is the first priority in the Code of Ethics."

The majority of the women who discussed the desire for the value Concern for Others to be satisfied in their career role believed this could be accomplished through "*Helping others.*" The responses ranged on a continuum within this subtheme from less directly relational, such as "helping others by sharing knowledge" made by an engineering student, to directly and deeply relational, evidenced by this comment made by a social work student about what this value meant to her, "A deep understanding of others' situation as we walk through their troubles together." Many women in the

Traditional faculties alluded to the fact that Concern for Others is inherent in their job by virtue of the nature of the work in their field. Some noted this as the reason for entering the profession.

The women mentioned nurturing, caring for, and comforting others, as well as helping them to attain hope, solace, happiness, and self-actualization. A nursing student phrased her point of view in this way, "One of my greatest joys is to calm frightened people, help hurt people and just generally help people out when they need it" and "My concern for others drives me and enables me to help people in that really personal way." Improving the quality of life of others was also mentioned, particularly of those who are less fortunate. An engineering student stated, "I hope to one day go overseas to work with under-developed countries and assist them with water purification/irrigation/solid waste management." A science student noted, "I hope to have a job that allows me to improve the quality of life for other people or animals or aspects of the environment." A few of the women mentioned acting as an advocate for those in need. The desire to help others was also expressed on a macro level. Some women stated that they wanted to help communities or contribute to the betterment of society as a whole.

### Responsibility

Responsibility was also a major theme in the data, and, like Achievement, contained some subthemes that were relational and others that were not. Beginning with the latter, the subtheme "*Skills*" appeared frequently. The women believed that the value of Responsibility could be satisfied through "hard work" and applying the skills they had as well as developing new ones. A science student noted, "I have a subtle leadership style and a desire to learn the inner workings of organizations, so I tend to start earning

responsibilities right from the start.” Other women mentioned meeting deadlines, using good time management, effective decision-making skills, and ongoing professional development as methods of behaving responsibly in their jobs. Receiving increased responsibilities and taking on more challenging work was another sentiment expressed by the women. “I want a job that allows me the freedom to take on projects, etc, in a way letting my level of responsibility grow” commented a social work student.

To some women, Responsibility could be satisfied through “*Being in charge*,” in the workplace, which emerged as a second subtheme. Being in a leadership or management position and being accountable for one’s actions were mentioned. An engineering student wrote, “I like to be responsible for running the operation – being in a managerial position. I like having an influence on the way a company or team turns out.” Another engineering student mentioned the desire to be in charge of multi-million dollar assets and technology. A nursing student succinctly remarked, “I guess I like to be my own boss.”

The majority of the women who stated that they wanted the value of Responsibility to be satisfied in their career role, suggested that it would be possible through being “*Trustworthy*” a third subtheme. It could be argued that by its very definition, the word “trustworthy” implies a relationship, whether that is with another person or a larger entity such as an organization or company. The women’s responses comprising this subtheme, however, differed as to whether or not they explicitly mentioned demonstrating trustworthiness *to someone else*. For example, one engineering student stated, “I hope to be known as a responsible engineer. I plan to satisfy this by applying good work ethics, and just doing my job to my full potential.” More obviously

relational were the comments such as this statement from another engineering student, “I want people to be able to trust me and depend on me to do what I promise I’ll do and be able to help them.”

Many women noted that in their careers they would be relied upon and counted on by co-workers, supervisors, organizations, and clients or patients. A few women described the trustworthiness needed to be in a position where one is dealing with patients or clients in great need. Trust seemed to be considered an important precursor to good relationships with others. A science student wrote “It is important to me to know my supervisors and co-workers consider me reliable, and can be trusted.” Similarly, a nursing student stated, “As a nurse it is important to instill a level of trust between the nurse and patient in order to provide optimum care.” Others noted that being in a position of trust carried with it ethical and legal obligations. An engineering student noted, “As an engineer, I will be responsible for every design or procedure I approve. This is a large duty because if anything I approve was to cause damage to property or human life (i.e. collapsed building or bridge that I designed) I could be held personally accountable, incarcerated with criminal charges...”

A fourth subtheme that appeared in the data was being responsible through making “*Contributions*” to others or making a difference in another person’s life in some way. A social work student revealed that she personally had been helped in her life and felt responsible to help others through her work. Four students mentioned the responsibilities they had to others such as family members or partners. For example, a social work student stated, “as part of a family, I am responsible for earning a living

through working.” A science student remarked that there are certain duties that she expects and accepts in her roles as friend, daughter, and girlfriend.

### Financial Prosperity

As was the case with the themes of Achievement and Responsibility, Financial Prosperity was a common theme throughout the qualitative data that contained both relational and other subthemes. This discussion will commence with the latter. A few women mentioned in the first subtheme receiving financial payoffs as a “*Reward*” for the efforts, abilities, and knowledge demonstrated on the job. An engineering student felt that financial prosperity could be realized in her career through working hard and having “your abilities and achievements noticed so you can get ahead – receiving pay raises and bonuses.”

There were many women who mentioned the importance of monetary rewards in their careers, however there were two distinct subthemes that arose from this sentiment. One was “*Financial gain*” and the other was “*Financial security or stability*.” Those few women who discussed the importance of “*Financial gain*” expressed that making a good salary was a main focus in their career, noting the benefits of financial freedom and having expendable income. A nursing student stated that she was willing to travel abroad and “move where the money is” to “enable financial independence faster.” One engineering student was aspiring to be making “6 figure digits by the age 30-34.”

The women who expressed the desire to have “*Financial security or stability*” frequently mentioned that they “did not need to be rich” but just wanted to live a comfortable lifestyle. Practicality prevailed with these women who discussed wanting enough money to pay bills, debts and mortgages, have a roof over their heads, and plan

for retirement. These women also mentioned wanting enough money to occasionally go on a nice vacation or engage in other leisure activities. A science student commented “Well, I don’t plan on being poor all my life. I am not interested in being wealthy, just comfortable. Enough money for the things I wish to do without having to watch every penny.” A few nursing and social work students noted the fact that they would likely never become wealthy working in their chosen professions. One social work student expressed frustration with the role that money plays in society and stated that she would work for free if it were feasible.

The fourth subtheme within Financial Prosperity that emerged, “*Provide for family*,” had obvious relational overtones. Making enough money in one’s career to support one’s family was mentioned equally by women from Traditional and Nontraditional faculties. Some women spoke about children they already had, “When I have my degree I will be making enough money to support myself and my son” noted a nursing student. Others, like this science student, were planning for the future, “financial prosperity will be satisfied in my future job if I am paid well and given benefits for myself and my potential family.” A science student noted that she wanted to be in a position financially to take the time to go to the school concerts of her children and spend time with her husband.

