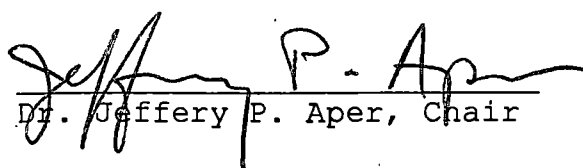


To the Graduate Council:

I am submitting herewith a dissertation written by Ellen J. Neufeldt entitled "Anticipated Life Paths: A Study of Male and Female College Students." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration and Policy Studies.


Dr. Jeffery P. Aper, Chair

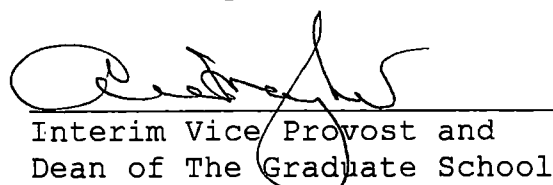
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Anticipated Life Paths:
A Study of Male and Female
College Students

A dissertation presented for the
Doctor of Education Degree
The University of Tennessee, Knoxville

Ellen J. Neufeldt

December 2000

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Dedication

This dissertation is lovingly dedicated to
my parents and sisters

Harvey and Anne Neufeldt
Sharon Carter
Beverly Wagner

whose unfailing love and support
made it possible to complete this dissertation

Thank you for standing by me

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ABSTRACT

College men and women are afforded more freedom than ever before to make decisions about their future lives. However, even when men and women start with similar characteristics, in many cases they are still making different life choices. The problem is to identify values, priorities, or circumstances that may influence or limit the life choices of men and women.

The purpose of this study was to describe and compare how male and female college students constructed their life paths. Through semi-structured interviews, this study examined the goals and priorities of 32 college juniors and seniors by examining the choices they made during their college years. Further, it examined their visions of their future lives.

At first glance, the findings in this study showed the men and women to be similar. Both the men and the women described an idealized future vision of the future. The majority of students described their vision as a problem-free, middle-class American life, which included a nuclear family, a career, financial security, and, for a

third of the students, a location near their family of origin.

Three major differences emerged between the men and the women. First, the role in the future vision was different for men and women. The majority of women placed caring for their future family at the center of their future lives, while the men were more likely to place career as their top priority or not prioritize their life components.

Second, the men and women had different influences in selecting their majors. The majority of women selected their original majors based on the advice and encouragement of family members, teachers, and friends. The majority of men reported selecting their majors based on past experiences or interests.

Third, many women expressed fear that some component of their future vision would not work out as planned, while the men conveyed confidence that their future vision would become reality.

Ultimately, 10 of 16 women changed their major and 12 of 16 women changed their career path. Conversely, 6 of 16 men changed their major and 4 of 16 men changed their career path.

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Chapter 1

Introduction to the Study

College women and men make different choices about their futures in the areas of their college majors, careers, and family roles (The U.S. Department of Labor and Statistics (1998). As researchers have examined the different choices of men and women, they have found more similarities than differences between men and women (Blum, 1997; Seymour & Hewitt, 1997). Despite the similarities, college women in 1994 were still more likely than men to obtain a degree in psychology, education, health sciences, or the humanities. Men in 1994 were more likely than women to obtain a degree in the physical sciences (chemistry, astronomy, physics, and geology), math, and engineering (U.S. Department of Education, 1997).

Background to the Study

An historical look at the life roles of men and women in the United States showed strong societal influences that dictated their decisions (Smelser, 1980). Sex role stereotypes of appropriate male and female roles

encouraged women to stay at home and raise a family (Smelser, 1980). Careers in such fields as medicine, law, and business were perceived as appropriate for men, while women were discouraged from pursuing these options (U.S. Department of Labor, 1998).

Over the last half of the 20th century, women have increasingly entered the workforce and higher education. In 1960 women received 35.3% of all bachelor's degrees and 31.6% of all master's degrees. In 1997 women earned 55.4% of all bachelor's degrees and 52.7% of all master's degrees (U.S. Department of Labor, 1998). Women are also making strides in entering fields that are considered nontraditional for women. They have increased their representation in areas such as medicine, law, and business (Valian, 1999). Even though women and men are entering and graduating from college at similar rates, many women are still making choices that lead to careers that yield fewer economic rewards (Lorber, 1994). Generally, men are more likely to complete a degree in science, math, and engineering (SME), which yields higher salaries in the workforce, where women are more likely to obtain a degree in the humanities and education. (U.S. Department of Education, 1998)

Even women who complete a college degree have selected majors and careers that yield fewer economic rewards. Further, they tend to progress at a slower rate than men through the promotion chain (Lorber, 1994; Valian, 1999).

Many explanations have emerged over the past 20 years to describe why men and women adopt different life roles. While some feminist scholars have resisted the idea that men and women are genetically different, evidence shows that the male and female brains are affected differently by hormonal influences during development (Blum, 1997). Kirma (1992), for example, found that when testosterone was added to female rats at a young age, they solved spatial problems in ways similar to male rats. The females' enhanced ability to solve spatial problems was retained for the rest of their lives. Studies have shown that some variation in choice is tied to genetic factors, but as Blum asserted, the structural differences in the brain between men and women are slight.

Hackett and Betz (1981) asserted that self-efficacy plays a role in the decision process of women. Self-efficacy refers to "the beliefs in one's capabilities to

organize and execute the courses of action required to produce given attainments" (Bandura, 1995, p.3). Low self-efficacy in women has been related to not selecting or not remaining in nontraditional majors. Betz and Hackett (1981) asked 134 female and 101 male college students to rate their perceptions of ability in completing the educational requirements and performing the job duties in 10 traditional and 10 nontraditional occupations for women. The researchers found that females showed significantly less self-efficacy in their ratings of projected performance in five nontraditional majors, as compared to the traditional majors. The men's self-efficacy scores were consistent across majors.

As noted above, cultural norms of society have been used to explain the different choice processes of college men and women. Researchers such as Mickelson (1989), Gilligan (1993), and Belenky, Clinchy, Goldberger, and Tarule (1997) have suggested that women tended to examine the connections between the components of their lives, such as work and family, when making life decisions, while men tended to compartmentalize the different areas of their lives. Women have attempted to ensure that choices about work complement their choices about family

and personal life (Farmer, 1997; Gilligan, 1993, Merriam & Clark, 1991; Mickelson, 1989). Men, by comparison, tended to consider career advancement a more important factor in decision-making (Gilligan, 1993; Farmer, 1997).

Astin (1993) found the influence of peer groups has a direct effect on students' choices of majors. Holland and Eisenhart (1990) found that the peer group of women in their study steered them away from challenging majors in science and math. Conversations within the females peer groups tended to focus on making choices about romantic relationships and rarely discussed or gave importance to academic work or major and career choice. However, Holland & Eisenhart's results were limited by their decision not to include comparative data on men.

The theories outlined here all point to major issues in why college men and women select different life paths, but the research is limited. One limitation in the research is that many studies only examined one sex (Belenky, Clinchy, Goldberger, & Tarule, 1997; Gilligan, 1993; Holland & Eisenhart, 1990; Perry, 1970), which did not allow for a comparison between the sexes. Further, studies conducted by Seymour and Hewitt (1997) and Holland and Eisenhart focused on women majoring in SME.

By limiting the study to a subgroup within a gender, one cannot fully understand how women in general make choices.

A second limitation is that studies such as Farmer and Associates (1997), interviewed both men and women, but the study examined students in the seventh and ninth grades and contacted them for an interview approximately 13 years later. While the information gathered was valuable, it gave only a retrospective glance at how traditional-aged college students made decisions. By obtaining only a retrospective view of this time, valuable information could be lost. When time separates a person from an event, information is often forgotten (Fruzzetti, Toland, Teller, & Loftus, 1992).

A third limitation is that the views of how students anticipate their future lives were omitted from the research. College is a time when students are making critical decisions in anticipation of their future lives (Chickering & Reisser, 1993). Josselson (1987) has argued that late adolescence is crucial in "identity formation" and decision-making (p.14), and according to Chickering and Reisser (1993), the later college years

are a time when students develop a sense of purpose in anticipation of leaving college and beginning adulthood.

Research has shown that even when women have the ability to succeed in nontraditional fields, they are still more likely than men to change their majors (Farmer and Associates, 1997; Seymour and Hewitt, 1997). Both men and women have many options when faced with their life choices. However, if either women or men limit their options due to hidden barriers, such as gender stereotypes, socialization, or self-efficacy, they may not be utilizing their full potential and talents. In order to maximize choices for men and women, it is important to identify and gain understanding of any obstacles that prevent them from making decisions freely.

Many findings indicate that men arrive at different life choices than women. This study was designed to learn more about why many men and women are making different choices about their future by examining the choices college students make during college and exploring the plans and visions for their future lives.

This study sought to fill these gaps in the literature by obtaining information from both male and female college students during the critical college

years. The vehicle for obtaining this information was one-on-one interviews, during which the college students were asked to describe how they arrived at their chosen major, and to explain how they anticipated their future lives. By enabling the students to tell their stories, additional understanding was gained about why men and women today lead different life paths.

Problem

While many barriers have been lifted, allowing college men and women more freedom to make decisions about their future lives, males and females are still arriving at different choices about their family roles, careers, and college majors, which set them on different life paths. While much research has been done on the subject of men's and women's life choices (Betz & Hackett, 1981; Blum, 1997; Farmer & Associates, 1997; Holland & Eisenhart, 1990; Seymour & Hewitt, 1997) gaps still remain in the literature about how and why they make their choices, and what we do know has been limited by focusing on either males or females, which has not allowed for comparisons of the gender differences. Further, we do not know how males and females think about

the decisions to be made at the time they are making them during the critical college years when men and women are making important decisions in anticipation of their future. Therefore, the problem is to identify values, priorities, or circumstances that influence or limit the life choices of men and women.

Purpose

The purpose of this study was to describe and compare how male and female college students constructed their life paths. Through semi-structured interviews, this study examined the goals and priorities of male and female college seniors by examining their choices made during their college years. Further, it examined their vision of their future lives.

Research Questions

1. How do female undergraduate students describe and decide upon their anticipated life paths?
2. How do male undergraduate students describe and decide upon their anticipated life paths?
3. How do the anticipated life paths of females compare with the anticipated life paths of males?

Significance

Despite efforts over time to remove barriers enabling women to expand the range of their life choices, generally, men and women are still making different choices about their lives. Women tend to be limiting their options in ways that men do not. Holland and Eisenhart (1990) suggested that even women who attended college continually accept "inferior positions and accept jobs that yield a low standard of living" (p.8).

While other studies have examined the life paths of males and females, this study attempted to fill voids in the literature by giving college students an opportunity to explain their visions of their futures and their rationale for decision-making during their junior or senior year. As students enter their later years of college, they are expected to develop their purposes for their future lives (Chickering & Reisser, 1993). While information exists about how life paths unfold, this study allowed examination of how students anticipate their future lives. Further, the study compared both males and females from a variety of majors.

The interviews assisted in gaining an understanding of how students anticipated and made decisions about their future life paths. By interviewing both males and females with similar abilities, the researcher was able to identify differences in the males' and females' goals and priorities about their future lives, as well as identify any gender-related obstacles that inhibited the men or women from maximizing their future life choices.

Delimitations

The study was confined to junior and senior, traditional age, full-time, undergraduate college students who had never been married. The study was conducted at a public university of approximately 6500 undergraduate students in the Southeast. The data were collected over an 8-week period during August and September of 1999, after the study was approved by the Institutional Review Board (IRB) at The University of Tennessee at Knoxville.

Limitations

Because this study was qualitative and took place at one university, with only 32 respondents, the findings may or may not be applied to other students or

universities. The goal of the interviews was to gather the personal stories of individual students with similar academic abilities at one institution in order to gain insight into the values and priorities that they used to make choices about their futures.

The findings might be applicable to students of similar backgrounds. The results could be transferable to other students at southern universities. McCandless (1999) in her book, The Past in the Present: Women's Higher Education in the Twentieth-Century American South, asserts that southern students have unique characteristics. They are more conservative and religious than the rest of the nation. This suggests the students in this study were more likely to be similar to students at other southern, public institutions.

Further, one researcher conducted the interviews and the interpretations were subject to her bias. To control for bias the researcher taped and transcribed the interviews, took detailed notes during the interviews, and conducted member checks with four students.

Additionally, the researcher was an administrator in student affairs at the institution where the research was conducted. She had a role of authority, which could have

affected the students' responses. She made every effort possible to assure the students that their interviews would not affect their status at the institution.

Assumptions

Assumptions in this study were:

1. Students being interviewed could explain the focus of their future plans in a meaningful way.
2. Students' perceptions about their future plans are important in understanding their life choices.
3. Interviews are an effective way to gain insight into values and priorities that affected how students make life decisions.

Research Design

A qualitative approach using semi-structured interviews was selected for this study. Sixteen female and 16 male junior and senior college students with similar academic backgrounds from high school were interviewed. Each participant agreed to be interviewed and to discuss decisions they had made about their majors while in college and their future life visions, including their hopes and fears for the future.

The interviews were taped and transcribed. The data were separated into two major categories of male and female to answer the first two research questions. The results were then compared to answer the third research question.

Organization of the Study

The written documentation of the study consists of five chapters. Chapter One contains the introduction, problem statement, research questions, purpose and significance of the problem, delimitations, limitations, assumptions, research design, and organization of the study. Chapter Two provides a literature review of relevant research concerning the process college men and women use to make decisions about their anticipated life paths. Chapter Three focuses on research method. Chapter Four describes the analysis of the data. Finally, Chapter Five provides conclusions from the research and offers recommendations for further research.

Chapter II

Review of the Literature

The purpose of this study was to describe and compare how male and female college students constructed their life paths, as reflected in their decisions and descriptions about their lives during and after college. Three research questions were developed to guide this study.

1. How do female undergraduate students describe and decide upon their anticipated life paths?
2. How do male undergraduate students describe and decide upon their anticipated life paths?
3. How do the anticipated life paths of females compare to the anticipated life paths of males?

A review of the literature was conducted to understand the factors that affect why men and women are making different life choices about their future. This chapter was organized in three main sections: a brief historical account of women's education and life roles, accounts of male and female life paths, and explanations of why men and women tend to make different choices.

Historical Background

In the history of the United States, men and women have typically held different roles in their adult lives. Within the family unit, the men worked in some fashion to provide material support for their family and the women existed within the private role of the home to care for their families (Martin, 1999; Merriam & Clark, 1991; Smelser, 1980).

The role of the woman in Western culture has been viewed by society as the subordinate role (Hubbard, 1990). "Most women of past generations could only marry the American Dream; they did not dare to have high expectations for themselves" (Rimm, 1998, p.40). The historical place of women in the United States has been cemented through religion, claims of inferior biology, and claims of psychiatric abnormalities that researchers thought proved that women were only made for and only capable of caring for the family (Bellah, 1996; Blum, 1997; Hales, 1999; Merriam & Clark, 1991). "From Aristotle to Freud, the thinking on gender has been that only one sex had fully evolved out of the tidal pool, and it wasn't the sex that wears panty hose" (Enrenreich,

1999, p.56). It appears that many theorists who claimed women were the weaker felt that taking care of a household was inferior to work outside the home (Martin, 1999).

Until the last century, there was a small minority of women who held professional positions outside the home. While African-American women worked outside the home in mainly domestic positions, the ideals of the upper middle-class lifestyle dictated that women were the nurturers of the family in the home (Smelser, 1980). Education was largely a privilege for upper middle-class white men. Most women learned their life role from their mothers.

As women began to slowly enter higher education, many did not plan for careers (Mickelson, 1989). Jean-Jacques Rousseau warned during the 18th century,

Women's entire education should be planned in relation to men; to please men, to be useful to them, to win their love and respect, to raise them as children, care for them as adults, counsel and console them, make their lives sweet and pleasant. These are women's duties in all ages: these are what should be taught from childhood (as cited in Rimm, 1998, p. 321).

In 1833 Oberlin College began to admit women. This was the first coeducational campus, but the women that

attended were required to take care of the men's domestic chores, such as making their beds and cooking (Martin, 1999).

In the United States the roles of men and women began to change during the 20th century. Women increasingly participated in education and the workforce (Hansen, 1996; Merriam & Clark, 1991; Solomon, 1985). Women gained access to many new experiences in jobs and educational opportunities during World War II; however, as the war ended, many women gave up their work and educational opportunities because they did not want to threaten their opportunity for marriage (Solomon, 1985).

This gave way to a big push in the 1950s for women to acquire an education that prepared them to take care of a household so that they could be good wives and attract a husband. Further, authors such as Dr. Benjamin Spock were writing that mothers needed to give more time to infants and young children. Working outside the home was claimed to have adverse effects on the children (as cited in Solomon, 1985). The true sign of success for women was regarded as getting married (Solomon, 1985).

During the second half of the 20th century, the tide began to turn once again as the Russians launched Sputnik

in 1958. This resulted in the National Defense Act of 1958, intended to encourage more students to major in math and science so the United States could counter the concern that the Soviets had surpassed the United States technologically (Solomon, 1985).

As the 1960s emerged with more women going to college and working outside the home, women began to demand equal pay. As a result, in 1963 the Equal Pay Act went into effect, stating that individuals performing similar work should be paid similar wages regardless of gender (U.S. Department of Labor, 1998). Additionally, during the 1970s, schools took more steps to remove barriers to women entering nontraditional fields. Declining enrollment at universities during the early 1970s encouraged many institutions, such as University of Virginia, Yale, and Princeton, to become coeducational (Solomon, 1985). Also, in 1970 the National Institute of Education (NIE) mandated that sexist language could not be used on interest inventories that guided high school students toward career paths. Career classes also made efforts to remove sex role stereotyping by bringing in nontraditional role models and exposing students to many work environments (Farmer, 1995).

All of these changes in education over the last half of the 20th century ostensibly allowed similar opportunities for women and men, as they constructed their life paths. In theory, men were free to select more nurturing roles, and women were allowed to pursue professional roles in their future (Hansen, 1996).

Today, there are many similarities between men and women in higher education. Both sexes are entering college at similar rates. Similar numbers of men (7.4%) and women (8.8%) begin college undecided about their majors (U.S. Department of Education, 1997). Women are entering college with equal or greater numbers to men of math and science courses from high school with the exception of physics (U.S. Department of Education, 1997). While men are still outscoring women on math and science proficiency exams, equivalent to one-half to a full school year, women entering science, math, or engineering (SME) fields in college exhibit similar or higher math and science proficiency scores than men (Seymour & Hewitt, 1997; U.S. Department of Education).

Despite the similarities, according to the findings of the U.S. Department of Education (1997), in 1994 women were more likely than men to obtain a bachelor's degree

in psychology, education, health sciences, or humanities. Men in 1994 were more likely to obtain a degree in physical sciences (chemistry, astronomy, physics, and geology), math or engineering (U.S. Department of Education, 1997). Findings from Astin's (1993) study, which involved surveying over 4000 students from 309 different higher education institutions, reported that being female was negatively correlated with careers in law and engineering and being male was negatively correlated with careers in teaching and nursing. The degrees more commonly obtained by women placed them on a career path that yielded lower financial rewards (Valian, 1999).

Reporting the dominant majors of many men and women does not accurately portray the progress of women in nontraditional fields over time. While lawyers and physicians are considered nontraditional professions, because less than 25% of the discipline consists of women, the fields have seen dramatic growth in women through the 1970s and 1980s (U.S. Department of Labor, 2000; Valian, 1999). For example, female lawyers were 3% of the profession in 1970, 8% of the profession in 1980, 13% of the profession in 1985 and 23% of the profession

in 1995 (Valian, 1999). Similarly, in 1960 almost 6% of medical school graduates in the United States were women. In 1990, 34% of medical school graduates in the United States were women (Ingelhart, Brown, & Malanchuk, 1993). According to the U.S. Department of Labor (2000), female physicians now make up 24.5% of the profession.

Another profession that has seen significant growth in the number of women has been women in management. The U.S. Department of Labor (2000) reported that 45.1% of all managers in 1996 were women, compared to 39% in 1988. Management is a broadly defined profession ranging from fast-food managers to chief operating officers of large corporations. The tasks for individuals in this group include "establishing policies, making plans, determining staffing, and directing the activities of businesses, government agencies, and other organizations" (U.S. Department of Labor, 2000, p. 1).

Within these professions, women have been concentrated in a few areas. For instance, female physicians are more likely to specialize in areas such as "pediatrics, obstetrics/gynecology, psychiatry, pathology, and family practice", which hold less prestige and monetary rewards in the medical profession than

specialties such as surgery (Inglehart, Brown, & Malanchuk, 1993. p. 375). Likewise, female managers tend to be concentrated in areas where they have experience, such as medicine and health care, human resources, and education (U.S. Department of Labor, 1997, 2000). A fact-finding report of the 1991 Glass Ceiling Commission reported that while women hold 43% of executive, administrative, and managerial positions, women comprised less than three to five percent of all executive positions (U.S. Department of Labor, 1997).

In summary, Valian (1999) reported that while women have made great strides in fields such as management, medicine, and law, men still hold more prestigious and lucrative positions and ranks in those fields. Women in these fields also reported working fewer hours on average, and tended to select fields or specialties that were not held in as high prestige as their male counterparts.

Further, the Department of Labor reported in March of 2000 that the gap between men and women in the technical fields has widened. Engineering, physical sciences, and mathematics are still slow to attract women. In 1983 the ratio of male to female computer

scientists was approximately two to one. In 1999 the ratio was almost 2.5 to 1 (U.S. Department of Labor, 2000).

While the roles of men and women have changed throughout the century, allowing both men and women more freedom in their decisions about education, family roles, and careers, generally, men and women tend to lead different lives as evidenced through studies on male and female life paths.

Life Paths of Men and Women

Studies examining the life paths of men and women revealed that, despite changes in men's and women's careers, women were still taking primary responsibility for family roles.

Han and Moen (1999) examined, retrospectively, the life paths of retired workers from six large manufacturing plants and service companies in upstate New York. Their sample included 212 women and 246 men. The men were more than twice as likely as the women to have had a "stable" career path where there were no gaps in work history, and progress through the ranks of the company was achieved over time or via a "fast-tracked"

career path where there was quick advancement through the promotion chain. Further, the men that consistently stayed in the workforce were more likely than the women to have a long-lasting marriage. Fifty percent more men than women were married at the time of the survey. The researchers found little relationship between marriage and job status for the men.

Conversely, the women tended to show a connection between career and family. The women who held a steady or "fast-tracked" career path were more likely to have experienced instability in their marriage (Han & Moen, 1999, p.104). They were seven times more likely than the men to have never been married, and 34% more women than men had experienced divorce. Only females reported delayed entry into the workforce or breaks during their careers (Han & Moen, 1999).

A longitudinal study at a Michigan Medical School followed students from entry into medical school between 1975 and 1983, until 1991, having them periodically respond to questionnaires (Inglehart, Brown, & Malanchuk, 1993). The men and women entering this school had similar high school grades, above a 3.5, but the men had significantly higher SAT scores (721) than the women

(691). During medical school, overall, the females had lower grades than the males, but there were no gender differences in grades on the clinical rotations (Inglehart, Brown, & Malanchuk, 1993).

The women more often reported going to medical school to help others and selected their specialties, which were likely to be obstetrics/gynecology, pediatrics, and psychiatry, based on interests. The men, conversely, were more likely to select their specialties, which were usually related to surgery, based on financial rewards.

Upon completion of medical school, the women expected to work fewer hours than men in order to spend more time with their future families. Ten years after medical school, the women worked an average of 48 hours per week, while the men averaged 58 hours per week. Six percent of the women had left the profession, citing their immediate family as the reason. Less than one percent of the men had left the profession. Further, almost 69% of the females compared to 32% of the males reported that their spouses' careers had an influence on their careers (Inglehart, Brown, & Malanchuk, 1993).

One component of the study conducted by Farmer and Associates (1997) investigated work and family in the lives of 22 respondents between 1991-1993. Seven men and 15 women, aged 27-30, in the beginning stages of their career, were interviewed. The interviews revealed that all of the respondents felt that family was a priority in their lives, but 21 worked full time and admitted spending at least 50% of their time at work, leaving less time for family.

The participants felt that there should be a parent at home with pre-school-aged children. They had negative views about daycare, regardless of whether or not they currently had children. Only four couples had used daycare and all expressed dissatisfaction with the situation.

Both men and women felt it was important to limit work hours to have time for family. The women who were parents discussed changes in their work schedules once they had children, and women anticipating children discussed detailed plans for altering their work schedules in anticipation of having children. Men with a family did not report altered work schedules and men

anticipating a family did not discuss plans to alter their work schedules.

Both men and women felt role conflict between work and family. The men felt it was their primary role to provide financially for their families and, in general, felt this infringed on time spent with their wife and children. The women more often felt their primary role was to give time to their children. Both sexes of those married reported the female took greater responsibility for the family.

In a study examining only women, Travers (1993) traced the life paths of 13 women who graduated from an elite high school in 1972. The women were interviewed in 1971, 1979, and 1987. The women's plans for the future at the time of graduation included being married and having children within 10 years. Career plans included becoming teachers, social workers, and secretaries. Eleven of the thirteen women reported they would not work if their husband disapproved (Travers, 1993).

Over time, the women became less traditional in their views. In 1979, all of the women held either full or part-time jobs. Only six were married, but the single women still planned to have a family in the future. In

1987, 12 of 13 women were employed full-time. Half of the women were combining work and motherhood (Travers, 1993).

Overall, changes have occurred in women's life paths over time. According to data from the U.S. Census Bureau in 1996, women get married an average of four years later than they did in 1955 (Young, 1999). Sixty-four percent of women with children under six years of age were in the workforce in 1995, compared to 12% in 1955 (Han & Moen, 1999).

While more women were in the workforce in 1996, they were still maintaining the majority of responsibility for the household (Han & Moen, 1999). Women who were mothers were the population in the workforce most likely to alter their work schedule, but in the 1990s, several other sectors of the workforce population were also seeking jobs with less hours, including men and women without children (Young, 1999).

Even though information from the U.S. Census Bureau revealed changing demographics for women over time in the areas of marriage and when and how much they worked, it is interesting to find many similarities among the studies of men's and women's life paths. Regardless of

age, education, or the time the study took place, the women were more likely to alter their career paths. They were also more likely to take more responsibility for the family and find more of a connection between their family and work roles. The men were less likely to take breaks in their career and were more likely to work more hours per week.

Explanation of Male and Female Differences

Many attempts have been made in the last 20 years to explain why many women select different life patterns from men. This paper explored four common and extensively researched explanations: biological differences, self-efficacy, peer culture and social development.

Biology

A controversial explanation of differences between men and women has been that men and women are genetically different. For men and women, most genetic material is the same (Maccoby, 1998). Men and women both walk upright on two legs, they communicate through speech, and "reason and remember with the most complex organ on the planet" (Hales, 1999, p.7). While there are obvious

physical differences between men and women, such as men are taller, stronger and heavier than women (Ehrenreich, 1999), this is countered by the fact that approximately two feet separate the range of height in adult humans, but only a few inches make the difference between the average height of men and women (Hubbard, 1990). This illustrates the key point that there can easily be more differences between two males than between a male and female (Blum, 1997).

Historically, there have been drawbacks to admitting sex differences exist based on biological differences, but some biological data cannot be ignored. Blum (1997) argued that sex differences in the brain were "few, they are slight, we don't know what causes them, and in many cases we don't know what they do. On the other hand, they are real" (p.46). Hales (1999) stated, "The difference between men and women, we can now see, are exactly that: differences, not signs of defects, damage or disease" (p. 201).

Feminist scholars have resisted explaining male and female differences through biological explanations, because, in the past, studies assumed the male to be the standard by which to measure humans, leaving female

differences to be considered inferior or abnormal (Ehrenreich, 1999; Hubbard, 1990; Van Den Wijngaard, 1997). "We realize that to define us as different is one of the ideological and practical instruments that holds together the social order that oppresses us" (Hubbard, 1990, p.17). Hubbard found that distorted biological studies have allowed women to be "proven" incapable and kept out of opportunity (p.18). Van Den Wijngaard (1997) affirmed this. "In biological investigations, women and non-Caucasians appear to be biologically inferior or passive, which makes their social subordination seem natural" (p.17). Hubbard asserted that women were found inferior and less talented in math and science by upper middle-class white men, which justified having women in lower paid work positions.

In early research of the differences between male and female brains, it was accepted by male scientists that men had evolved past women. Aristotle found that women were "an unfinished man, left standing on a lower step in the scale of development" (as cited in Borysenko, 1996, p.8). His rationale was that when a man impregnated a woman, if his "seed" was warm and active, then a male child would result. If the "seed" was less

active and cold, then a female was formed (Borysenko, 1996).

During the 19th century, the physical size of brains was used to explain differences in male and female abilities. Scientists showed that women had smaller brains. On average, men's brains are 15% larger than women's brains (Blum, 1997). This fact was used to "prove" that women were less evolved and intelligent than men. Renzetti and Curran (1992) argued by analogy that if that were so, an elephant should then be considered the most intelligent creature on earth with its large brain, a conclusion defying logic and evidence.

It was also concluded during the 19th century that female reproductive organs required much energy from the woman. This theory, linked with the smaller brain size, was used to determine that women should not study too hard once they began to menstruate, because they might damage their reproductive organs, causing the human race to become extinct (Hubbard, 1990; Renzetti & Curran, 1992). In 1886 the British Medical Association printed, "Women are made and meant to be not men but mothers of men" (as cited in Hubbard, p.40). Hubbard showed that this theory had to be altered for working-class women who

expended much energy in their daily chores. It was concluded that these women were "animal like and less highly evolved" than upper-class women (p.27).

Another explanation emerged in the latter half of the 20th century that maintained that males and females tended to use the right and left hemisphere of their brain differently. Tissues called the corpus collosum connect the right and left hemispheres of the brains. Some studies have shown that women have larger nerve fibers in the corpus collosum (Blum, 1997). Dr. Roger Sperry conducted tests on epileptic patients where the corpus collosum had been cut to control seizures. He found that the right and left hemispheres of the brain specialize in different areas (as cited in Renzetti & Curran, 1992). This was a springboard to hypothesize about how differences in the male's and female's corpus collosum could result in gender differences.

It has been speculated that women have better communication between both the left and right hemisphere, allowing them to have enhanced verbal skills and a greater ability to express emotions. Conversely, men operate more from the left side of the brain, allowing them greater ability with math and spatial skills. (Blum,

1997; Renzetti & Curran, 1992; Van Den Wijngaard, 1997). It was even speculated that the "compartmentalization" of the male brain allowed men to be more promiscuous (Van Den Wijngaard, 1997). The theory proposed here is weak and impossible to validate (Blum, 1997; Renzetti & Curran, 1992).

During the 20th century, the different effects of hormones on the brain have also been used to explain gender differences. In 1959 the Organization Theory proposed by Phoenix, Goy, Gerall, and Young became widely accepted (as cited in Van Den Wijngaard, 1997). In this theory it is proposed that differences in males and females took place before birth. Males required androgens, a male hormone, before birth to develop. Tests were conducted on guinea pigs and generalized to humans (Van Den Wijngaard, 1997). The findings were further validated through studies on intersex girls. Money and Ehrhart found in their study that intersex girls were more likely to be active, have higher intelligence, and be gay. All of these traits were linked to the presence of higher levels of androgens being present (as cited in Van Den Wijngaard, 1997).