### Independence

The theme of Independence contained virtually no relational subthemes, however, it was mentioned frequently, particularly by women in the Nontraditional group, and will therefore be discussed.

Distinct or mutually exclusive subthemes did not emerge within Independence, rather, very similar sentiments were expressed by many of the participants who mentioned this theme. Having the ability to make one's own decisions and choices, and being able to do things "my way" on the job were commonly stated ideals. A science student noted, "I need to have a job where I can use my own judgement and plan things my way." A nursing student believed that as a nurse she "would be able to make independent decisions and work independently to help others." Working alone or unsupervised was also discussed by some women like this nursing student who stated that to her Independence could be achieved by, "working under minimal supervision, and being able to make decisions at my own discretion." A science student expressed this sentiment, "I prefer to work on my own, in my own way."

The idea of being the boss, or in position of control or influence over tasks was appealing to some women as a way to satisfy their value of Independence. A social work student stated, "I really dislike the idea of having a boss! So I would like to be the boss!" An engineering student remarked, "I generally tend toward opportunities that allow me to control/affect the overall direction of whatever task or project I'm considering taking on."

One engineering student discussed Independence in a manner unlike the others. She seemed to discuss independence in terms of assertiveness with a slight relational connotation, noting that in the workplace, "I know I would stand my ground on any issue (maybe sexual harassment, treatment for employees, public safety/other ethical concerns that I feel strongly on)."

### Other Relational Themes

The remainder of this section focuses on the discussion of themes that are considered relational despite the fact that they were not among the most frequently mentioned themes in the qualitative data.

Belonging. Feeling a sense of affiliation, inclusion, or acceptance in the workplace was a desire expressed by women from both Traditional and Nontraditional faculties. Some, like this engineering student, commented on the desire to feel like a valued member of a work group or team, “Belonging would be satisfied by working as part of a team where I feel that my part on the team is important.” Developing friendships, bonding with co-workers, and “fitting in” were all discussed as ways of cultivating a sense of belonging. An engineering student expressed that she wanted to be “well-liked” by her co-workers. Another engineering student noted that in order to enjoy work, it is important to get along with co-workers. Expanding beyond co-workers, one nurse mentioned feeling belonging as part of a larger team of health professionals (doctors, dietitians, and social workers). The nurse-patient relationship was also mentioned as a situation in which one feels a sense of belonging.

Home and family. Although the value Loyalty to a Family or Group was only mentioned by two individuals as a value they would want to have satisfied in their career role, other themes of home and family did emerge from the data. Some of these have been addressed in previous sections as subthemes (in Responsibility and Financial Prosperity). A nursing student mentioned her desire to be able to offer her family advice regarding health issues such as hereditary diseases, and link them with “appropriate resources to deal with any problems.” A science student stated she hoped her family

would be proud of her. The influence of her family on her choice of career was noted by a nursing student. A few women discussed the desire to have their own family balanced with a career. An engineering student remarked, "I wouldn't want my job to take away from my family life." Interestingly, the most strongly worded sentiments regarding home and family came from an engineering student who wrote, "As a woman, there are certain domestic duties such as childcare, cooking, and cleaning that must never be neglected. No matter how manly or aggressive and successful I become in my engineering career, I know that I am still a homemaker 24 hours a day, 7 days a week" and "A woman has an eternal influence and contribution to the world, not only through some engineering feat, but more so by raising good sons and daughters."

Concern for the environment. Caring for the environment through protection of natural resources, or improving existing conditions (air pollution, water quality, deforestation, and so forth) was important for some women, particularly in the Nontraditional faculties. Making the world a better place to live for humans, other animals, and plants was a priority. Some engineering students mentioned, "contributing to society," "making a difference," and "creating designs that will make life better for people." One engineering student noted, "I want to be able to go home at night and feel that aside from just making money, I did something real. Something that is good for the environment that goes beyond making money." Another engineering student felt a responsibility not only to humankind at present, but was also concerned about the future stating that it was "our duty to conserve the earth for the generations to come."

Spirituality. A few women discussed the ways in which their religion or spirituality could influence their behavior and activities in their careers. An engineering

student mentioned incorporating integrity and honor into her work as a method to “glorify God” through her career. Some women in the Traditional faculties expressed the fact that Spirituality could be satisfied in their career through putting the needs of others before their own, and helping those who are suffering or in need. A science student stated that she lives her faith by her example. Sentiments regarding feelings of connectedness to God or a higher power and to others were common among these women. A science student revealed that she feels a connection to a higher power through her connection with nature and therefore hoped that her work as a geologist would “get me into nature a lot.”

#### Summary of Qualitative Data

Achievement was obviously a very important value for all of the women in the sample, evidenced by the frequency with which it is mentioned in the qualitative data. Concern for Others was also to be an important value, based on the qualitative data, but was not mentioned as equally by both groups as was Achievement. In terms of the other most frequently mentioned values, Responsibility was mentioned by almost the same number of women from the Traditional and Nontraditional groups. Independence and Financial Prosperity on the other hand were mentioned by more women from the Nontraditional group than the Traditional group. Relational meanings emerged across a number of different values for both groups, albeit more commonly in the Traditional group.

The variety of conceptualizations of the same values suggested that the personal meanings of some values differed between individuals. Moreover, the personal meanings of some values sometimes differed from the definition provided in the Life Values

Inventory. Overall, there were many differences that emerged between the women in the Traditional and Nontraditional groups, but many similarities were evident as well.

### Summary of Results

Descriptive analyses of the data indicated that Achievement was a very important value to all of the participants overall and in the career role. Relational values such as Spirituality and Loyalty to Family or Group were also important to all participants in values ranking overall. In the career role, in addition to Achievement, Responsibility and Financial Prosperity emerged as important values for all participants. Concern for Others was also an important value for women in the Traditional group overall and in the career role.

Results of the inferential analyses indicated that Concern for Others was significantly more important to women in the Traditional group than to women in the Nontraditional group overall and in the career role. Women in the Nontraditional group ranked Privacy and Creativity significantly higher than did women in the Traditional group in values ranking overall. Level A Relational values were often found to be inversely related to the values of Financial Prosperity and Independence. Only one significant difference was found in the analyses of gender role orientation. Feminine women ranked Concern for the Environment significantly higher than did Masculine women in values ranking overall. In terms of the variable of age, Younger women were found to rank Financial Prosperity as significantly more important than Older women in the career role.