Kirma (1992) also found that different patterns of ability were probably due to hormonal influences on developing brains. Male rats were found to be better at geometric cues and female rats were better at identifying landmarks (Kirma, 1992). In experiments involving rats, when females had testosterone added at a young age, they solved problems in a similar manner to the male rats and retained the enhanced ability for the rest of their lives (Blum, 1997).

During the 1980s, other hormone studies were done with children of mothers who had taken the diethylstilbestrol (DES) hormone during pregnancy between the 1940s and the 1970s. DES was a prescription hormone given to expectant mothers to prevent miscarriages. The drug was stopped when it was found that female rats took on "masculine" traits if they had been exposed to the hormone as a fetus (Blum, 1997; Van Den Wijngaard, 1997). In human studies when girls were asked to listen to verbal statements, females exposed to the DES hormone used only one hemisphere of their brain, while unexposed females used both hemispheres of their brain (Blum, 1997). Van Den Wijngaard (1997) proposed that social elements could not be eliminated in these studies.

While Blum (1997) and Hales (1999) conceded that biology may contribute to differences between the sexes, Blum insisted that culture reinforced the differences. She suggested that men and women may not be better at different tasks, but may organize the way they perform tasks differently. For example, a study conducted by Bever found that men navigated their way through a computer maze by its geometry, where women found their way through the maze with landmarks (as cited in Blum, 1997). Both produced the same end result. Blum cautioned that in a male dominated society, women are, at times, required to perform the way men do instead of producing the end result through their natural talents. Blum (1997) cautioned that the male and female brains are similar, even if they are used differently at times. "The contrasts are too tiny, and still too far mysterious, to suggest that these are profoundly different organs" (p.63).

Self-Efficacy

Betz and Hackett (1981) proposed that Bandura's (1977) self-efficacy theory, which has been shown to play a major role in the decision making process, was an explanation for gender differences in selecting and

persisting in selected majors (Bandura, 1995; Betz & Hackett, 1981). Betz and Hackett theorized that men and women made different choices because females exhibited less self-efficacy in non-traditional fields than men.

Self-efficacy is defined as "the beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1995, p.3). In other words, a human's motivation is more affected by what they believe to be true than what is actually true (Bandura, 1995). The Self-Efficacy Theory was built on Bandura's Social Learning Theory (as cited in Zunker, 1998). Social Learning Theory holds that humans learn from the environment by observing others and modeling other people's behavior.

Self-efficacy has four principal components: mastery experiences, vicarious experiences, emotional arousal, and verbal persuasion. First, mastery experiences increase self-efficacy in a particular field through past successes and experiences in that field. Second, vicarious experiences increase self-efficacy through watching others' accomplishments. Third, emotional arousal is a state of psychological well-being. Self-efficacy is increased when negative thoughts are reduced.

Last, verbal persuasion increases self-efficacy through positive feedback by encouraging a person that they can succeed at a given task (Bandura, 1995; Hackett & Betz, 1981).

Several studies have found a relationship between self-efficacy and success in a field of study. Betz and Hackett (1981, 1983) conducted two studies in the early 1980s that showed self-efficacy beliefs to be different for males and females in traditional and nontraditional majors. In the first study a questionnaire was distributed to 134 female and 101 male college students enrolled in an introductory psychology course. The students were asked to rate their perceived capabilities in completing educational requirements for and performing in selected occupations. They used 10 traditional and 10 nontraditional occupations for women. In a chi-square analysis comparing the sexes with each occupation, they found that 10 of the 20 occupations showed significant differences in self-efficacy beliefs between males and females. Female self-efficacy scores fluctuated between traditional and nontraditional career options. The females reported lower self-efficacy in the nontraditional fields and greater self-efficacy in the

traditional fields. The male scores stayed constant regarding overall self-efficacy from traditional to nontraditional occupations.

In a later study, Betz and Hackett (1983) examined self-efficacy effects on selecting a major. The researchers again surveyed students in an introductory psychology course. Their sample consisted of 153 females and 109 males. The measures used were the Fennema-Sherman Scale, a mathematics self-efficacy scale authored by the researchers, which was revised for college students, and the Bem Sex Role Inventory (BRSI), which measures traditionally defined masculine and feminine traits. The BRSI was developed in 1974 and the items might not be categorized similarly today.

The researchers found both male and female students who reported stronger self-efficacy expectations, more years of math in high school, and low math anxiety were more likely to select science majors. Further, they found that self-efficacy was significantly lower in women than men.

Conversely, a study by Lent, Brown, and Larkin (1984) did not find a link between self-efficacy and gender. The researchers' sample consisted of 42 students

who were participating in a 10-week career planning course for science and engineering fields. The researchers administered Betz and Hackett's (1981) self-efficacy scale, and examined high school ranks, PSAT scores, college grades, and majors. The researchers did not find any significant gender differences in efficacy beliefs, but found correlations between efficacy and higher grades and persistence in a particular major. Lent, Brown, and Larkin felt that, in accordance with the first component of self-efficacy theory, performance accomplishments, the high achievement in subjects boosted the self-efficacy of respondents.

While these studies took place almost 15 to 20 years ago, more recent studies have also found the link between self-efficacy and selection and success in selected majors. Studies that have examined the link between gender and efficacy beliefs have mixed results.

Ware and Lee (1988) conducted a study using the 1980 data from the Federal Office of Educational Research and Improvement. The group consisted of 510 male science majors, 187 female science majors, 770 male non-science majors, and 1125 female non-science majors. In comparing female science and non-science majors, the researchers

found that female science majors had significant influence from high school teachers and guidance counselors, had interested parents, held a positive attitude about math, and took high school math courses. This study showed several links between majoring in a non-traditional field and self-efficacy. The women who majored in science had encouragement from others and had accomplishments in the field by successfully completing high school math courses.

Seymour and Hewitt (1997) conducted a qualitative study consisting of interviews of 335 female students who began college as science, math, or engineering (SME) majors. The researchers found that, even when the women in their study entered college with an adequate number of high school science and math courses and a strong high school GPA, they had low self-efficacy about their abilities to achieve. The low self-efficacy of these women was linked to the fact that they had lost their positive reinforcement from high school teachers.

In more recent studies comparing men and women, researchers were still finding gender differences in relation to self-efficacy. Lent, Lopez, and Bieschke (1991) administered the mathematics self-efficacy index

and obtained math ACT scores for 138 college students (53 men and 85 women) in an introduction to psychology course. The researchers found personal performance accomplishments to be the greatest influence on math self-efficacy. The researchers found a "small but significant" difference in self-efficacy between the men and the women (p.428). The researchers cautioned that, in general, men tended to take more math classes and the experiences may have boosted their self-efficacy. They stated differences in self-efficacy between men and women might be lessened if women took comparable math classes to men (Lent, Lopez, & Bieschke, 1991). In 1997, the U.S. Department of Education reported that men and women now enrolled in similar numbers of math classes.

Lapen, Shaugnessy, and Boggs (1996) examined 101 college students' (54 men and 47 women) selection of a math and science major. The researchers administered a demographic questionnaire, mathematics self-efficacy scale, investigative self-efficacy, mathematics basic interest scale, artistic general occupational theme, and an introversion/extroversion scale.

The researchers found that efficacy beliefs influenced selection of a math or science field. The

study also found differences between the efficacy of men and women, resulting in fewer women selecting a math or science major (Lapen, Shaughnessy, & Boggs, 1996).

Farmer and Associates (1997) interviewed 105 individuals in the early 1990s after these individuals graduated from college. Of the population that had originally chosen a major in SME, both males and females reported being under prepared for science and math courses in college, but men were more likely to persist in the major despite feelings of inadequacy about completing the course work. Also, men persisted regardless of negative role models that steered them away from these fields. For women, positive role models appeared to play a larger role in persistence in SME majors (Farmer & Associates, 1997).

While the studies in this review showed that self-efficacy played a role in the choices of college students, the research had mixed results in showing a link between self-efficacy and gender differences.

Peer Culture

Findings from Astin's (1993) study involving over 4000 college students across the country revealed that students' peer groups, particularly same sex groups, had

a direct impact on their choice of major. "Generally, students tend to change their values, behavior, and academic plans in the direction of the dominant orientation of the peer group" (p.363). Astin stated that college students' peer groups tended to be same-sex. He felt the same-sex peer groups generally had an impact on gender differences, which broadened over students' college years.

Holland and Eisenhart (1990) found the peer culture of women in their study did not support women persisting in an SME fields. The researchers were asked by the NIE to investigate why women were not entering math and science fields in college. They started with two public universities, one predominantly African-American (Bradford) and one predominantly Caucasian (Southern University). The investigators followed a total of 23 female students planning to major in science or math who began college with at least a B+ average from high school. The researchers collected data from the women through their first two years of college, contacted them again around their expected graduation date, and five years after expected graduation.

The question for the investigators was, "How is it that women end up with marginal career identities no matter what their choice of major" (Holland & Eisenhart, 1990, p. 63). The researchers found that most of the women came to college with the desire to achieve in school. As time passed in their first two years of college, the female students' interests changed more to interpersonal relationships with men. College was a place where most people were the same age and it became important to the students to interact in the social culture. The researchers felt that the peer groups degraded career identities. The researchers were surprised to find women spending many hours trying to attract males and maintain romantic relationships. Intellectual pursuits receded into the background. Students' conversations with friends revolved around forming romantic identities, but they rarely discussed academics or majors (Holland & Eisenhart, 1990).

The researchers found that their subjects' motives for pursuing academic work in college fell into three main categories:

1. School work in exchange for finishing college.

2. School work in exchange for good grades.
3. School work in exchange for learning from the experts (Holland & Eisenhart, 1990, p. 102).

The ten students in the first category of doing school work for the sake of finishing college were mostly African-American (Holland & Eisenhart, 1990). They came to college without any real definitions about what a career entailed. Many found college "boring and unrewarding" (p. 186). Even the students that eventually graduated did not gain a strong concept of a career.

The eight students in the second category, school work in exchange for good grades, were mainly Caucasian students (Holland & Eisenhart, 1990). When they did not do well, their identity of being a good student eroded and they replaced it with romantic identities. In this category only three out of the eight women ended up with professional careers defined as "being engaged in a job sequence that requires a high degree of commitment and promises continuous professional development" (Holland & Eisenhart, 1990, p.181).

In the final category, school work to learn from the experts, five students, three Caucasian and two African-

American, did the best job of not allowing romance to take control of their schoolwork (Holland & Eisenhart, 1990). Four out of five women in this category found a career related to their major.

Rimm's (1998) findings corroborated Holland and Eisenhart's (1990) assertion that women were more likely to forgo their career identities if their peer cultures did not support them. Rimm's interviews revealed that it was imperative for women to belong to a peer group in college that valued achievement in order to be successful in their chosen field.

Social Development

A final explanation for men and women assuming different life paths is the way men and women are socialized in their attitudes about work and family. Traditionally, women have been socialized to assume the role of primary care taker of the family and men have been socialized to assume the role as the worker (Hansen, 1996; Smelser, 1980).

The interactions of work roles and family roles have been examined through the concepts of work and love. Merriam and Clark (1991) asserted there were three key points central to work and love.

1. Healthy, mature individuals develop the capacity to work and love.
2. Different concepts of the way work and love interact exist.
3. Work and love are central to human lives.

Merriam and Clark (1991) defined work as "task oriented achievement focusing on behavior" and love as "people oriented, emphasizing feelings and relationships" (p.3). Baruch, Barnett, and Rivers (1983) defined work in their study as "mastery," which related to conducting activities and love as "pleasure," which involves feelings and relationships (p.18). The researchers were careful to note that work was not necessarily going to a job. Mickelson (1989) stated that love is the "private life" and work is the "professional life" (p.58). As in Mickelson's definition, Merriam and Clark concurred that the generally held definition of love and work has been narrowed. In modern times, work referred to the "bureaucratic, industrial" areas and love focused on marriage and family (Merriam & Clark, p.17). This omits farms and work at home from the definition of work and personal relationships outside the home from the definition of love.

As researchers have studied the concepts of work and love, two gender differences have been proposed that account for different life paths between men and women. First, in Western culture men and women have been socialized to assume different life roles in adulthood (Smelser, 1980). Second, generally men and women have viewed work and love differently. Men have tended to compartmentalize work and love while women have tended to view them in connection (Gilligan, 1993; Josselson, 1987; Mickelson, 1989)

Every culture has norms that have an impact on the choices of men and women. Smelser (1980) stated that the influences of western culture have compartmentalized work and love. He attributed this to the Puritan ideals of American culture. The ideology was that men were to "work" and women were to oversee the domestic side of life, "love".

Today, while recent studies discussed earlier have shown that many women work, working women still maintain primary responsibility for the family. This is resulting in women, more often than men, showing breaks in their work schedule by taking time off for family obligations

or working part-time (Inglehart, Brown, & Malanchuk, 1999; Valian, 1999; Young, 1999).

Interviews conducted by Holland and Eisenhart (1990), Josselson (1987) and Farmer and Associates (1987) revealed that women tended to see themselves as the primary caretakers. Farmer and Associates interviewed 22 males and females on work and family roles. The consensus for both men and women was that women were the primary caretakers of the family.

Josselson (1987) interviewed women as college seniors in the early 1970s and again 12 years later when they were in their mid-30s. The main focus for the women was their family roles. Josselson found that the women were constantly trying to recreate the family lives their mothers gave them. The major difference between the women interviewed and their mothers was that these women had added work to their lives, but they did not leave their "primary identity" of being a mother and homemaker (p.186).

Similarly, 10 of the 12 Caucasian women in Holland and Eisenhart's (1990) interviews of college females revealed that they saw their primary role as with the family. The women reported the positive influence of

their mothers in their lives and many mentioned that they appreciated that their mothers had stayed home when they were children. Further, the women indicated that they did not expect to be responsible for themselves financially. They expected their future husbands to be the primary economic support of their future families.

A second gender issue concerning work and love is the claim that men compartmentalize the two areas, while women view them in connection (Josselson, 1987; Mickelson, 1989). Gilligan (1993) stated that women value connection and interdependence. As Gilligan studied children's play, she observed that boys played in large groups by fixed rules. Through their activities they learn independence. Girls play in small groups and are willing to make exceptions to rules to keep peace. They learned to play in cooperation and develop interdependence.

Mickelson (1989) proposed that because females, unlike males, tended to value connections, generally, women do not have a clear division of their public and private lives. They were prone to take family considerations into account when deciding on a career.

On the other hand, men tended to separate their public and private lives.

Studies in this area have shown mixed results. Merriam and Clark (1991) conducted a study examining the patterns of work and love in human lives. While their study did not show strong variations in gender, they used a sample of convenience. The study consisted of 405 adult and graduate students at universities across the country, and the majority of questionnaires were given to adults in continuing education classes. The respondents were largely employed as teachers, principals, and school administrators. The sample was 72% female and many of the respondents were from a similar field of study. They identified three patterns of work and love among their sample:

1. Parallel pattern.
2. Steady/fluctuating pattern.
3. Divergent pattern.

First, 39% of the respondents fell into the parallel pattern, where work and love move together. Middle-aged people dominated this category. Some made a conscious effort to keep a balance between love and work. Others felt they could not separate love and work. A few

explained that one pattern was dominant and the other was carried along (Merriam & Clark, 1991).

Second, 26% of the respondents were in the steady/fluctuating pattern, where one area always stayed constant and the other fluctuated. Young adults largely fell into this pattern. External forces such as changing jobs or a family tragedy affected the fluctuating pattern that changed often, while the pattern that was constant reflected internal reality (Merriam & Clark, 1991).

Finally, 35% of the respondents were in the divergent pattern. Most of these respondents were in their 30s. Change was a major part of their lives. Work and love were independent of each other. Work was central in their lives (Merriam & Clark, 1991).

Merriam and Clark's (1991) study did not reveal any gender differences in patterns of work and love. Differences in results were related to an individual's age, not gender. Conversely, interviews conducted by Farmer and Associates (1997), and Seymour and Hewitt (1997) both showed evidence of gender differences in the way men and women viewed work and love.

Many of the women that Farmer and Associates (1997) interviewed described a parallel pattern. Farmer

interviewed 25 females who did not persist in science majors. Balancing family and career was one of the top three reasons the women reported for changing their majors. They wanted to make their professional lives balance with their personal lives. The women that selected nursing as a career cited that they chose it because they could be employed wherever they lived and they could work flexible hours (Farmer & Associates, 1997). The men in this study reported work as the focal point of their lives. Many men reported that their primary role was to work and support a family (Farmer and Associates, 1997)

Fifty percent of the women in Seymour and Hewitt's (1997) study that left an SME major reported stress over making their career choice "fit" with their future lives (p.236). Overall, SME women were almost twice as likely as SME men to report the concern of having their career choice integrate with their lifestyle.

Need for Additional Research

Numerous studies have investigated the different aspects of why and how men and women are making different life choices. Much attention has been focused in the

areas of non-traditional fields for women in SME.

Limited attention has been given to comparing college men and women with similar abilities from across several fields of study.

Many studies have focused on either men or women such as Gilligan (1993), Holland and Eisenhart (1990), Perry (1970), and Rimm (1998). These studies provide a glimpse of one gender and do not allow for a comparison of the differences between genders. Further, in studies similar to Holland and Eisenhart where women entering SME majors were examined, only women beginning college in an SME field were investigated, not allowing for examination of all women.

Farmer and Associates (1997) interviewed and surveyed both men and women, but failed to interview the students during college when they were making critical decisions about their future that would have an affect on their life paths. Retrospective information has the potential for loss of accuracy. Information may be forgotten over time (Fruzzetti, Toland, Teller, & Loftus, 1992). Also, the respondents' views on particular subjects may have changed. For example, Travers (1993)

found the women in her study became less traditional over time.

Research on the decisions of college students is fundamental to understanding the progression of the life path. Late adolescence is an important time in identity formation (Chickering & Reisser, 1993; Josselson, 1987). Through their examination of several theories and studies about human development, Chickering and Reisser stated that students develop a sense of purpose during their college years. As students approach graduation in their junior and senior years, society pressures them to develop a sense of purpose for their lives. This involves integrating their values, career interests, and lifestyle goals, as they enter adulthood (Chickering and Reisser, 1993). As Josselson (1987) stated, "At the close of adolescence, the first choices are made. As the adolescence ends, the young person carves out a place in the world..." (p.14).

In making life choices students may not be maximizing their options due to perceived or real barriers. Many of the outward and visible obstacles inhibiting the choices of college women and men have been eliminated (Farmer, 1995; U.S. Department of Labor,

1998). The challenge comes in identifying some hidden barriers such as gender role stereotypes, self-efficacy, and peer culture. Gould (1980) warned that males and females may stagnate when they are relegated into particular roles through sex stereotyping. Further, if women and men are not making decisions free of barriers, then this can result in a loss of talent for society.

One of the best ways to gain an understanding of how people make decisions about their future is to interview them during that critical time when decisions are being made. Therefore, this study interviewed both male and female students close to the end of their college years to determine what influenced their life choices. This allowed the researcher to identify those values, priorities, and circumstances that influenced the life path decisions of these students. Further, the researcher was able to compare differences in the anticipated life paths of males and females.

Chapter III

Research Methods

The purpose of this study was to describe and compare how male and female college students constructed their life paths as reflected by their descriptions and decisions about their lives during and after college. The literature indicated that college men and women in general tend to make different choices about their futures in areas such as completion of college majors, their roles in their families, and their selected careers. Three research questions were developed to guide the study.

1. How do female undergraduate students describe and decide upon their anticipated life paths?
2. How do male undergraduate students describe and decide upon their anticipated life paths?
3. How do the anticipated life paths of females compare to the anticipated life paths of males?

This chapter discusses how the study was designed and completed. The topics include rationale for the study, rationale for using a qualitative approach,

demographic characteristics of the sample, data collection, and data analysis.

Rationale for Study

While men and women were found to be more similar than different in academic ability as they entered college, they were generally making different life choices that affected their future (Blum, 1997; Seymour & Hewitt, 1997). Despite the growing opportunities for women, many were still likely to select a traditional life roles, placing them at the center of their families (Lorber, 1994). While there are many viable life choices, it was important to identify values, goals or circumstances that may be causing women or men to limit their life choices.

The research in this area over the past 20 years explored why and how women were making life choices. Several explanations have emerged, including biological differences, low self-efficacy in women, cultural norms of women, and peer culture influences (Betz & Hackett, 1981; Blum, 1997; Farmer, 1997; Holland & Eisenhart, 1990). The research to date has been limited by methodological issues. For example, Farmer's research of

the career process included both men and women, but it focused on pre- and post-college years, missing the opportunity to gain insights from students while they were in college. Further, while Holland and Eisenhart's research focused on college students, the researchers only studied women.

This study was intended to provide insight into how male and female college students describe and make decisions about their future. Further, this study compared both men and women to examine the similarities and differences as they described their choices during college and their visions for their future lives. This was done in order to gain a further understanding of why men and women start at similar points in college and in many cases end with different outcomes.

Rationale for Qualitative Design

The research method selected for this study was qualitative, which allowed for much information to be gathered from a relatively small sample (Patton, 1990). Qualitative research assisted in gaining an understanding from the subjects' perspectives (Creswell, 1994; Merriam, 1998).

Not all of the variables that could be discovered were known when the study began. A qualitative approach does not force the researcher to be limited to predetermined variables. If a quantitative study had been used, the questions would have been standardized and the responses would have fallen into precise categories. This would not have allowed for themes to emerge and the respondents' full stories to be obtained (Weiss, 1994).

Further, a qualitative approach allowed for an in-depth look at how individual students made meaning of their lives (Patton, 1990). Weiss (1994) stated,

In a qualitative study, you are interested not only in the physical events and behaviors that are taking place, but also in how the participants in your study make sense of this and how their understandings influence their behavior (p.17).

In this study, the researcher already knew that men and women were making different life choices about majors, careers, and family. She was interested in understanding how each student made those choices. In order to gain an understanding, the researcher needed detailed descriptions from the subjects in the study on how they interpreted their experiences and how they described their outlooks for the future.

Semi-structured interviews were selected as the method for collecting data. Patton (1990) stated that interviews are one method that can be used to collect data that cannot be directly observed from respondents. Through a series of open-ended interview questions, the students were able to describe their choices and their future vision through their perceptions (Merriam, 1998).

Demographic Characteristics of Participants

The study was conducted at one southeastern, public university in the United States. The school population was approximately 6500 undergraduate students and 2000 graduate students. The primary source of data was a sample of 32 undergraduate college students (16 men and 16 women).

The sample was purposeful. Merriam (1998) and Patton (1990) contend that purposeful sampling is necessary in qualitative research because the researcher needs a sample where the most useful information can be gathered. When selecting the sample, efforts were made to find participants who had relevant information to the study (Patton, 1990).

Merriam (1998) explained that a researcher needed to make a list of criteria needed to frame the study and select the sample based on this list. This is referred to as "criterion-based selection" (p.61). A list of criteria was established from the attributes stated above. First, the students were junior or senior undergraduate students, because, as upperclassmen, they were more likely than freshmen and sophomores to have an established major. As the interviews progressed, the interviewer primarily sought senior students because the interviews revealed that the senior students were more focused on their future and were more established in their chosen major.

The students were also traditional-aged college students ranging from 20-24 years of age, because this study focused on decisions of young adults. The participants were single with no children to ensure that immediate family obligations did not influence their thoughts about the future or limit their opportunities.

Students selected had a minimum of a 'B' high school grade point average and a minimum of a 23 ACT composite score, so that students' choices concerning their life paths were not limited by general academic ability. The

researcher also attempted to find students with a math ACT above 23 because a low ACT in math discouraged students from majoring in certain SME fields (Seymour, 1997).

There were approximately 600 students at the selected location that met the study criteria. The researcher obtained permission to conduct the study from the Institutional Review Board (IRB) at The University of Tennessee at Knoxville (Appendix D) and from the Director of Records (Appendix E) at the university where the study took place.

The Records office where the study took place generated six hundred biographical data sheets by gender and major. After the study was completed, the biographical sheets were returned to the Director of Records and destroyed.

This study attempted to interview students from a variety of majors in order to examine the views of a broad range of women and men. Since research (e.g. Farmer & Associates, 1997; Seymour & Hewitt, 1997) has indicated that women in nontraditional majors (science, math, and engineering, i.e., SME) are less likely to persist, participants were selected to include males and

females in both traditional and nontraditional majors. The majors were divided based on the report from the U.S. Department of Education (1997) that listed what majors women were more likely to select and what majors men were more likely to select. This met another goal of purposeful sampling, which is to avoid having all the respondents come from similar majors (Weiss, 1994).

The goal was to interview eight men and eight women from traditionally male-dominated fields (SME), and eight women and eight men from the remaining majors. As the researcher began to contact students requesting interviews, she quickly learned that some of the information on the data sheet concerning entering majors was not always correct. This resulted in nine SME females and nine SME males compared to seven males and seven females selected from the non-traditional majors for women. Special efforts were made to locate female engineering students and male nursing and elementary education students because they were very rare within the overall pool.

Data Collection

The interviews took place over a 2-month period at the university described above. A location for the interview was selected based on the convenience of the students being interviewed. All of the students gave permission to have the interviews audio taped and agreed to be contacted if further information was needed. Having the interviews taped and transcribed allowed for better accuracy, and therefore less subjectivity, in their interpretation because tape recordings and transcriptions provide an accurate record of what the respondent has stated and allow the interviewer more freedom to note non-verbal cues during the interview (Patton, 1990).

Each interview was approximately 30 to 45 minutes. The interview continued as long as the participant shared relevant information that applied to this study. A set of semi-structured interview questions (Appendix A) was used for each interview. Beginning the interviews in a semi-structured format allowed for easier comparison of data between males and females (Maxwell, 1996).

As the interviews progressed, the respondents brought up unexpected topics, and follow-up questions were added during the interviews to gain an understanding of the respondents' answers. The researcher also changed the order of the interview questions with a respondent, as needed, to maintain the flow of conversation. The questions were designed to understand the students' visions of their future and how they made decisions in college that affected their visions (Patton, 1990).

At the beginning of each interview, the researcher attempted to build rapport with each respondent. Before the interview began, she would have a casual conversation with the student to help him or her feel at ease and comfortable. This allowed for the actual interview to begin in a less formal environment and fostered open conversation. As Weiss (1994) suggested, the researcher began each interview by explaining the purpose of the study. She allowed each respondent to ask any questions or make any statements before the actual interview began, and she gave the respondents two copies of the consent form (Appendix B). Each respondent was asked to sign one copy of the form and keep the other.

The students appeared to be very comfortable in the interviews. They were open and forthcoming with information. They freely discussed sensitive topics such as sexual abstinence, rape, birth control, and secret engagements for marriage. They also discussed frustrations they had with their families, significant others, and friends. Two students cried during their interviews. One of them discussed the pull between pleasing herself and her parents at the same time as she pursued her career and family goals.

Some students (men and women) commented that they found the interviews interesting and thought provoking. Some came by after the interviews to let the researcher know that they kept thinking about the conversation. Others wanted to listen to the audiotape of their interview in the following weeks. The researcher did not expect all of the open answers and reactions that went with this process. One explanation for the students' reactions might be that the students were near graduation and had never reflected on their goals as they did in the interview.

During each interview, notes were taken to record body language or to note the researcher's reactions to

certain responses. Merriam (1998) found that taking notes during the interview was an effective way of gaining information that cannot be recorded by audiotape.

The researcher attempted to summarize her notes after each interview. Sometimes, because of the frequency of the interviews, she summarized her notes after two or three were completed. Merriam (1998) stated that this is one of the first steps in data analysis, and those notes proved invaluable as the data were analyzed. They added to the entire story of each student interviewed.

Each student was assigned a confidential number known only to the researcher. This number was used on the audiotapes and transcripts instead of the students' names so that the students' confidentiality could be maintained. A master list was recorded with each student's name, interview number, and entering major. The master list was kept in a locked filing cabinet to which only the researcher had access.

The tapes were transcribed and then stored in a secure location. The transcriber signed a form agreeing to keep confidential any information from the tapes (Appendix C). The transcripts were saved and duplicated

on two identical computer disks. One disk was kept secured at the researcher's home and the other disk was locked in a filing cabinet in the researcher's office to ensure that the information would not be lost. Originally, two hard copies of the transcripts were printed. More copies were printed, as the researcher needed them. The transcripts were stored and secured in a filing cabinet in the researcher's home.

Response Bias

A limitation in collecting interview data is response bias. The possibility that a respondent may not be honest with the researcher can affect the accuracy of the study (Weiss, 1994). Since the questions asked in this study were personal in nature, the possibility existed that the students could withhold information in their responses.

To encourage honesty, the researcher attempted to make the students feel comfortable. Further, notes were made about body language as the students answered the questions. As shown above, the students gave comments that were personal in nature and appeared very sincere in their answers. The researcher had confidence that the

information and feelings shared by the students were sincere and honest.

Researcher Bias

Another major limitation in qualitative studies is researcher bias. Any personal biases of the researcher conducting the research and analyzing the data can taint the credibility of the research findings. While the researcher cannot completely eliminate her subjectivity, it is important to be open-minded about the research study.

To control for the accuracy in the interpretation of the interview data, the researcher taped and transcribed each interview. This ensured that the researcher did not forget important information. The researcher also took notes during the interview to capture body language and personal attributes that could not be captured on the tape recordings.

During the interviews, the researcher verbally summarized the respondents' statements and the respondents let her know if she understood them correctly. Further, member checks were conducted with four randomly-selected students. A member check involved allowing a study participant to review tentative

interpretations. It assisted the researcher in assuring that she had an accurate interpretation of the subject's information (Merriam, 1998).

Data Analysis

In qualitative data analysis the researcher begins with a large amount of data that must be assembled into a manageable form in order to gain meaning from them (Patton, 1990). The researcher began analysis during the interview process. Many researchers warn that it is important not to wait to begin data analysis until all the data have been collected (Coffee & Atkinson, 1996; Maxwell, 1996; Merriam, 1998; Patton, 1990).

In this study, the researcher began analysis by reading the interview notes and transcriptions several times to become familiar with the data. She wrote a one-to two-page summary of each interview based on the field notes and the transcript. As the material was being read, the researcher noticed similar concepts emerging in the data.

While this study does not qualify as a case study according to Merriam's (1998) definition, which stated a case study is "a thing, a single entity, a unit around

which there are boundaries" (p.27), the data were analyzed similarly to comparative case studies.

The data were first separated into two major categories. Coffee and Atkinson (1996) suggested that at the first level of analysis, the data can be separated directly into major categories that answer the research questions. While this did not assist in understanding the data, it assisted in making them more manageable. The first two categories addressed the first two research questions. How do female undergraduate students describe and decide upon their anticipated life paths? How do male undergraduate students describe and decide upon their anticipated life paths? Each of these categories was first analyzed separately, similar to an individual case study (Merriam, 1998).

In the next step the researcher compared the first two major categories. Merriam (1998) described this as "laying one transparency over another" (p.195), looking for similar and different patterns. This ultimately addressed the third research question of how do the anticipated life paths of females compare to the anticipated life paths of males?

As the researcher began the analysis, she identified different themes as she read through each transcript, using a practice called coding to make the task more manageable. Coffee and Atkinson (1996) described coding as "data simplification and reduction" (p.28). During coding, the data "fractured" and rearranged into categories (Maxwell, 1996, p.78). Merriam (1998) described coding as assigning symbols to parts of data so one can easily access information related to a particular theme.

As noted above, the data analysis began as the first transcripts and field notes were read. As each transcript was read, text was highlighted and notes made in the margins to flag important and interesting information. This process is called coding. According to Merriam (1998), as codes are identified in the data, they should be narrowed "to the smallest unit of information that can stand by itself" (p. 180).