The qualitative analyses revealed that Achievement was a very important value to all participants. Responsibility was also frequently discussed as important for all

participants. Women in the Nontraditional group more often mentioned Independence and Financial Prosperity, however, these values were also important to women in the Traditional group. Relational connotations were apparent for many of the values discussed, including Financial Prosperity and Achievement, values not often thought of as relational.

## Chapter 5

### Discussion

This chapter begins with summaries, explanations, and interpretations of the findings pertaining to the three independent variables in the present study. A general discussion of the results is followed by some directions for further research. The chapter closes with the limitations of the present study and some implications for theory and practice.

The value rankings of all women in the sample were very similar to the value rankings for women in both the Traditional and Nontraditional groups, overall and in the career role. One of the most notable differences emerged from the descriptive statistical analyses which revealed that Nontraditional women value Privacy in their overall values, a value which did not appear for women in the Traditional group, or all women in the sample. Not surprisingly, most of the significant findings for women overall that emerged in the inferential statistics were consistent with significant findings of the women in the Traditional and Nontraditional groups and therefore will not be elaborated upon separately.

#### Traditional and Nontraditional Groups

Achievement was clearly an important value for all women in the present study, overall and in the career role. Ranked as the most important value for the Nontraditional group in both domains, overall and in career, Achievement was one of three values tied as most important overall for the Traditional group, and the second most important value in the career role for this group. The obvious importance of Achievement to the participants in this study is not surprising considering the composition of the sample.

One might expect that all those regardless of faculty, who endeavor to pursue at least four years of post-secondary education, would have a strong sense of Achievement, a willingness to work hard and challenge themselves. This characteristic has been shown in previous research (Ben-Shem & Avi-Itzhak, 1991; Bridges, 1989). Increasing numbers of women are choosing to attend university. In fact, in 1997-98, there were more female students at the University of Calgary than male students (Office of Institutional Analysis, University of Calgary, 1997). It was noteworthy that women in both Traditional and Nontraditional faculties rated Achievement similarly, suggesting that perhaps these two groups of women are not as different on this dimension as previously portrayed in the literature or that the values in these two groups have changed with women in Traditional fields becoming more achievement oriented.

The majority of the themes that emerged from the qualitative data in the present study regarding Achievement, such as Advancement, Challenge, Financial Rewards, and Recognition were consistent with the customary or “usual” meaning of this value. Understandably, the definition provided on the LVI for Achievement is, “It is important to challenge yourself and to work hard to improve.” Some authors suggest that what has come to be known as the “usual” definition of career achievement “has been formulated by researching men’s career development” and therefore includes factors such as “career advancement, stable occupational roles, and levels of status symbolized by power and money” (Hashizume & Crozier, 1994, p.106). Powell and Mainiero (1992) note that the traditionally male vision of career success, “getting ahead” in an organization may be “dated” due to the new realities of the workplace such as decreased job security and downsizing.

For women in the sample, Achievement was found to be significantly inversely related to Level B Relational values overall. It is interesting to speculate what this finding might signify. It could be that the Concern for the Environment and Spirituality, the values that compromise Level B Relational values, are conceptualized as factors not directly related to *self-advancement*. The concern in these values seems to be for things outside of one, whereas Achievement is often defined in the opposite fashion.

Achievement was also significantly inversely related to Level A Relational Values in the career role of women in the Traditional group. As Table 8 (p. 62) shows, for Traditional women, Achievement is ranked fairly evenly over the four ranks, whereas the majority of Traditional women who ranked Concern for Others ranked it very highly. Also, as previously noted, achievement is often conceived of as an “individualistic” value, one that is self focused. Achievement in the career realm might entail activities such as competing with co-workers for a promotion or raise, something seemingly incompatible with a simultaneously great concern for connectedness and interdependence. When considering their careers, women focused on Achievement and getting ahead may be less concerned with connections with others.

Although the quantitative data revealed an inverse relationship between Level A Relational values and Achievement, what was unique about the value of Achievement in the career role in the present study, was the relational connotations that emerged in the qualitative section. However, it was mainly a smaller number of the Traditional women discussing Achievement in this way and therefore would likely not emerge in the inferential statistics. Also, as previously mentioned the majority of the themes regarding Achievement in the qualitative data were traditional in the meaning given. Achievement

is often associated with factors such as advancing in one's career, facing and overcoming challenges, and being competent, all themes that appeared in the qualitative data. However, for some of women, a sense of Achievement was experienced through connecting with and/or helping others. Making a difference in the lives of others constituted achievement for some women in the present study. Unfortunately, the literature does not often recognize or give credence to this meaning of achievement.

Three core achievement styles have been suggested by Lipman-Blumen, Handley-Isaksen, and Leavitt (1983). These are: direct achievement, in which achievement through one's own efforts is preferred; instrumental achievement, in which achievement is viewed as a means to goal attainment; and, relational achievement in which a sense of achievement is attained through collaborating with others, contributing to a group task, or experiencing it vicariously through the achievements of others. Relational achievement in the career role, note Hashizume and Crozier (1994) is not a contradiction in terms, however when it is mentioned, it is often pathologized. This finding offers support to some previous research. Pryor's (1983) cluster analyses with his Work Aspect Preference scale showed that for women, Altruism formed a cluster with Self-development. Self development was found to be substantially correlated with the Achievement subscale of Super's Work Values Inventory (Pryor, 1983). Super and Hendrix (1968) also found a correlation between Altruism and Achievement for women on an "experimental" version of the Work Values Inventory.

Concern for Others appeared to be a very important value overall for the women in the Traditional group, and the most important value for this group in the career role. This finding is not surprising and supports previous research which shows that women in

traditional feminine fields possess altruistic type values (Chatterjee & McCarrey, 1991; Erez, 1988; Feather, 1984; Young, 1984). While Concern for Others was not as important to women in the Nontraditional group overall or in the career role, themes of this nature did emerge for this group in the qualitative data, supporting the findings of Subotnik and Arnold (1996) and Ambrose, Lazarus, and Nair (1997) who found that women in nontraditional fields such as science and engineering have a desire to be helpful or useful to others and to society to serve a greater good. However, Level A Relational values and Concern for Others were still significantly more important to the Traditional group. In general, these findings lend support to the self-in-relation theory and to Gilligan's (1982) ethic of care model. Many women in the sample were found to express values of concern and care for the wellbeing of others, while still holding more self-focused values like Financial Prosperity.