Once the researcher had coded the transcripts, she cut them into sections identified by the codes. She placed them on notecards. On the back of each note card, the researcher wrote the interview number, entering major and code name. At the first attempt, she realized some

of the themes could be separated even further. She literally cut the transcripts further to make sure only one theme was on each card.

At this point, the researcher sorted the notecards into stacks that began to form categories. The advantage to using notecards was that the categories could be changed or altered as needed by resorting the cards (Coffee & Atkinson, 1996; Merriam, 1998; Patton, 1990).

Merriam (1998) outlined certain criteria for making categories.

1. Categories should reflect the purpose of the research questions. In effect they are the answers to the research questions.
2. Categories should be exhaustive, that is, you should be able to place all data that you decided was important or relevant to the study in a category or subcategory
3. Categories should be mutually exclusive. A particular unit of data should fit into only one category.
4. Categories should be sensitizing. The naming of the category should be as sensitive as possible to what is in the data.

The categories changed several times, before a final set of categories was determined. In deciding what categories to form, Patton (1990) says one of the first steps is deciding what "things fit together" (p.403).

The male and the female respondents were analyzed separately. The final set of categories was used to answer the first two research questions of how female undergraduates described their anticipated life paths and how male undergraduates described their anticipated life paths. The results of the first two research questions were then compared and contrasted to find similarities and differences in the females' and males' responses. This ultimately answered the third research question of how the anticipated life paths of females compared to the anticipated life paths of males.

Chapter IV

Analysis of Findings

No generation has wanted to believe in the American dream more than current undergraduates (Levine and Cureton, 1998, p.135)

The purpose of this study was to describe and compare how male and female college students constructed their life paths as reflected by their descriptions and decisions about their lives during and after college. The literature indicated that college men and women in general tended to make different choices about their futures in areas such as completion of college majors, their roles in their families, and their selected careers. Three research questions were developed to guide the study.

1. How do female undergraduate students describe and decide upon their anticipated life paths?
2. How do male undergraduate students describe and decide upon their anticipated life paths?
3. How do the anticipated life paths of females compare to the anticipated life paths of males?

The data were collected at a mid-sized, public, comprehensive university in the southeast. Thirty-two traditional, undergraduate students (16 male and 16 female) were interviewed.

The data were presented in three major parts. First, the females' responses answered the first research question: How do female undergraduate students describe and decide upon their life paths? Second, the males' responses answered the second research question: How do male undergraduate students describe and decide upon their life paths? Finally, comparison of male and female responses answered the third research question. How do the anticipated life paths of females compare to the anticipated life paths of males?

Female Responses

Sixteen women were interviewed. Nine started college in a science, math, or engineering (SME) field. Four women were African-American, one woman was Asian, and 11 women were Caucasian.

This section answers the first research question. How do female undergraduate students describe and decide upon their future life paths? The female responses were

divided into two major sections: (1) undergraduate females' descriptions of their future life paths, and (2) the thought processes undergraduate females use to make decisions about their future life paths.

Descriptions of Future Life Paths

As the women described their future life paths, three major themes emerged. First, the women described their idealized vision of their future. This vision for 14 women was described as a problem-free, middle-class American life, which included a nuclear family, supplemented by a career, financial security, and a location near their family of origin. The students' visions of their futures were similar to the lives modeled by their childhood families. Second, one-half of the women discussed the role God played in their future lives. Finally, 12 women described fear that their future lives might not evolve as planned.

Future Life Vision

Primary Future Vision

As the women described their vision of their future life paths, 14 of 16 women discussed aspiring to a future that resembled an American middle-class fairytale. The life they discussed would be similar to the life their

parents had led, except these women wanted their future to be without problems or struggles. This vision each woman described included marrying the man of their dreams and having children, supplemented by an enjoyable career that was woven around their primary focus of family. This vision was enhanced by financial security for 12 women, as well as the need to live in specific locations for 5 women.

These 14 women described their middle-class fairytale as the life that would make them happy. One woman conveyed her sentiments.

I just want to be happy...I want to get married and have a couple of kids...every girl wants to get married...Honestly, I want to have some money...I just want to have a wonderful family one day...I want to be well off and I just want to find a good job where I can make some decent money...I want to first start off my career and then get married one day and after that...have kids. But that's what I have always wanted, ever since I was a little girl. Just fall in love with somebody wonderful, get married and have kids. I do think about it a lot. Everybody I know does. I always just think...I wonder what my future husband is doing right now?

Another student described her happiness in terms of her family and possessions.

...just finding the right guy and settling down...I'd like a family and kids and a house on the lake with a boat.

The future vision discussed by these 14 women included four major components. Fourteen discussed their (1) *future family* and (2) *career goals*. Twelve described the importance of (3) *financial security*, and five women conveyed their need to live in a specific (4) *location*.

Fourteen women described the most important aspect of their future as their *future family*, which included a husband and children. The following three women shared their top goal for the future.

...my biggest hope for the future (is) that I have a great family and I want to have no problems.

I look forward to having kids and seeing them grow up and have children of their own.

My biggest goal for the future is to have a good strong family and just have a good family life...

An important aspect of the idealized family was marriage without divorce. While all of these women were single, three women discussed elements necessary for a long-lasting marriage. This student explained her formula for a successful marriage.

I think the most important thing to me is to be friends first and be comfortable and know the person. I think marriages are set up that way or not just...based on sex or whatever.

The women stated that they would have a career in their future, but they discussed how their work schedule would be secondary to caring for their family. Some women planned to stop working when their children were young. Here, a woman shared that, while work would be a necessary part of her future, her primary role was to be a mother.

I've always pictured myself as a mom, with a dog and that. That's what I want to do, and I'm going to have to work in there too, but that's the part I want to move into. To be a mom, to be married, all that stuff. That's my ultimate goal.

Similarly, another female shared that her chosen profession must allow her to fulfill her primary roles of wife and mother.

I want my family to have my full attention and time. If I have a career, that is great, if I can work part time sometimes when my kids start school, but I don't want to do something that's going to switch my focus from my real priority (motherhood).

For 12 of the 14 women, financial security was essential to the vision of their future life. They discussed the importance of specific material possessions, such as having a house and a car, as well as low debt. This woman described the elements of her perfect financial picture.

I don't want to have to worry about not having money to make the house payment. Can I get this car? Are my kids going to have decent clothes? Have a dog?

Another woman described her financial needs for the future.

I don't care about being rich, but I don't want to be poor. I don't want to have to struggle financially. I like to know that everything is going to be okay.

As the students discussed their need for money and material possessions, the women were careful to point out that they did not have to be "rich," but clearly felt that certain financial comforts of life were in order. It is possible that they felt that they were willing to give up a lucrative career and the idea of being rich in terms of vast wealth similar to individuals like Donald Trump and Bill Gates, but they were not expecting to struggle financially for the possessions they wanted.

The women did not mention where their financial resources would come from. They did not relate how their scaled-down career aspirations affected their future financial goals. Although the researcher did not pursue this point during the interviews, the women's comments concerning family and career could lead one to conclude

that the women expected their mate to provide substantial financial support in their future.

The final category in the ideal, middle-class future life path for five women was *location*. Five women discussed their desire to stay close to the area where they were raised as children. Their hometown was the ideal place to raise children. One woman conveyed her desire to stay in her hometown.

I love (my hometown) and I don't want to leave. I've always lived here and I want to stay. I couldn't think of a better location for me to stay..

These 14 females showed how their vision for the future was modeled from their childhood family. They wanted to raise their future family similar to the way their parents had raised them. A student expressed her desire to spend time with her family the way her parents spent time with her during her childhood.

...just being able to be there for them (children) like my parents were there for me...taking me to softball practice or coming to watch me cheer at all the games...stuff like that.

Another student spoke about creating experiences for her children similar to her own childhood.

I've always had a big family, and my Dad has six brothers, and I have cousins everywhere. I

want to have a lot of kids...kind of have a childhood for them like I did, I always had family around.

Alternate Vision

Two of the 16 women had a different future vision. Both of these women were African-American. One of the striking differences between these 2 women and the other 14 was that they did not aspire to have children. One woman stated that, by seeing other people's experiences with children, she had decided children were not a priority for her.

I don't think I'm going to have children...I've got a cousin that's pregnant now and she doesn't look like she's a happy camper all the time. I've got a friend that's pregnant, too.

These two women wanted to have a prestigious career, money, and power. One pre-medicine major conveyed her goals for the future.

I want to have enough money and I want to have a career and be in a good powerful position, like I want to have connections.

Both women discussed their desire to be married at some point, but they wanted to wait until they were in their 30s.

Faith

Half of the women in this study discussed the importance of their spiritual faith in guiding their decisions about the future. The women explained that there was one path or plan that God had for their lives. This woman made those sentiments clear as she stated, "I know if I live right, God is going to send me on the right path."

One female referenced God's plan as the reason she came to the university she attended and went on an indirect path to her final major. God's ultimate goal in this scheme, as she explained it, was to help her find her future husband at her current university.

If I had been chemistry at first, I would have gone somewhere else (another university) and played soccer. And it was, we like to call it destiny, but how uh, God is what I think about...how He (God) told me to do engineering at first, but then brought me back to chemistry cause that is what I was supposed to be doing, but it was also for me to meet him (boyfriend).

Seven of these eight women described peace and comfort they received from God after they changed their major. The students described experiencing turmoil in making the decision whether to stay in what they perceived as a time-consuming major or changing their

major to one that would allow them time for their future family. Eventually, these seven women had selected new majors that allowed them more time for their future family. They discussed the relief in finding the one right path that God had planned for them. They often referenced living life the way they were "supposed to." One student stated, "It's a great relief to be doing what you are supposed to be doing." Another student captured a similar thought.

I look forward to just being able to live out my life's dream. You know, get to know myself through doing what I am supposed to be doing.

The women discussed their ability to make decisions through God's guidance in prayer. This woman explained how her decision to alter her major was made through God's guidance.

It all comes back to my faith and how I really feel this is what God wants me to be doing right now...

Fear

Twelve women discussed their fear that specific aspects of their future might not work out as planned. This was surprising after one-half of the women had discussed a certain future guided by God. Perhaps, the women could not deny the reality of the world around them

that did involve divorce and financial problems. This woman's statement seemed to offer a possible explanation for the pull between the fear that her future dream might not become reality and her faith in God:

I have this little perfect plan that I can see so, I think there's a fear that I think I know what I really may not know for sure, but it's not to worry because, it all really comes back to my faith and how I really feel that this is what God wants me to do right now...

The woman admitted that she did not really know that her future would work out as she has carefully planned it, but quickly turned back to her faith as a guarantee that she is on the right track.

Eight women discussed their fear of being unsuccessful at their chosen career. An education major expressed her fear that she would discover teaching was the wrong career for her. She was concerned that her time spent in her major might be wasted if the teaching profession did not prove to be rewarding.

The main thing that I worry about when I think about my future is that I will get into the classroom and that I won't be able to handle it. They say that a lot of teachers quit within the first three years and that thought scares me to death thinking that that could happen to me... because I put so much time and effort into this, and I hope that I don't become that statistic, but I don't know how things are going to pan out for me...What if I

can't do this? What if I am in the wrong field and I'm simply going to choke on my first day of teaching? This really scares me.

Five women who did not have a significant male in their lives at the time of the interview feared being alone. One woman stated, "I don't want to be lonely, I want to be married." The five unattached women described their future husband as "Prince Charming" from a fairytale. One student went on to describe her criteria for her future mate, "...he has to have an authority position...have power, a strong individual."

One student discussed the fear of having an infertile husband.

...what if I marry somebody who can't have kids?
There's little things that can come up.

Decisions Affecting Future Life Path

As the women explained how they made decisions about their futures, three major themes were explored. First, the women discussed the *influences on decision-making*. These influences included: (a) manifest messages which were verbal messages from family, friends, and teachers about selection of original majors and career goals, and (b) latent messages which were from the lifestyles their parents modeled for the women during their childhood.

Second, the women described the *incompatibility* of the influences. They discussed how the manifest messages, which encouraged a prestigious career, were in conflict with the latent messages that encouraged the women to give primary focus to their children.

Third, the women described making decisions based on a *perceived lack of ability*. These women changed their original major within the first semester because of poor performance in or avoidance of a particular class.

Influences on Decision-Making

The women discussed the influence other people had on their decision-making process. The women received two kinds of messages from family and friends. Fourteen women described *manifest messages*, which were the overt messages from others to pursue prestigious and lucrative career goals, as the primary influences in selecting their original majors. It also became evident that the women received *latent messages* from their culture as they described having a lifestyle similar to their childhood.

Manifest Messages

When the 14 women began college, they described receiving outside encouragement from parents, teachers, and friends that guided their selection of their original

major. All of the women were high academic achievers in high school. They discussed how others encouraged and expected them to major in perceived high prestige and academically challenging disciplines. Fourteen women cited the influences of others as the primary reason they selected their major. Consequently, these women did not make independent decisions when they selected majors during their freshmen year. The following woman showed how her options were very narrow because she followed the expectations of her father to become a professional, such as a lawyer or a doctor.

...it was partly my father. He was very into more professional lawyer, doctor. I knew I couldn't stand the sight of blood. That (majoring in pre-law) was basically my other option.

The women also discussed being influenced by indirect pressure from others. Indirect pressures were the women's descriptions of the expectations of their community, which assumed they would select a professional field because of their academic abilities. This female explained how indirect pressure from others motivated her to select pre-medicine as her original major:

Nobody really pushed me into it, but a lot of people expected me to do something like that (medicine). Do something big. Basically, will

you be a doctor or a lawyer. Be something that's going to make a lot of money or that will really be impressive, and doctor was more in the field of interest...I sort of chose the best (major) with the options I saw.

Eight of these 14 women never mentioned personal interests or experiences motivating their decisions. They indicated that they had not independently examined their choice of major and did not fully understand its focus and educational requirements. The following statements are from three different women as they evaluated their original choice of major:

I think I really didn't think about what pre-med meant.

I realize now that I didn't really think it through, I didn't, I mean I wasn't really considering what I wanted in my life when I made that decision at first. I was thinking more of my father...

I really didn't know all that it involved.

The remaining two women, who did not select their major based on outside influences, selected their original majors based on interests. A chemistry major made the following statement.

I liked chemistry when I was in high school, I liked to mix things together, you know, and I was going to be a chemist when I graduated.

Latent Messages

The second kind of guidance women received from others in their decision-making was the latent messages displayed in the life their family modeled for them. The 14 women who placed family as the top priority described how they wanted to have a family similar to the one they had as children. The women described how their mothers modeled a life of placing family first and career second. This woman discussed how she wanted to model her mother by devoting time to her children.

My mom didn't work when I was little, so that was a great thing for us. She was able to be there and did all kinds of things with us. We were real close, so I want to be able to be there for my kids, if not all the time, at least a lot of it. That's my plan.

Another woman explained that she wanted to have a large family like her parents.

I am very family oriented, there were six kids in my house...I have always had a strong family system and family values... and I always have wanted a big family, I've always said I'm going to have 12 kids someday.

This woman explained that when she considered changing her major from pre-medicine to nursing, she considered being at home for her children, like her mother was for her.

I want to be able to take time off and be with my kids and stuff cause Mom was home when I was born, to be there, to be a house mom, to be there for me, I wanted to be like that, so, I took that into consideration, too (when she changed her major).

Incompatibility of Influences

The important link between the manifest messages that reinforced career goals and the latent messages that reinforced a family focus was time. The women described a limited amount of time in their future. Family and career were inter-related. Giving time to one component meant the other component might have to be altered.

Two components of time were explored. First, 11 women described a concept of the progression of time. Their education, career, marriage, and children had to be accomplished by a specific chronological age to ensure their future vision could become reality. Second, 14 women had a concept of a moment in time which was how time would be allotted in a typical day in their future. These women discussed that choices had to be made to make sure that a typical day in their future would allow them to devote the right amount of time and energy to the right priority.

First, the women described the years before they were 30 as the time allotted to accomplish specific goals. The women discussed completing their education, working in their chosen career, and starting their family within the next 10 years. The following two women discussed their 10-year plan.

In the next 10 years I see graduate school, getting married, starting a family, that's what I think.

...finding the right guy and settling down and, I mean I'm not talking about the next 2 years, I'm talking about within the next 6 to 10. I just turned 21 years old. I'm not looking for anyone now, but you know, on down the road, that's ideally what I would like. I'd like a family and like kids and a house on the lake with a boat.

Another issue of time discussed by 14 of 16 women involved giving energy to different priorities in a set time period. They discussed that to give adequate time to their children would require them to give less time and energy to their career. The women discussed having careers that could be coordinated around school schedules. They described having the flexibility to attend softball games and ballet recitals. This woman described how being a teacher would allow her to have a similar schedule to her children.

...being a teacher you're going to have the summers off and pretty much the evenings and afternoons I guess. School usually gets out at 3:00. So I'd probably be getting off work when they'd (children) be getting out of school...

While this study was not designed to focus on the differences between the SME and non-SME majors, it was important to note some differences at this point. Of the nine SME majors, eight considered a career in medicine at some point in their lives. Seven of these eight women described discomfort as they examined their future through their perceived time constraints. These women conveyed that limited time had made their original career goals, encouraged by family and friends, incompatible with their overall future vision that had been modeled by their family. One woman expressed her worry for the future was to coordinate time between the future priorities of career and family.

Just making sure of the timing of things...I just want to know that the things that I choose to do as far as a family and a career...that it all works out in the timing that it is supposed to.

These seven women described family as the primary focus of their vision of future self. As the women began to prioritize the two goals, these seven women discussed the possible need to alter their career plans. For

example, this woman discussed how her changing life priorities led her to alter her career goals.

I think it (medicine) was a wise decision at the time. I didn't know as much then as I know now. I don't think my priorities were what they are now and so when I first started college, I was very interested in making money and doing that sort of thing, and my priorities since I've grown up, since I've been in school have kind of changed and that's not so much the focus anymore.

Her new focus was on devoting time to family.

In order to have a profession that would allow me to be the mom and the wife I want to be, like I'm supposed to be, I needed to find a profession where I could use my knowledge and my interests but one that I would also have time to be at home and to have my priorities where they need to be.

Another student explained how her priorities of motherhood led her to think more maturely about her future priorities.

I was ready to take the MCAT ... Suddenly, things I should have been considering a little further back sort of sprung up on me. I realized my number one priority has always been to have a family. That's what I always wanted to do and coming to college and choosing a major that's going to make me happy. Really what I was doing was choosing something that's like a fall back, you know. If ever I'm married and have kids and something happens to my husband, I might as well have the best, most profitable degree that I could have gotten. I sort of evaluated my priorities and realized that being a mom was way more important to me than being a

doctor even though at this point, I was very interested in being a doctor.

The seven women discussed the relationship between career and family. Allotting time to family meant that their career would have to be altered. This woman explained that her family needed to have her energy instead of her profession.

I think that being a doctor is another thing that demands your whole attention... it demands your full attention and time, and I want my family to have my full attention and time.

Of these seven women, who felt that it would be difficult to balance a career in medicine and a family, five were Caucasian, and were the only Caucasian SME majors. All five Caucasian women changed their career path. Their descriptions for their lives were almost identical. These women decided to abandon their original career plans because they needed to achieve their overall life goal involving marriage and children by a certain chronological age.

These five women selected new majors that could be completed in fewer years. One woman decided when she was a sophomore in high school that she would relinquish her dream of becoming a doctor so that she could have a family with children. She stated, "I want a family and

that's one reason, like I said, that I got out of medicine. I didn't want to wait too long to have one." At the time of the interview, she was progressing toward a degree in chemistry. She had not decided at the time of the interview whether to become a chemist or a high school chemistry teacher.

The other four women began college in pre-medicine, two in biology and two in chemistry, and selected nursing as their new major. They claimed that they changed their majors to enable themselves to have a family. The women conveyed their belief that becoming a doctor would take too many years to allow them to have children early enough in life. For example, one woman discussed how positive she felt about her decision to select nursing because she would be at a relatively young chronological age when she finished school.

Like when you plan your life out, you think OK, this year I'll graduate and this year I'll be doing this. And then you're 35 years old and you like, but I haven't had kids yet...it's kind of complicated...that's one reason I chose this career (nursing) is that with less schooling I will have a degree that I'll be very satisfied with, but one that allows me to finish earlier, age wise, and so probably you know I want to be in my career for a few years and I think it's a career that I can do and still have children.

Another student gave an almost identical description as she discussed what she needed to have achieved by the time she was 30.

I figured that by the time I'm 30, I still don't want to be in school...I want to work for a while, for two or three years at least and then decide whether or not I want to go back to school and I think eventually, I do want to become a nurse practitioner...and then hopefully get married within the next five years maybe and have kids.

The other two of seven women who expressed stress over having enough time to become a doctor and have a family were persisting at the time of the interview. One woman was Asian and the other was African-American. They were very torn and unsure about how they would be able to have all the components they wanted in their future. One woman described her struggle between time required to become a doctor and being able to have children at the desired chronological age.

...right now, I consider it being a problem in like getting married and all that stuff cause I'll be pretty old when I'm finished there as far as I've figured out...Well I'm thinking that by the time I get out of school, I'll be 30. I always said I didn't want to get married until after I was done completely. And then I'll have to establish a practice. I couldn't, like if I wanted to have kids, I couldn't just stop then...I've been considering other things (career goals) lately.

While the student eventually finished her degree in biology, she changed her career goal after the interview and decided to become a nurse practitioner to allow time for her family. The other student also finished her biology degree and began to pursue a degree in occupational therapy.

Perceived Ability

Five women attributed their decisions to change their major to perceived lack of ability. It was the primary reason for four women and a secondary reason for one woman. Four of the five women discussed their dissatisfaction with their grades in the first semester that resulted in their selecting a new major.

A pre-law major described above explained her decision to change her major.

I took Political Science 101 and I was miserable and I didn't like what they were telling me. I didn't enjoy the class at all and I just thought that was a sign. I made a "C", so I had already decided that I shouldn't go into pre-law, but it upset me to think, I had determined my major and I was going through with it. And then I thought and I had talked to my Mom many, many times about what I was going to do and if that was the right decision for me to change my major and I thought, and when I walked out of Records, I felt so much better, so much better for having changed my major.

The fifth woman changed her major to avoid taking classes she felt would be challenging and uninteresting. She changed her major from psychology to special education to avoid taking statistics. She stated that she felt she would not enjoy the class and had no motivation to take classes she would not enjoy. She later indicated that math was not her best subject and that these statistics classes would involve math.

I was looking at the descriptions in the handbook. I was just thinking, you know, this doesn't interest me at all and it doesn't really seem applicable to what I want to do, so I don't want to take two semesters worth of it and then on down in your senior year there were a couple more classes that were like that, that were very statistical, a lot of data, that type of an approach and so it completely didn't interest me and so I thought I want to find a different way to kind of approach the same thing.

All five of the women said that they felt they could have been successful in their original major if they had put forth greater academic effort. The women allowed one semester or one class to shift their aspirations in their major and career.

In summary, 14 women reported a similar future life vision containing family and career supplemented by finances for 12 and a location near the childhood family

for five. Family was the top priority of their future. This caused conflict for seven of nine women with entering majors in SME fields because they felt they would not have enough time to achieve in both their career aspirations and family.

Male Responses

Sixteen men were interviewed. Nine men started college in a SME field. Two men were African-American and 14 men were Caucasian.

This section addresses the second research question. How do male undergraduate students describe and decide upon their future life paths? The male responses were divided into two major sections: (1) undergraduate males' descriptions of their future life paths and (2) the method undergraduate males use to make decisions about their future life paths.

Descriptions of Future Life Path

As the men described their visions for their future life paths, three major themes emerged. First, the men discussed their idealized *visions of their future*. Thirteen men described a life modeled by their parents although it was problem free. Second, seven men

discussed the role their *faith* had in guiding their future. Finally, the 14 men conveyed a *confident* attitude that the components of their future would become a reality.

Future Life Vision

Primary Vision

Thirteen of 16 men described a similar future vision. It involved a career with a family, complemented by financial security and material possessions for 11 men and life in a specific location for six men. These men discussed how this future vision would equate to future happiness. Happiness was discussed as being a primary goal for their future. One man stated that happiness equaled a happy family.

A happy family, that's really what I want (to) have, a happy family who loves me, who I want to take care of.

Another man described happiness through financial freedom.

To be able to live happily...not to feel like I'm having to struggle to make it everyday. I would just like a comfortable lifestyle...I would like to make it to the job everyday with a dependable car. I want to make sure I have a comfortable house, not one that I have to make repairs to everyday.

One man discussed how having a career and family would make him happy.

I would already be into what I am doing...already practicing (medicine) and hopefully be involved in a family.

As the men discussed their future vision, the first component they discussed was their career. All of the men saw themselves having a career. One man stated that it was important to be "content" with his work.

I would like to be content in what I do, to enjoy my work, and to feel like I am doing what I need to do - to be satisfied with my job.

Another male discussed the importance of being respected at his job as a band director.

I hope that wherever I wind up, that no matter what quality program it is, that somehow I can improve it and make it respectable. I've seen quite a few band directors in this area and when they gain a school's respect, then it gives them a bit more influence.

A third man felt his career would come with the perfect work schedule.

I think it will be nice once I get to have an eight to five job or nine to five job, and I have evenings and weekends off.

For seven men, completing an education and becoming established in a career was the first step in building their future vision. The following two men discussed how

they must have a job before they could proceed with other aspects of their future plan.

Job comes first...once I've gotten a job that I like and can settle down, then I can start planning other things in life, but without that job, nothing can proceed.

I'd just like to graduate right now, get myself a job where I can make some money and start working on my master's...(I'll) get family later, not in a hurry for that.

Thirteen men expressed that *family* was an expected and natural component of their idealized future. The men did not describe a need to have their family by a particular chronological age. A male stated he looked forward to having a family after he graduated from college.

I look forward to having a family, whenever God brings me that right person. Whenever I find the person I am going to marry.

Specific ideas were shared about the men's families. As he discussed his future wife, one man stated, "I'm looking for a specific type of girl." Another male discussed how he wanted a typical "southern" family. He stated, "...just southern style, country, close knit." Two men shared their preference of having sons over daughters.

Having a family, having a son, and his name is going to be (the participants name) III... people tell me that since I want a son so bad, I'm going to have a lot of girls, but I hope not.

A man stated how his family would come when he was through with college and was financially secure.

It's easier when you wait until you've got everything set up, I mean you've got your house taken care of, you're not stressed about bills... it's something I see for after college... something like my uncle always tells me, stay away from them women in college, don't be getting in any relations while you're in college...cause all they're after is their MRS degree.

Two men discussed their aversion to divorce. One explained his future vision in terms of correcting his parents' mistake of divorce.

My family went through a divorce, and that was during the ages that I can still remember...and I do not want that to happen (divorce)...I want this nice little perfect life for my child when he comes.

Eleven of the 13 men discussed having a life with *financial security*. They discussed having a home and low debt as important facets of their future. One man conveyed the importance of being able to have money for the possessions he wanted.

Being comfortable...not having to worry about paying for bills. Just if something happens, just being able to pay for it. Not having to tighten your budget, I guess. Just, I mean, if

you wanted something, within reason, you could get it.

This man shared that having his own home would symbolize independence.

I would like to own a house - built somewhere, instead of renting an apartment...I think that would be the final statement of independence.

Another man discussed his desire to be able to provide financial support for his future family.

I don't expect to be the sole provider for my family. I want to make sure that I can (provide for the family). I don't want my family to lack for what they need.

This student discussed that he would not have a child until he had a house because his family conveyed that message to him.

I'm not going to be in an apartment when a child comes. That's not the way I was taught (or) raised or anything like that.

Six men discussed their desire to live in a location near their relatives. This student explained that the world outside his community contained a different type of person that he was apprehensive to meet.

Well, I hope to get a job in one of my majors, somewhere locally...if I can't get one in engineering then maybe at one of the local high schools...(I) want to try some place that's at least driving distance. When my aunt and uncle were out in Washington, it was the worst...they met some weird people out there...if something

happened to them out there, among those weirdos, we'd never know, so being further than driving distance is something that I'd rather not do.

Alternate Vision

Three men discussed a different view of their future. The major differences from the other 13 men were that they planned to focus on their career and they were not sure if they were going to have a family. One student explained that he did not focus or worry about having a family because he stated, "That's not something that's under my complete control."

The men, like the women, discussed living a life similar to that of their parents and raising their children as their parents raised them. A student wanted a family like the one he had as a child.

I feel like I have a strong family life. I have two brothers and two parents that are still married and I feel lucky for that...I would like to have a similar family of my own.

A different message was conveyed by another student who wanted to correct the mistakes his divorced parents made.

I'm looking forward to having children...looking forward to making amends where my father and I or my mother and I didn't...I want to make sure that I correct those mistakes and have a better relationship with my child and family. I don't

want to go through a divorce. I want to make sure everything is perfect and move on with my life.

Faith

Seven men discussed their faith as they made decisions about their future. The men described their faith in God as a guide in selecting the right career, and discussed how God would provide them with the proper components for the future in "His time." One interviewee discussed how God created the circumstances that led him to select elementary education as a major.

I wanted to play sports all the time (in high school), but I didn't make the basketball team one time. I was really thankful that God kind of worked it out like that because someone invited me to come and start working with a Bible club once a week...that is how I started to see that I wanted to work with children and maybe major in elementary education...

Another man discussed how God would reveal the right woman to him in time:

I'm just waiting for God to reveal the right girl for me, and in His timing, not in mine. So I'll just wait. Right now I know where I'm supposed to be and that's what's important. I'm supposed to be here preparing to graduate and then pursue further studies and God in His time will provide.

Confidence

The men displayed confidence as they discussed their future vision. Six men shared that they had no fears about the future. Three men made the following statements.

I just know that I can conquer whatever I set myself to.

...At the moment I don't have any doubts (about future).

...I'm too young to worry.

Eight other men mentioned doubts or fears they had about their future, but followed up their statements by showing their confidence in their ability to overcome their doubt. This man expressed his concern over being admitted to medical school.

If I don't get into med school, I don't know what I'd do. I'd probably teach or something for a year and try and get into med school the next year. But I think I can get in.

Another man shared that, even though he worried from time to time about having a job or enough money, he was confident that he could "make it"

Will I make it? Will I still have a job? Those are way back in my head. I am one of those persons that will go out and I will make what I need to make (money)...and I'll always make it...

Decisions Regarding Life Paths

As the men discussed how they made decision about their futures, two major themes were explored. First, the men discussed influences on their decision-making. The men discussed the major motivation to select their original major was from *interests and childhood experiences*. They also discussed being guided by *latent messages*, which were the cultural influences of the life that their parents modeled for them during their childhood. Second, the men discussed how they prioritized the components of their future.

Influences on Decision-Making

Interests and Experiences

Interests and experiences were described as the primary motivators for 13 men in selecting their original majors and career paths. The experiences they discussed were jobs or activities in which they participated before and during college. One student discussed an after-school program that led him to major in elementary education.

They (friends) asked me if I wanted to come down and work at an alternative school to get early release from school and start working with that, and so through that I started to get involved more and more working with children.

I just started to see that I had a real interest in doing that. It was something I really enjoyed.

Another education major had experience in his parent's business.

I've grown up hanging around classes in a classroom at night. You know talking to people. You know I've had 20-year-olds, when I was 11 years old, come to me and ask me questions about scuba diving and I could explain it to them on a very simple basis because, one, I was young, but I could understand it, and that enabled them to understand it.