It makes intuitive sense that women who place a high priority on Concern for Others and other relational values would choose a traditional career such as Social Work or Nursing in which the opportunity to fulfill that value is obvious by virtue of the nature of the work. Social Work has been referred to as "professional caring" (Freedberg, 1993, p. 538) and the profession of Nursing is said to be rooted in values of care and concern for others (Katims, 1995). Some research has shown that individuals whose primary value orientation is Concern for Others will be more likely than others to accept a job in an organization where the value Concern for Others is emphasized (Judge & Bretz, 1992).

It is recognized that "expressive" traits like Concern for Others may play an important role in a nontraditional career like engineering given the amount of teamwork

involved (Jagacinski, 1987). However, the classroom atmosphere for women in science and engineering training programs has been described as “chilly.” Women report that there are negative preconceived notions about their qualifications and their seriousness as scientists (Brush, 1991). Lips (1992a) notes that research shows that women in science and engineering programs experience negative social pressures through the stereotyping of these careers as masculine by men. Furthermore, “given the efforts and sacrifices to do well and the career stereotyping by men” women entering these fields are “faced with many fewer opportunities than men for affiliation, for social support and friendship with same-gender peers similarly engaged” (Lips, 1992a, p. 18). As a result, women who are training in these fields may suppress their relational values believing it is necessary for success. It is also possible that the women who choose science and engineering careers hold less relational values than those women who enter more traditional careers for women.

Two relational values Spirituality and Loyalty to a Family or Group appeared as important values in the values ranking overall for both Traditional and Nontraditional groups. Values relating to home and family have been shown to be influential in the lives of women (Davey, 1998; Fiorentine, 1988; Fitzgerald, Fassinger, & Betz, 1995). In the career role, however, these values were not among the most important for either group. This finding suggests that women overall regardless of career choice value connectedness with others and/or a higher power in their lives. It has been suggested that women, who have traditionally taken on the role of caregiver, value religious values more so than men (Di Dio, Saragovi, Koestner, & Aube, 1996) although since the present study did not include men, the same comparison cannot be made. Home and family values continue to

be important for women even though the importance of “status attainment goals” has been increasing for them (Fiorentine, 1988). Women believe that it is possible to successfully balance career and family demands (Sullivan, 1992). It has been said that in terms of family and career, women want to “have it all” (Weitzman, 1994). Roberts and Newton (1987) conceptualize women’s aspirations in both home and family, and career roles as a “split dream” which encompasses both domains.

Privacy, emerged as an important value overall for women in the Nontraditional group but not in the career role. This value was significantly more important to women in the Nontraditional group than to women in the Traditional group. It was also inversely related to Level A Relational values for the women in the Nontraditional group. Chatterjee and McCarrey (1991) found that women in nontraditional training programs valued autonomy more so than women in traditional training programs. Privacy and autonomy imply being alone or doing things on one’s own. It might be that women in Nontraditional areas are more introverted than those in Traditional areas, and therefore desire more time to themselves less time interacting with others. Ultimately, Privacy implies being alone, which is obviously not conducive to connecting with others.

Creativity, which did not appear in the top ranked values overall or in the career role for either the Traditional or Nontraditional group, was found to be significantly more important to the latter group. This finding is supported in previous research. In Chatterjee and McCarrey’s (1991) study of women in traditional and nontraditional training programs, Creativity was also found to be more highly valued by the women in the nontraditional group. Ben-Shem and Avi-Itzhak (1991) found that students in faculties geared toward helping professions ranked Creativity as less important than those

in faculties not geared toward helping professions. Ben-Shem and Avi-Itzhak (1991) hypothesize that the dimensions of creativity measured in the scale they used (Super's Work Values Inventory) may not have corresponded to the kind of creativity demanded in a client-professional interaction. The same might be said for Creativity as defined on the LVI. It might also be that Nontraditional women more so than Traditional women may enjoy things such as abstract thinking and problem solving, activities that require creativity. Another explanation for this finding is that women in the Nontraditional group may be less "compliant" or "conforming" to the stereotypes of what women should be like, valuing instead new or different ways of being for women.

Independence and Responsibility were also ranked as important values overall by the women in the present study. While Independence continued to be important for Nontraditional women in the career role, Traditional women did not rank it as important in this domain. A similar finding was reported by Ben-Shem and Avi-Itzhak (1991) in their study of work values and career decisions among students in programs leading to helping and non-helping professions who found that aspirants to non-helping related careers scored higher on Independence than those aspiring to helping careers. Male dominated jobs are commonly perceived as offering more opportunity for autonomy than female jobs (Scozzaro & Subrich, 1990), a feature that may attract those who value independence. The strong priority placed on Concern for Others in the career role by the Traditional group may preclude a simultaneously high priority placed on Independence. In fact, overall and in the career role, Independence is significantly inversely correlated with Level A Relational values for Traditional women.

The greater the concern for the wellbeing of others and the maintenance of connectedness, the less one would likely be concerned about being autonomous. More specifically, the direct client or patient contact involved in social work and nursing as well as the team-oriented environment that often characterizes these professions, would entail more interdependence rather than independence. Curiously, for women in the Traditional group, Independence was found to be directly correlated with Level B Relational values. This perhaps reflects the fact that the Level B Relational values are less directly relational and therefore might allow for a similarly high priority placed on Independence.

Responsibility was ranked as one of the most important values by women in the present study in the career role. The most salient meaning emerging from the qualitative data that was attached to this value was the desire to be viewed as trustworthy or dependable by others, which has a somewhat relational connotation. Of particular interest was the fact that this was true for a relatively equal amount of women from Traditional and Nontraditional groups. It would appear that women from both groups are concerned about being seen in a positive light in their work role.

Given the popular relational connotation that emerged in the present study for Responsibility in the qualitative data for the career role, it is perplexing that this value had an inverse relationship with Level A Relational values for women in the Traditional group in values ranking overall, as well as for Nontraditional women in the career role. Responsibility also had an inverse relationship with Level B Relational values in the career role for women in the Nontraditional group. However, Responsibility may carry a less relational meaning for some women. As also evidenced in the qualitative data in the

present study, Responsibility can mean taking on an increasing number of projects or tasks, or being in charge of an activity. Considered in this light, Responsibility could be considered an individualistic value. Having a number of “responsibilities” or obligations in one’s life, such as sitting on committees, working, or volunteering may also be viewed as conflicting with more relational concerns such as spending time with family or friends.

Women in the present study ranked Financial Prosperity as an important value to be satisfied in the career role. It used to be that men valued extrinsic rewards such as income, and status, and prestige more so than women, however this trend seems to be diminishing (Marini, Fan, Finley, & Beutel, 1996). A study by Marini et al. (1996) showed that young men and women equally value extrinsic rewards. A larger percentage of women in the Traditional group ranked this value as their most important value, however it had a higher mean ranking in the Nontraditional group. The high priority women place on Financial Prosperity in the present study is supportive of previous research. In Fiorentine’s (1988) time series analysis of values and life plans of college students, a “dramatic” increase in the value placed on having a high income was detected for female students. In 1984, 67% of the female cohort indicated this value was important compared to only 28% in 1971. Bridges (1989) found that the women in her sample, drawn from introductory classes in psychology and communication science, ranked salary as their third highest work value.

An equal but small number of women from the Traditional and Nontraditional groups attached a relational meaning to Financial Prosperity in the qualitative section, viewing its importance in terms of helping and supporting family members in a financial way. Somewhat on the contrary, Financial Prosperity was found to be inversely related at

a level approaching significance and at a significant level to Level A Relational values for the overall values ranking, and in the career role (respectively) for women in the Traditional group. In the career role, this finding may be resulting from the fact that careers in social work and nursing are not known to be highly lucrative. Therefore, perhaps women who are most drawn to traditional careers are less interested in factors such as Financial Prosperity. Financial Prosperity was also found to be inversely related to Level A Relational values for women in the Nontraditional group. Similar to the explanation for the Traditional group, as Financial Prosperity becomes more important, there may be less of a focus on relational values. Financial Prosperity is often considered an individualistic and self-serving value.

#### Gender Role Identity

Within the Nontraditional group, the highest percentage of women were classified as Masculine (40%), supporting the findings of previous research in the area which shows that women in Nontraditional fields most often possess masculine characteristics (Jones & Lamke, 1985; Metzler-Brennan, Lewis & Gerrard, 1985; O'Brien & Fassinger, 1993). However, a fair number of the women in the Nontraditional group were classified as Feminine (25%), more so even than Androgynous (15%). This is contrary to the common conceptualization of women who choose Nontraditional careers. It may be that more women with Feminine characteristics are entering Nontraditional careers, recognizing that feminine traits can be useful in these careers (Jagacinski, 1987).

As might be expected, there was a higher percentage of Masculine women in the Nontraditional group than in the Traditional group (22%), and a higher percentage of Feminine women in the Traditional group (30%) than in the Nontraditional group. The

differences between these percentages however, were not great. Furthermore all four gender role identities were represented in both the Traditional and Nontraditional groups. The distribution of gender role orientations within both the Traditional and Nontraditional groups runs contrary to what one might expect. There were a fairly substantial number of Feminine women in the Nontraditional group and in the Traditional group, a substantial number of Masculine women. This finding suggests heterogeneity among the women in the Traditional and Nontraditional groups.

The women in the Traditional group were fairly evenly spread over the four gender role classifications. Nearly equal numbers of women in this group were in the Feminine and Androgynous groups and a fewer, but still substantial number were in the Masculine group. These findings coincide with the findings of Fouad and Post-Kammer (1989) who suggest that this realization counters “a hypothesis that women with traditionally feminine sex-role orientation choose to enter a traditional career, and women with masculine sex-role orientation choose nontraditional careers” (p. 196).

The finding that Feminine women ranked Concern for the Environment significantly higher than Masculine women in overall values ranking may suggest that Feminine women are more relational than Masculine women. In her study of sex role identity and “being in relation” McChrystal (1994) found that those who were classified as Feminine on the BSRI had a significantly higher score on her Relational Being Scale than who were not classified as Feminine. The Femininity scale on the BSRI contains items such as “sympathetic” and “passionate” characteristics that may lead someone who possesses them to be concerned with the state of the environment and its effects on humankind.

The fact that only one significant difference was found between the gender role groups was in itself an interesting outcome. Particularly interesting was the fact that there were not more differences found between the women in the Masculine and Feminine groups. For example, Achievement was not found to be significantly more important or relevant to Masculine women than Feminine women, contrary to the theorizing of Betz and Fitzgerald (1987). The lack of substantial significant findings in the present study is not consistent with previous research and theorizing (Betz & Fitzgerald, 1987; Chatterjee & McCarrey, 1991; Eccles, 1987; Feather, 1984). It might be that gender role identity has less of an influence on values and beliefs than proposed. Also, perhaps women in all of the gender role groups are becoming more flexible in their values, beliefs, and attitudes and therefore less confined to the stereotypical mould that defines each gender role orientation.

#### Age

The greater importance attached to Financial Prosperity in the career role and to Achievement overall by the “Younger” group validates the findings of McConatha and Schnell (1997) who found that the younger cohort in their study (17-25 year olds) considered more “self centered” personal values as more important than the older age groups. In the last three decades, there has been vast social and cultural change, which has affected traditional expectations of men and women, and age norms (McConatha & Schnell, 1997; Stake & Rogers, 1989). More women than ever before are working outside of the home (Fassinger, 1990) and are supporting themselves financially. Couples are having fewer children and when they do have children it is later in life than in earlier generations. A Canadian study by Perron & St-Onge (1991) found that both

female and male undergraduate students expect that young women in their twenties and early thirties should give priority to education and their career over family life. In past generations, women of this age were expected to place a priority on marriage and motherhood.

The findings in the present study related to age were somewhat unexpected. To a certain extent, neither Gilligan's (1982) developmental stage model of caring nor Bardwick's (1980) model of the life phases of women was supported. Each suggests that younger women are more concerned with the establishment and maintenance of relationships than are older women. The fact that Younger women more highly valued Achievement in values ranking overall in the present study, was not supportive of one particular study by Nunn (1994) that showed that younger students aged 17-24 were less achievement oriented than students in older age groups 25-30, 31-40, and over 40.

Gilligan's (1982) theory may not have been supported in the present study due to the fact that the majority of the participants were between 18 and 30 years of age which is relatively young, perhaps not allowing enough of an age spread to be relevant to her model. The ages of most of the participants were concentrated in the early twenties. The lack of evenly spread age distribution might explain why few significant differences were found.

### Summary of Discussion

The current study explored the priority, placement, and meaning of relational and other values in general, and in the career role, of post-secondary women in Traditional and Nontraditional faculties. Examined also were two other factors that influence life

values, age and gender role orientation. This exploration was facilitated through primarily quantitative means, but was supplemented with qualitative analyses.