A third man decided he would go to seminary after teaching an adult Sunday school class.

I've been teaching an adult Sunday school class at my church and its given me the opportunity to use what I've learned about the Bible and such to be able to meet with adults and to speak with them and to teach a class in...it's really shown me that that's sort of where I need to be going.

Of the remaining three men, two men discussed their parents selecting their original major for them. This man shared his father's desire for him to become a doctor.

My parents pretty much pushed me that way, my Dad really wanted me to go into medicine, to be the first doctor in the family.

He later changed his major four times, floundering between majors that interested him and majors that his parents selected.

The last of the three males selected a major that he felt would allow him a secure future where he could provide for his family:

It's (engineering) basically one of the best professions I could think of for my future. I mean I really didn't think about my future until my senior year in high school and, when I did, I wanted something that I could get a job in, that I could keep the job, didn't have to worry about losing it some time, um, so that later on I could provide for myself and my family when I have one. That's really the basis of it all I think.

Changing Majors

Six men had changed their majors. Two of them had been pre-medicine majors. They stated they did not want to devote the time necessary to completing a medical degree. One man explained, "I did not want to spend the first third of my life in school..."

The remaining four men switched to majors they described as more accurately fitting their field of interests. Two of them explained that their interests and career goals had not changed, but that their original majors did not fit their interests the way they thought

they would. One man discussed how he realized the major he had selected did not have the content he expected.

I found after taking a few communications classes and things like that, I found that it wasn't really quite what I had in mind, my first glance at it then, you know...I felt like it was headed more in the direction towards actually manipulating people and things like that than actually helping them and being able to relate with them, so that sort of steered me away from it.

The other two of four men who changed their majors to meet their interests floundered between majors their parents selected and majors that interested them. The male mentioned above whom originally selected pre-medicine because of his father's encouragement changed his major after one semester to computer science, which interested him. He stated he was always talented in computer classes and enjoyed working with computers. He said his reason for leaving biology was lack of enjoyment.

It wasn't the classes, just my general attitude of figuring out that this isn't the way I want to go. I want to do my own thing. Once you get out of the household, you start making your own choices.

He enjoyed the computer science classes, but his parents felt that engineering would be a better choice for a "job of high esteem and clout." After enrolling in

cooperative education for a semester, he realized after majoring in engineering for two years, that he disliked the profession.

I worked at XXX, and I really didn't like working with the engineers. I didn't like the kind of work they did, and I lost my motivation when I went back to take classes the next semester. I just absolutely did not want to do it anymore.

As the student evaluated the decision to enter engineering, he stated, "It really wasn't my decision. It was kind of a bad decision on my part because it really wasn't something that I wanted to do." He then went back to biology in order to quickly obtain a degree.

Latent Messages

The men also discussed having a future similar to the life their family modeled. They described living a life similar to the one they had experienced as children. One man explained how everyone envisions his or her future family life.

Everybody, I think, envisions what their perfect family would be, like living in a nice subdivision with a golf course and everything. So, hopefully, you know, one day I can realize all of that just like my family did, my Dad did.

Another male stated he wanted to give his children a "good life" similar to the one he had as a child.

I like the way I was raised. I think I'd like to raise children and pass on what my parents taught me. I think I have had a good life.

This man explained that he knew "everything would work out as it should" in his life and with his future family because of the influence of his relatives.

I was brought up by my mother and father, and then also grandparents and great grandparents...I can remember it all so clearly and vividly.

While the men discussed being influenced by interests and experiences, as well as the latent messages of their family culture, they never discussed a relationship between the two messages. The men never described conflicting messages or competing life goals. The men did not discuss the need to alter the goals of family and career.

Prioritizing Life Components

Eight men did not discuss a need to prioritize the components of their future: career, family, financial security, and location. As the men discussed achieving in one component of their lives, they did not convey any necessary alterations to another component. These eight men never mentioned having to make adjustments to their goals concerning future family or careers. Further, six of these men did not discuss the effect their chosen

career would have on their financial status. As an education major shared his future vision, it became obvious that he compartmentalized the components of his future. First, he discussed the wealth he would obtain by the time he was 35 as a high school English teacher.

...Eventually, I'm looking forward to being rich. I'll retire a multi-millionaire at the age of 35...The stock market is starting to catch my eye...Eventually, I hopefully will start investing some money into long term...I would like to have all the money that I can invest and play with the ticker and hopefully not go crazy like the guy down in Atlanta. *(At the time the interview was taking place, a day trader in Atlanta had recently been on the news for shooting people in his office complex.)*

Later in the interview, he explained that his priority was to stay in the local area even though his fiancée was planning to go to graduate school in Chicago.

...that is up in the air as to whether or not I'm going to be moving to the Chicago area. I do not have a desire to. It's a cold city, it's very windy, the school systems there are...I'm not big on lower income children, and it may change once I get into the public school system this year, but I just don't have the desire. It's not where I feel my calling is. It's just the average kid; that's who I want to hit and get with. And so I am looking at possibly getting a house, like a nice little house in (local community). That way, if we decide to move out of there, we can rent it.

The remaining eight men described prioritizing one or more components of their future lives. Five men

discussed that their career would be top priority for their future. Three of these five men speculated that time might not permit them to have a family. This man stated that his goals of becoming a physician would mean that he would not have time to give to a family.

I don't feel that I can give that (family) a high priority right now because I see people already married and having kids and all that, and what I'm trying to pursue (medical school), I can't give a lot of time to anybody. That's just how it is.

Of the remaining three men who prioritized their future, one man placed location above career. He discussed his willingness to alter his career goals to stay near his relatives. The remaining two men placed emphasis on family. One man discussed selecting engineering to guarantee he could support his future family and the other altered his career from pre-medicine to nursing, stating that he wanted to have more time to spend with his future family, which he believed nursing would allow over the practice of medicine.

In summary, 13 men had a similar future life vision containing career and a family, supplemented by finances for 11 and a location near the childhood family for six. Eight men did not prioritize the components of their

future, while five placed their career as the top priority.

Comparison of Women and Men

Similarities

At first glance, the men and the women in this study appeared similar. The selection criteria were designed to purposefully match men and women with similar characteristics when they entered college. They were all pre-selected to have an ACT above 23 and at least a "B" average in high school. All of them were single and ranged in age from 20-23. Nine men and nine women entered college in SME fields.

Primarily, the descriptions the men and the women gave about their future were similar. Fourteen women and 13 men described a problem-free future with a family and a career. Financial security was important to both groups, and approximately one-third of them wanted to live in a location near their relatives. The majority described a future vision that was similar to the lives they had as children. Eight of the women and seven of the men discussed the important role their faith in God

played in guiding their future and justifying their decisions.

By examining their similarities, it appeared that the women and men entered college with similar characteristics and formulated similar descriptions about their future life paths, but ultimately the two sexes described different priorities for their future that led to different roles in career and family.

Differences

Three major differences in the way the men and women determined their future life paths were identified: (1) their process for making decisions, (2) the way they anticipated their future, and (3) their role in their envisioned future.

Process for Making Decisions

The process the men and women used to make decisions about their future was different in two areas: (1) the factors that influenced their original major, and (2) the effect of the latent messages of their culture, which was the lifestyle their family modeled for them when they were children.

Selecting a Major

First, 14 women described the primary factors in selecting their original majors were direct and indirect encouragement from parents, teachers, and friends. These outside influences encouraged the women to pursue a prestigious and time-consuming career. Eight women never mentioned interests or childhood experiences as factors in their decision. While the women allowed others to play a major role in their original decisions, 13 men described a more independent method of selecting a major based on their interests and childhood experiences.

The women later explained that they did not have an understanding of what their original major entailed. They did not develop their own thoughts about what would interest them in a career. While the women did not state their lack of understanding as a direct reason for changing their major, it is reasonable that the women would find it easier to switch majors than the men, because they did not necessarily have a personal interest in the major they selected. Someone else had selected the major for them. Nine of the 10 women who changed their major were from this group of 14. Conversely, only

four of the six men that changed their major were from the group of 13 men.

Latent Message

Both men and women discussed the influences from their culture. These latent messages were modeled by their families when they were children. Both sexes showed their desire to recreate the lives of their parents through their descriptions of their envisioned future. The students discussed living a life similar to the one their parents shared with them.

Fourteen women interpreted the latent message to mean that their primary role was to give time to their future family. They described devoting time to their children to replicate the way their parents had raised them. While 13 men wanted a family to be a part of their future and discussed the desire to have a future similar to the lives they had with their parents, 12 of the 13 men never mentioned the need to set time aside to care for the family or that they needed to have children by a specific age.

Seven of the 14 women who emphasized that family would be the top priority in their future lives reported conflict between the manifest messages of others verbally

encouraging prestigious career goals and the latent messages of their family culture. While the goal of this study was not to compare women in traditional and non-traditional majors, it was important to note that the women who struggled between these competing messages were seven of the nine women who all began in SME majors. Each of the seven women was concerned that she could not pursue a time-consuming career and find time for a family with children.

These seven women discussed the fact that time was the important link to their future life. They described a link between career and family. Allowing time for one required the other to be altered. While the manifest message stressed career, the latent message stressed family. As these women sorted out this conflict, all seven eventually altered their career goals to less prestigious and less time-consuming careers, such as nursing, to place their family as top priority.

These women conveyed that their educational goals needed to be completed by a certain point in time so they could have children and that the majority of time in their daily future lives should be devoted to their family. They felt that time-consuming career goals, such

as medicine, would not allow them sufficient time to have their family with children. Further, 14 women stated that they were willing or planned to alter their careers in the future to ensure their family had enough of their time.

Conversely, 15 men never reported sensing conflicts in having enough time for their chosen career and family. Thirteen men also never mentioned a conflict between their method of selecting a major and the lifestyle their family modeled.

Differences in Descriptions

As the women described their future, they expressed certain fears that elements of their future would not turn out as planned. The women described their apprehension in areas such as the possibility of not finding a mate, not having children, and not being professionally successful. To make sure that their future vision would become reality, they discussed their willingness to manipulate and control their environment through their methods of managing time.

The men appeared more confident that the components of their future would fall into place. Six men stated that they did not have fears about their future. While

eight other men discussed fears about their future, they quickly stated that they were sure they could overcome them.

Some of the differences conveyed in the fear of the women and the confidence of the men were subtle. During the interviews, the women's tone and body language appeared anxious and excited as they described their future vision. Two women became emotional as they discussed their dreams for the future. The men were more relaxed and casual in their responses. The language the women used was less certain, compared to the men, who made more affirmative statements.

Examples of the subtle differences the men and women used in their language were apparent through the statements about finding a mate made by five students. The following two males showed their confidence that they would have a mate in the future. The first one described having his mate brought to him.

I look forward to having a family whenever God *brings* me that right person.

...there shouldn't be any problems finding a woman.

The following three women expressed anxiety about the possibility of not finding a mate. The first woman described her worry about finding someone.

(Worry)...in my personal life, *finding* someone that I would like to spend the rest of my life with, have children, that kind of thing.

I don't want to be lonely.

I worry about being lonely; I just don't ever want to be alone.

Role in the Vision

The men and women described a similar vision for their future. The differences were in the roles they described themselves having in their envisioned future. Fourteen women discussed their primary role as taking care of their future family. These women indicated that they were willing to alter and downgrade their career aspirations to fulfill their family obligations. They described having careers that would allow them flexibility to spend time with their family and the possibility of not having to work when their children were young. The women's statements conveyed that giving time to family meant taking time away from their career.

Eight men did not mention prioritizing career and family. They discussed having both a family and a career

in their future, but they did not discuss altering one to meet the demands of the other. Five additional men placed their career as their top priority. Three of those men discussed that they might not have children in their future.

The differences in the description of female and male roles resulted in the women anticipating a subordinate role in the workplace and having a primary role as the caregiver of the family. By contrast, 13 men either saw that no prioritization of roles between family and career was necessary or they placed priority on their career.

Though they began with similar kinds of majors and career aspirations, by the time the students were upperclassmen, the men and women had different career goals. The women were pursuing careers such as teachers, nurses, and nurse-practitioners. Of the nine women who began in SME fields, only two women still considered pursuing non-traditional careers for women. The major changes in the women's career goals involved the nine women who began as SME majors. While four women would graduate with degrees in biology or chemistry, only two of those women still considered non-traditional careers

for women. One woman still planned to pursue medical school and the other woman had not decided whether to teach high school chemistry or become a chemist.

On the other hand, the men planned to pursue careers such as school administrators, doctors, lawyers, and one anesthesiologist. Only one man, who wanted to teach in an elementary school, planned his ultimate career goal in a field traditionally dominated by women.

Conclusion

These men and the women entered college with similar characteristics and articulated a generally similar vision for their future life paths. The majority of both groups wanted a future life with a spouse and children, a career, financial security, and one-third wanted to live in a location near their childhood home. The differences between the two groups were identified in their influences on their decision-making, differences in their descriptions, and their role in the vision. The possible impact and interpretation of these differences on the men and women will be discussed in chapter 5.

Chapter V

Implications and Recommendations

The purpose of this study was to describe and compare how male and female college students constructed their life paths as reflected by their descriptions and decisions about their lives during and after college. The literature indicated that college men and women in general tend to make different choices about their futures in areas such as completion of college majors, their roles in their families, and their selected careers. Three research questions were developed to guide the study.

1. How do female undergraduate students describe and decide upon their anticipated life paths?
2. How do male undergraduate students describe and decide upon their anticipated life paths?
3. How do the anticipated life paths of females compare to the anticipated life paths of males.

The data were collected at a mid-sized, public, comprehensive university in the southeast. Thirty-two traditional-aged, undergraduate students (16 male and 16

female) were interviewed. Any differences identified between the two sexes could assist in explaining why men and women are making different decisions about their future lives.

Efforts were made to select students that had opportunities to make choices about their future by selecting students that were not limited by lack of academic ability or family constraints, such as a spouse and children. Students interviewed all had an ACT score 23 or above and a minimum of a "B" grade point average from high school. All were single and between the ages of 20-24.

The interviews appeared to be a positive experience for the students. The students were open and thoughtful as they shared their experiences. Several students returned after their interview had ended and stated that they had pondered our discussion for several days. One student noted that the interview gave him new insight as he completed his medical school application. Two students cried during the interview. One of those students commented that she had little opportunity to discuss issues concerning her future.

Summary of Findings

Several themes emerged as the men and women described their anticipated future life paths. As the third research question was analyzed, which compared the anticipated life paths of males and females, many similarities and differences became evident in the way the males and females describe and decide upon their future.

The findings from the study are reported below:

Similarities

1. Thirteen men and 14 women described an anticipated life similar to that of their childhoods, which included the following components:
 - Fourteen women and 13 men wanted a traditional nuclear family.
 - All of the women and men expected to have a career.
 - Twelve women and 11 men wanted financial security.
 - Five women and six men wanted to live in a location near their childhood home.
2. Thirteen men and 14 women wanted a late 20th century, middle-class, suburban lifestyle.
3. Eight women and seven men described their faith in God as crucial in guiding their life paths.

Differences

1. Twelve women feared that some aspect of their future might not work out as they hoped, where 14 men expressed a casual confidence that their future vision would become reality.
2. Fourteen women selected their original major primarily following the direct and indirect influences of family, friends, and teachers. In contrast, 13 men selected their majors primarily based on their interests and childhood experiences.
3. Fourteen women placed caring for the family as the primary focus for their future life, while eight men did not prioritize their future and five men placed the primary emphasis on family.
4. Seven women found their original major and their role of caretaker in the future vision incompatible, In contrast, one man found his original major and role in his future family incompatible.
5. Ten women changed their major and 12 women changed their career goals. Six men changed their major and four men changed their career goals.

Relevance to the Literature

Future Vision

The men and women in this study described an idealized vision for their future, which included family, career, financial security, and, for one-third of the students, a location near their childhood home. They wanted lives similar to those of their parents, except they wanted to eliminate problems. One-half of the students stated they were guided toward this vision through their faith in God.