The present study found predictable differences between women in Traditional and Nontraditional groups, namely the greater importance of relational values in the value system of women in the Traditional group both overall and in the career role. It was not surprising to find that Creativity and Privacy were more important values to the women in the Nontraditional group. Despite these differences, there were also some commonalities between these groups that emerged from the descriptive statistics. Similarities emerged in the qualitative data in terms of the personal meanings attached to the values. The women in the sample defined many of the values in the same way.

The findings in relation to age that the Younger group seemed to be somewhat more self-focused than the Older group were not predicted, rather they were contrary to what was expected. However, the age distribution in the sample of the present study was likely not sufficient to expect the kinds of differences theorized by Gilligan (1982). Gender role orientation did not produce as many differences as initially suspected, which is interesting in itself.

The findings of the present study make a number of contributions to our understanding of values. Of particular interest were the relational connotations that emerged from the qualitative data, adding new dimensions to the commonly accepted definitions of certain “work” values such as Achievement and Financial Prosperity. Moreover, these expanded definitions of values traditionally conceived of as “non relational” were mentioned not only by women in the Traditional group, but in the Nontraditional group as well. Themes of connecting with or helping others in some way,

while endorsed by more women in the Traditional than the Nontraditional group, were evident for both groups as important facets in career. These findings are also supportive of Gilligan's (1982) theoretical notion that women possess an ethic of morality, expressing concern and care for others.

The differences between the Traditional and Nontraditional group in terms of important values overall and in the career role were not vast. Many of the same values appeared in both realms for these two groups. Achievement and Financial Prosperity, commonly conceptualized to be a very strong for those in Nontraditional fields, were important values for women in the Traditional group in the career role. These similarities could suggest that the differences in value structures between women selecting careers in these two areas are not as great as often assumed.

#### Limitations of the Current Study

There were a few characteristics of the sample used in the present study that may limit the generalizability of the findings. For example, the sample size was small, and the majority of the sample was young (i.e., under 30) although quite representative compared to the age distribution of the total female undergraduate population at the U of C. Also, the Science students who participated were heavily concentrated in Environmental Science, which probably influenced the endorsement of the value "Concern for the Environment." Furthermore, the sample was composed of students, some of whom may never have experienced working in their fields, and who are not guaranteed to enter the professions they are training for. Hence, generalizing the results to those already working in the field would not be accurate.

The main research instrument in the study, the LVI, is a new instrument and thus has not been subjected to many tests of reliability and validity other than those conducted by the developers. Therefore, the information on its psychometric properties can be gathered from only one source. As well, the directions in section three of the LVI may have caused some confusion for the participants. In this section, respondents are asked to list all of the values that guide behavior, however, there are only spaces provided for six. Furthermore, statistical analyses could be affected by the directions provided in section four which ask the respondent to list at least 3 values that he or she hopes to have satisfied in each of four life roles. Within each life role however, four spaces are provided, increasing the potential for inconsistency in the number of values listed.

Due to the inability to assume normality of the data, nonparametric statistical analyses were employed. However, this prevented the application of multivariate statistical tests, as parametric statistics can only deal with univariate procedures. As a result, it was not possible to examine the combined effects of the independent variables involved in the present study, which may have yielded interesting information not apparent with the level of statistics used. As well, the standards of tests of significance were relaxed from .05 to .1 at times to facilitate and accommodate the exploratory nature of the statistical analyses. This relaxation of standards however, increased the probability of error.

#### Directions for Further Research

A possible area for further research would be to extend the study to include other populations such as men. This would facilitate not only a comparison between men and women but would also allow the examination of relational values in the career role of

men, an area that has been subject to little research to date. Extending the study to include women in other levels of post secondary study, such as those attending colleges or technical schools would also be worthwhile.

Including ethnicity as an independent variable would be a worthy endeavor, as it has been shown that this factor influences values, but has received comparatively little attention in the career development literature (Betz & Fitzgerald, 1987; Richie et al., 1997). Also incorporating faculties that are not as obviously “Traditional” and “Nontraditional” for women would serve to get a better idea of the prevalence of relational values in a women as a group as it would increase the representativeness of the sample. Studying women who are actually employed in Traditional and Nontraditional areas might give a better idea of specifically how relational values can and are being satisfied in these careers. Finally, including women in other levels of employment such as those in “non professional” careers as well as homemakers, would also help to increase the generalizability of the findings to all women.

Analyzing the additional information collected for the present study but not utilized, would be an interesting avenue to explore in future studies. The examination of relational values across life roles could provide additional information on the value systems women possess. Furthermore, it might provide insight into the desire for the satisfaction of relational values in life roles other than the career role. This process could provide a fuller picture of the importance of relational values in the lives of women.

Another worthwhile area of future research might be to attempt to replicate the findings of the present study, employing a different values instrument, such as Super’s Values Scale or his Work Values Inventory. It would also be interesting to observe

whether some of the findings in the present study that were difficult to explain, such as the inverse relationship between Level A Relational values and Responsibility for women in the Traditional in values ranking overall and for Nontraditional women in the career role, would be replicated if a different research instrument was used.

### Implications

The findings of the present study support the theorizing of feminist researchers such as Forrest & Mikolaitis (1986) and Gallos (1989) who suggest that a relational dimension should be incorporated into theories of career development used to understand women's careers. The inclusion of this construct could serve to more fully understand and appreciate the career choices women make. The findings of the present study suggest that women desire to have relational values satisfied in their career role. For women in the Traditional group in particular, Concern for Others was the most important value in the career role. However themes of helping clients, patients or society as a whole, being trusted by co-workers and employers, and feeling a sense of camaraderie with co-workers, emerged from the qualitative data in the present study as important factors for all women. These variables are left largely unaccounted for in the major theories of career choice and development.

One of the difficulties of fully appreciating women's values in the workplace is that they are often examined through a traditional male lens. Unfortunately, as Gallos (1989) notes, current theories of career do not possess the constructs or the language to account for a career that is "simultaneously high of achievement and high on relationship" (p. 124). Marshall (1989) notes that in the realm of career theory development, a repeated challenge has been "to incorporate female values into a so far

largely male base” (p. 288). She also suggests that theories of career must give equal value to the ways of being of both men and women. The results of the present study lend support to Marshall’s (1989) theorizing in this respect. The lack of a relational component in career theories serves to ignore or even negate this aspect of women’s value systems, which as this study demonstrates, can be a very important aspect of career choice for some women.

The findings of the present study send a message of caution to developers of values scales and the researchers that use them, that the personal meanings of the values in the inventory may be different than what is portrayed in the definition that is utilized. Therefore assumptions about these values and those that endorse them, may not be entirely accurate. The inclusion of a qualitative component might be advisable, considering the rich data that emerged from the qualitative data in the present study regarding the personal meanings of the values.

In light of the present findings, career counsellors should be aware of the assumptions and stereotypes they might have about not only traditional and nontraditional careers for women, but also about those who aspire to them. Those who aspire to nontraditional careers may desire to have relational values satisfied through their career whereas those who aspire to traditional careers may desire to have “non relational” values satisfied through their career. As can be evidenced in the findings of the present study, these two factors can exist simultaneously. There is a trend that is focused on generating interest in nontraditional careers for women. While this is a very worthwhile effort, it has the potential to negatively reflect on those women who choose traditional careers. Because relational values are often not appreciated in the career role (Stiver,

1994), those women who strongly possess these values and aspire to traditional careers should be supported and encouraged in their decision.

The findings of this study also suggest that career counsellors should consider the influence of values in the career choice and development of women. The exploration of how values fit with interests and abilities would allow a more comprehensive approach to the process. Also, career counsellors should be aware that many of the standardized instruments used in career counselling are based on career theories that do not acknowledge relational ways of being. Therefore, this factor while it might be important for the client, would not be indicated in the results. Finally, if values are incorporated into the counselling process, counsellors should explore the personal meaning they have for the client. As the findings of the qualitative data in the present study show, values can have different meanings for different people.

Implications also arise from the findings of the present study for the developers of career resource materials. Career resource materials such as books, magazines, newsletters, and Internet websites have the potential to transmit a wealth of career information to a great many people. Given the findings of the present study, it would be important that these materials not contain stereotypical profiles of careers that are traditional and nontraditional for women. It would be beneficial if these materials contained information regarding the full spectrum of activities involved in traditional and nontraditional careers, including the less relational aspects of the former and the more relational aspects of the latter. Furthermore, if illustrations or pictures are being utilized, it might be a good idea to portray women engaging in a wide range of activities in different careers. As well, if the materials are depicting individuals in nontraditional

careers for women, a scene involving group activities, such as consultation or teamwork might be a better choice than depicting say a lone male scientist, for example.

The lack of women aspiring to, and remaining in, nontraditional training programs and careers like those in science and engineering, has been noted and lamented by various authors (Brush, 1991; Eccles, 1994; Lips, 1992a). As previously alluded to, there seem to be many barriers that prevent the entrance and of women into, and their persistence, in these types of careers. Therefore, it may be a worthwhile endeavor for industries, professions, and professional associations that wish to attract more women employees to their field, to highlight, in a realistic manner, the possibilities for relational value satisfaction in these types of careers in their recruiting efforts. This task may be accomplished through emphasizing the ways in which nontraditional careers can offer relationships, be helpful to people, or make a meaningful contribution. Efforts such as these might serve to entice more women who may avoid such careers due to perceptions of them being “chilly” and only suitable for men. It is not surprising as increasing numbers of women enter nontraditional careers, they are choosing to do so in ways that allow their relational values to be satisfied such as selecting family law, ergonomics in engineering, and general family practice in the medical field (Crozier, in press). Similarly, industries, professions, and professional associations that want to attract more men to traditional fields for women, such as social work and nursing, might try highlighting the other, less relational values that can be satisfied in those careers.

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## Appendix A

### Definitions of LVI Values

#### **Achievement**

It is important to challenge yourself and to work hard to improve.

#### **Belonging**

It is important to be accepted by others and to feel included.

#### **Concern for the Environment**

It is important to protect and preserve the environment.

#### **Concern for Others**

The well-being of others is important.

#### **Creativity**

It is important to have new ideas or to create new things.

#### **Financial Prosperity**

It is important to be successful at making money or buying property.

#### **Health and Activity**

It is important to be healthy and physically active.

#### **Humility**

It is important to be humble and modest about your accomplishments.

#### **Independence**

It is important to make your own decisions and do things your way.

#### **Loyalty to Family or Group**

It is important to follow the traditions and expectations of your family or group.

**Privacy**

It is important to have time alone.

**Responsibility**

It is important to be dependable and trustworthy.

**Scientific Understanding**

It is important to use scientific principles to understand and solve problems.

**Spirituality**

It is important to have spiritual beliefs and to believe that you are a part of something greater than yourself.

## Appendix B

### Instruction Sheet

Dear Participant,

This research package should contain the following: (1) Participant Information Sheet; (2) the Bem Inventory; (3) the Life Values Inventory; and (4) the Researcher Generated Open-ended question. **Please complete the materials in the order that they are listed.**

This research package should also contain a Participant Letter of Information, and two copies of the Participant Letter of Consent. Please sign the Participant Letter of Consent forms. Retain one copy for your records and return the other signed copy with the other completed materials.

In the second and third sections of the Life Values Inventory, "Continuing to Explore Your Values," the first short answer question asks you to consider the people you most admire. One example given of a person that is often admired is Martin Luther King, Jr. Other examples of people who are admired are Mother Theresa or Sarah McLachlan. Also, people you admire do not need to be famous, you may admire your mother, or a teacher for example.

**We request that you complete *all* sections of both the Life Values Inventory and the Bem Inventory.**

Please complete these materials and either; (1) drop them off at the office of Marcia Inch (ENE 229D), or (2) mail them using the addressed, stamped envelope that has been provided to you, depending on what was mutually agreed with the researcher. Please do this within 14 days of receiving the materials. If you have not returned the materials within that time period, a reminder letter will be sent to you.

Thank you for your participation. If you have any questions, please contact Cindy Dorval at 220-5099 or Dr. Sharon Crozier at 220-5893.

Sincerely,

Cindy Dorval

## Appendix C

### Participant Letter of Information

Dear Participant:

My name is Cindy Dorval. I am a graduate student in the Department of Educational Psychology at the University of Calgary, conducting a research project under the supervision of Dr. Sharon Crozier, as part of the requirements towards a M.Sc. degree. I am writing to provide information regarding my research project, "Relational Values in Women's Career Role" so that you can make an informed decision regarding your participation.

The purpose of the study is to explore and compare the placement, priority and expectation of satisfaction of relational values in the career and other life roles of post-secondary women in "traditional" female faculties and "non-traditional" female faculties. As part of the study you will be asked to complete 2 assessment instruments, one researcher-generated open-ended question, and a Participant Information Sheet. These procedures will take approximately one hour. You should be aware that even if you give your permission you are free to withdraw at any time for any reason without penalty.

Participation in this study will involve no greater risks than those ordinarily experienced in daily life. However, if at any time by virtue of your participation in this study, other issues arise of an emotional nature that you do not feel capable of resolving on your own, you may access free of charge the University of Calgary Counselling Services (220-5893).

Data will be gathered in such a way as to ensure anonymity. All materials you complete will have any identifying marks removed and an identification number will replace them. Each research package will be assigned an identification number, which will be used instead of your name. Primarily group data will be reported in any published studies. Any individual responses reported from the short answer questions will be done in such a way that protects your identity. The raw data will be kept in a locked file cabinet and destroyed two years after it has been analyzed.

Each participant's name will be entered into a draw for a chance to win a \$150.00 gift certificate to the University of Calgary bookstore, unless the participant stipulates otherwise. The winner will be drawn randomly when participant recruitment is completed, which is expected in early 1999.

If you have any questions, please feel free to contact me at 220-5099, my supervisor, Dr. Sharon Crozier at 220-5893, the Office of the Chair, Faculty of Education Joint Ethics Review Committee at 220-5626, or the Office of the Vice-President (Research) at 220-3381. Two copies of the consent form are provided. Please return one signed copy to me and retain the other copy for your records.

Thank you for your cooperation,

Sincerely,

Cindy Dorval

## Appendix D

### Research Participant Letter of Consent

I, the undersigned, hereby give my consent to participate in a research project entitled, "Relational Values in Women's Career Role."

I understand that such consent means that I will complete two assessment instruments, one researcher generated open-ended question, and a Participant Information Sheet.

I understand that participation in this study may be terminated at any time by my request or at the request of the investigator. Participation in this project and/or withdrawal from this project will not adversely affect me in any way.

I understand that this study will not involve any greater risks than those ordinarily occurring in daily life. However, if at any time by virtue of my participation in this study, other issues of an emotional nature that I do not feel capable of resolving on my own, I understand that I can access free of charge, the University of Calgary Counselling Services (220-5893).

I understand that the responses will be obtained anonymously and kept in strictest confidence.

I understand that primarily group data will be reported in any published reports. Any individual responses reported from the short answer questions will be done so in a way that protects my identity.

I understand that my name will be entered into a draw for a chance to win a \$150.00 gift certificate to the University of Calgary bookstore, unless I stipulate otherwise. I understand that the winner will be drawn randomly when participant recruitment is completed, which is expected in early 1999.

I have been given a copy of this consent form for my records. I understand that if at any time I have questions, I can contact the researcher, Cindy Dorval, at 220-5099, her supervisor, Dr. Sharon Crozier at 220-5893, the Office of the Chair, Faculty of Education Joint Ethics Review Committee, at 220-5626, or the Office of the Vice-President at 220-3381.

\_\_\_\_\_

Date

\_\_\_\_\_

(Signature)

\_\_\_\_\_

Participant's printed name

## Appendix E

## Participant Information Sheet

1. Name (last name) \_\_\_\_\_  
(first name) \_\_\_\_\_
2. Which faculty are you in? (e.g. Social Work, Nursing, Science, Engineering)  
\_\_\_\_\_
3. Which department/division are you in? (if applicable) (e.g. physics and astronomy, mechanical engineering, mathematics and statistics, etc.)  
\_\_\_\_\_
4. In which year were you born? 19 \_\_\_\_\_
5. How would you describe your current relationship status: (please check one)  
 single (not married) do not live with intimate partner  
 married *or* not married but live with intimate partner
6. Do you have any children?  
 yes  no (if no, skip to question 7)
- How many children do you have? \_\_\_\_\_  
 What are their ages? \_\_\_\_\_  
 Do any or all of these children live with you?  yes  no
7. Are you a full time student (i.e., taking 3 or more university courses)  
 yes  no
8. Have you had any breaks in your education (either between high school and post-secondary *or* within post-secondary education)?  
 yes  no  
 If yes, how long was the break? \_\_\_\_\_ years \_\_\_\_\_ months
9. Do you want a one-page copy of your results from the Life Values Inventory sent to you?  
 yes  no

If yes, please include your address:

\_\_\_\_\_ Apartment of house number

\_\_\_\_\_ Street name

\_\_\_\_\_ City

\_\_\_\_\_ Postal code

*Continued on back of page*

**Questions 10 – 13 are optional**

It is recognized that an individual’s ethnic background may uniquely shape his or her values and beliefs. Therefore, in a research study such as this, it is useful to have the following information:

10. How would you describe your ethnicity?

\_\_\_\_\_

Some examples are:

- |               |                       |
|---------------|-----------------------|
| Pakistani     | Italian-Canadian      |
| Japanese      | Chinese-Canadian      |
| Irish         | African-Canadian      |
| Canadian      | Vietnamese-Canadian   |
| First Nations | German-Canadian, etc. |
| African       |                       |

11. Which is the language most often spoken in your home?

\_\_\_\_\_

12. Do you have a religious affiliation?

\_\_\_yes                    \_\_\_no (if no, go to question #13)

What do you consider your religious affiliation to be? Some examples are, Baptist, Jewish, Mennonite, Roman Catholic, Buddhist, Hindu, etc.

\_\_\_\_\_

13. Do you attend functions organized by your ethnic community?

\_\_\_often                    \_\_\_rarely                    \_\_\_never

**This is the end of the Participant Information Sheet**

## Appendix F

### Researcher Generated Question

In the Life Values Inventory which you just completed, the last section on “Values in Life Roles” asked you to rank order the values you hope to have satisfied in each of your life roles.

Please review the values you ranked as important to be satisfied in your job and indicate **in what ways do you hope to have these values satisfied in your job? If possible, provide specific examples.**

**Appendix G****Reminder Letter**

Cindy Dorval  
#60 – 6327 Bowview Road, NW  
Calgary, Alberta T3B 4L9

March 16, 1999

Ms. Xxxxxx  
Xxxxxxx  
Calgary, Alberta Xxxxx

Dear Xxxx,

Recently you received a package of research materials for the study, “Relational Values and Women’s Career Role.” This is just a friendly reminder to let you know that I have not yet received the completed package.

I am writing to request that you give these materials some time and attention. Completion of the materials will take approximately one hour of your time. Your participation is greatly appreciated.

If you have already returned or mailed the package, please disregard this reminder.

No further reminders will be sent to you. If you have any questions or concerns, please feel free to contact me at 220-5099 or by email at [cedorval@ucalgary.ca](mailto:cedorval@ucalgary.ca).

Sincerely,

Cindy Dorval