This description was similar to the findings of Levine and Cureton (1998). They interviewed students in colleges across the United States from 1992-1997. The students reported that a good job, money, and a strong marriage with no divorce were important. Ninety-two percent of the students stated a good marriage relationship was important and 78% wanted a family.

The vision the students held for their future in this study could also be linked to the cultural characteristics of the southern region of the United States (McCandless, 1999). Interviews conducted by McCandless with women at the College of Charleston in

1995 led her to conclude that, "Southerners were friendlier, more religious, more attached to their region, more family oriented, more traditional, and more prejudiced" than other Americans (p.272).

Fear and Confidence

The women in this study described an idealized vision for the future. One-half felt the path to their vision was ordained by God, yet 12 women still expressed fear that some part of their vision would not work out as planned. The women described their fear of being alone, not having children, and not finding success in their careers. This is also similar to Levine and Cureton's (1998) findings. Levine and Cureton noted that while students had hopes for ideal future lives, the students expressed fears that their futures were fragile when discussing romantic relationships, crime, and finances. The students in Levine and Cureton's study were primarily concerned with the fear that they would not be happy, which is consistent with the primary wish of the students in this study. "This generation is a generation that is desperately clinging to its dreams, but their hopes, though broadly professed, are fragile and gossamer like" (Levine and Cureton, 1998, p.144). Levine and Cureton

found a rationale for this fear through the world the students have witnessed, characterized by down-sized companies and layoffs, increased divorce and single parent families, and increased crime.

On the other hand, the men interviewed in 1999 for this study did not report the same kinds of attitudes as the students in Levine and Cureton's (1998) study. The men showed an air of confidence as they discussed their vision of the future. They appeared secure that their future vision would become reality at some point in their lives.

Decisions

Influences in Selecting a Major

Experiences and Interests

Thirteen men selected their major and career path based primarily on experiences and interests. This is consistent with the findings of Farmer and Associates (1997), Seymour and Hewitt (1997), and Strenta, Elliot, Adair, and Matier (1994). These researchers found that men were more likely than women to have personal experiences with building and fixing gadgets and playing with technical devices that influenced them in selecting a major.

Manifest Messages

The primary motivation described by 14 of 16 women in selecting their original career and major came from the overt influences of parents, teachers, and friends. The women described how others had encouraged or implied that they should pursue challenging, prestigious, and/or time-consuming career goals because of their intellectual ability. The direct influences were largely from parents who told their daughters which profession to pursue. There were also indirect influences from friends who expected them "to do great things" through academic achievement and prestigious careers. Seymour and Hewitt (1997) similarly found that women were twice as likely as men to select a career based on the influence of a significant person in their life and that women were less likely than men to have developed personal views of what they wanted in their careers.

Latent Messages

Both the men and the women received underlying messages from the life their family modeled. The students wanted to have a future life similar to that of their parents. For the women that meant their primary role would be to care for the family. Farmer and

Associates (1997) also interviewed women who said that they left a major in SME because they were socialized to raise a family. Josselson (1987) similarly found these attitudes when she interviewed women while they were in college in the 1970s.

Many of these adolescent women, as we have seen, also had strong career ambitions or, at least, a wish to be productive and employed outside the home for some portion of their adult life. But, at root, they shared the idea that the central structure of their life would be a new family to absorb their emotional energy (p.179).

Conflict of Influences

Seven of nine SME women felt a conflict between the manifest messages that they should achieve in professional, time-consuming careers and the latent message modeled by society that they should be the primary caretakers of their families. Seymour and Hewitt (1997) similarly found that women often cited their maternal instinct as reasons for leaving SME fields.

Merriam and Clark (1991) articulated the struggle of these women.

Women approach their lives by weaving diverse elements into a single tapestry of public and private roles...This perspective suggests that returns from education are refracted not only through the lens of income, status, and career

ladders, but through familial and community roles (p.24).

The inner conflict experienced by these women in choosing between challenging and high prestige career paths and motherhood can also be examined through what McCandless (1999) called "twoness," which combined "the old and new South" (p.276). She described the pull between looking forward to the future and the pull to tradition in the southern region of the United States. "The regional fascination with the past has been a blessing and a curse for women's higher education in the twentieth century" (p.280). McCandless illustrated her point through a description of a female college student who had been raised in a traditional home with traditional values and encouraged overtly by her family to find a challenging major and have a successful career.

Perceived Ability

Five of the women changed their majors due to perceived lack of ability. All of these women changed their majors within their first year at the university. Four did not perform well academically in their first semester and one changed her major to avoid classes that she perceived as difficult and uninteresting. This is

consistent with a group of primarily Caucasian women reported on by Holland and Eisenhart (1990) who changed their majors after they lost their sense of identity as being high academic achievers. Holland and Eisenhart explained that, once these women could not make high grades with ease, they sought less challenging majors. Similarly, the women interviewed in the present study all moved to majors that were perceived as less challenging.

Farmer and Associates (1997) and Rimm (1998) similarly found that women were easily discouraged by hard courses and perceived low grades.

Paths to Traditional Roles in Society

The future envisioned by 14 women in the current study positioned them for a traditional role in society. Their decisions concerning their futures resulted in 14 of 16 pursuing a field traditionally dominated by women. Further, 14 women described their willingness to alter their careers during their lives to care for their future families.

These decisions seemed invariably to place women on a track to a lower social and economic status in society. This left the women dependent on their mates for the

financial security and material possessions that 12 of 14 women espoused as a need for their future.

Three major differences emerged in this study that contributed to placing women on a track toward a traditional role for women in society. The three major factors were (1) decision-making, (2) connection, and (3) social reproduction.

Decision-Making

The women's methods of decision-making appeared to be less stable than the men's methods of decision-making. The men, unlike the women, described making primarily independent decisions based on their childhood experiences and interests. Four aspects that influenced the women's decisions were: (1) absence of independent decisions, (2) loss of verbal encouragement, (3) absence of personal experiences, and (4) perceived lack of ability.

Absence of Independent Decisions

As stated earlier, 14 women in this study reported being guided primarily by others in selecting their original majors. They depended on parents, teachers, or friends to assist them in selecting their original majors

and careers. Eight did not mention interests or childhood experiences that reinforced their decisions.

Seymour and Hewitt (1997) similarly found the "active influence of others" was a common influence in selecting a major for the women they interviewed (p.56). These women that Seymour and Hewitt interviewed described being less motivated toward the academic work in their major and had less confidence about the subject matter. Seymour and Hewitt found that women who selected majors based on outside influences were more likely to leave their major.

Loss of Verbal Encouragement

Fourteen of the women in this study described their primary influence in selecting their major and career as coming from family, high school teachers, and high school friends. While the subject of professors and friends at the university giving positive reinforcement to persist in a chosen major was not asked during the interview, the women never mentioned encouragement from college friends or professors to persist in the career or major at the university. Further, 14 of 16 women moved away from their hometowns to come to college, which meant that influences such as family and high school teachers, which

assisted the women in their original choice of major, were not on campus encouraging them to persist.

Evidence from the literature indicated that the positive influence and reinforcement of others is a vital part of women's success (Farmer & Associates, 1997; Holland & Eisenhart, 1990; Josselson, 1987; Rimm, 1998; Seymour & Hewitt, 1997). The absence of positive reinforcements could result in a loss of self-efficacy, which is "the beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1995, p.3). A component of self-efficacy is the verbal encouragement from others, which reinforces the belief that a student can achieve in a discipline (Bandura, 1995). Seymour and Hewitt found that, even when the women entered college prepared, lack of personal encouragement from significant others was detrimental to persistence in a major.

Holland and Eisenhart (1990) concluded that the women in their study did not receive positive reinforcement about their career goals in college. Instead, they received reinforcement from friends to cultivate romantic relationships that took time, attention, and energy away from academics. Rimm (1998)

and Astin (1993) found consistent evidence in this regard. Having a peer group that reinforced academics was vital to success in college.

Based on interviews with women 12 years after they had graduated from college, Josselson (1987) reported that, not only did college women need the support of outside influences, but that they flowed through a woman's life from beginning to end. She stated, "Rarely among women do we find an activity that brings gratification outside of an important relationship" (p.178).

Absence of Experiences

Another contributing factor for some of the women was the absence of personal experiences related to the major. Eight women never mentioned interests or childhood experiences that guided them toward their major. Bandura (1995) and Hackett and Betz (1981) reported findings that women were less likely to have experiences in childhood that related to SME majors. The absence of these experiences is another major component in females' loss of self-efficacy. Early experiences affect self-efficacy. Women who have not had experiences in childhood related to their major were not

as likely to persist in that field (Bandura, 1995; Hackett & Betz, 1981).

Lack of Perceived Ability

As stated earlier, five of the women interviewed for this study changed their major due to perceived lack of ability. Seymour (1995) concurred that even when women have similar high school grades and SAT scores to men, women were more likely to report that they did not have the aptitude for the major.

This again relates to self-efficacy. If individuals did not envision themselves as being successful in their original field, when they experienced a perceived low grade or were faced with classes they had not experienced or had had negative results with in the past, many did not have the confidence to persist (Betz & Hackett, 1981; Farmer & Associates, 1997; Rimm, 1998).

In summary, Holland and Eisenhart (1990) asserted that when the women in their study received unexpected poor grades and no positive reinforcement about academics from their friends, it led to "marginalization of or a failure of developing ideas of themselves as having a career" (p. 200). They asserted that the women's college

experiences resulted in the loss of their career and academic goals in college.

Alternately, women in this study did not describe developing career ideals before they began college. Instead of selecting career goals based on foundations of interests and experiences, the women did not begin college with any independent or firm goals about their careers or majors. Logically, as challenges, such as poor grades, loss of positive reinforcement, and lack of real interest occurred, one would more easily leave a field she had not personally selected or fully understood.

Connection versus Compartmentalization

The women in this study explained that their plans for future family and future career were interrelated. They were "connected" particularly in relation to time. To allocate time to one component meant the other would have to be altered. Fourteen women placed their future family as their top priority. As a result, seven women made plans to alter their future career goals. These women matched the parallel pattern in Merriam and Clark's (1991) study on work and love. The researchers conducted a study with adult and graduate students, asking them to

graph their highs and lows in the area of their public (work) and private (family) lives. In the parallel pattern the respondents in Merriam's and Clark's study implied that the public and private were linked and affected one another.

Conversely, eight men interviewed for this study did not prioritize the components of their future. This was similar to Merriam and Clark's (1991) divergent pattern, in which public and private roles are regarded as independent of each other.

Fourteen women analyzed the effect that their chosen career would have on their family. This connection of life components is consistent with the research of Gilligan (1993), Josselson (1987), and Mickelson (1989). Gilligan asserted that women are socialized to value connection. Seymour and Hewitt (1997) stated women "show greater concern to make their education, their career goals, and their personal priorities fit coherently together" (p.236).

Eight men in this study did not prioritize their future life components. Gilligan (1993) also concluded that men were more likely than women to compartmentalize aspects of their lives. Five men did place a priority on

the work component of their future. This is consistent with the findings of Farmer and Associates (1997) and Weiss (1990), who concluded that men tended to place work at the center of their lives.

In summary, the women described a connection of time between their future family and career goals. This connection resulted in limiting their aspirations because allotting time to family meant altering their career goals.

Social Reproduction

In 1968, Josselson (1987) was ridiculed by her students in an introduction to psychology class she was teaching for suggesting that women could have a career. Students in her class questioned, "who would take care of the children?" The message was clear at the time that the primary role for middle-class women was to raise their families.

In 1999, the overt message was different. Laws have been passed through the civil rights movement to allow women equal access into the workforce. Also, efforts have been made in educational settings to remove sexist themes from career guidance (Farmer, 1995). Women were free to select a challenging career of their choice.

Even with the progress of the women's movement over the last 50 years encouraging a variety of career options for women to choose from, the women in this study placed the family as the focal point in their future vision. This mirrored the findings of similar studies (Holland & Eisenhart, 1990; Josselson, 1987). While the similarities between the studies were not surprising, the consistency in the findings across decades was unforeseen.

Holland and Eisenhart (1990) interviewed women in the early 1980s. They found that the women expressed positive feelings about the role of their mothers staying at home. More importantly, the women seemed to take for granted their traditional role in the family. Holland and Eisenhart asserted that the women found romantic relationships more important than academics.

Additionally, Josselson (1987) interviewed college women from 1971-1973. The women in her study sounded remarkably similar to the women interviewed in 1999. Josselson asserted that the women she interviewed identified and relived the roles of their mothers. When she interviewed them 10 years later, the only major difference in roles between the women she interviewed and

their mothers was that these women, unlike their mothers, did work outside the home, but it was secondary to their primary role of caring for the family.

The studies discussed above showed similarities in women's roles over three decades. In many ways society still emphasized that women's roles were in the home. Women in the 1990s were still the primary caretakers of the children (Glenn, 1998). Critics have been writing about the destruction of the family and the dangers of daycare. Etzioni declared in The Spirit of Community (1993) that the family unit was neglecting the children. While the manifest message may have encouraged women to explore several options for their future, the latent message society was modeling in the South, through homes and churches, was likely to be similar to the message that was given verbally over 30 years ago when Josselson (1987) polled her class.

As the women in this study discussed their ideal future lives, they appeared shallow as they described their desire for an ideal life that included material possessions, financial security, and an ideal family with few or no problems. In taking a closer look it became evident that the women and men were simply reproducing

the life they were taught through their family and community structure.

The women in this study never expressed an understanding or interest of the world beyond the area where they were raised. They did not discuss alternative lifestyles or beliefs. The women never expressed ideas or curiosity about their husband being the primary caretaker of the children, or other alternative ideas about raising a family. Fourteen women were going to put family first and two women were not going to have children.

McCandless (1999) stated that Southerners as a group were likely to stay in the Southern Region and were more traditional than the rest of the nation. Their experience may not have extended past a 100-mile radius from their place of birth. One student in the current 1999 study stated, "I love (location) and I don't want to leave. I've always lived here and I want to stay."

Further, the university where this study took place participated in the CIRP Freshmen Survey from 1993-1996. The data from the university where the study took place suggested a pattern similar to the conclusions of McCandless (1999) who reported that women in the south

have always held a more "fundamentalist religious orientation" than the rest of the nation (p. 123). In 1996 twice as many students (62%) at the university where the study took place reported being a "Born Again Christian" compared to 31% of the national norm group. Also, compared to the 1996 national norms, 12% percent fewer students reported drinking beer, 10% percent fewer students felt abortion should be legal, and 12% fewer students felt pre-marital sex was "okay" (Based on unpublished data from the Cooperative Institutional Research Program, UCLA, 1996).

Churches encouraged the women to take a subordinate position in the household. In 1999, 54% percent of the entering students at the university where this study took place declared their religious denomination as Baptist. With this in mind, it is revealing to note the 2000 Faith and Message Statement of the Southern Baptist Convention concerning the wife's role in the family:

A wife is to submit herself graciously to the servant leadership of her husband even as the church willingly submits to the headship of Christ. She, being in the image of God as is her husband and thus equal to him, has the God-given responsibility to respect her husband and to serve as his helper in managing the household and nurturing the next generation.

As the women in this study described their role, it became apparent that, what on the outside appeared to be a selfish view of their future, they viewed as selfless in that they were willing to forgo their education and career goals in order to put their family first.

The following statements by two different students illustrated the women's view of putting others first.

...my husband and family will come first, and I have absolutely no problems with staying at home with my children while they're young and going back to work after that...

...I would never want to have a child during school because you take away from the child too much plus my husband...I don't want to do that to a child...

The pull toward the latent messages modeled by their society bound the women to a traditional lifestyle for women similar to the one their mother showed them. Regardless of overt messages about endless opportunities for their future, the women found their approval from selecting a life that those around them lived. Josselson (1987) explained girls found approval from their families by espousing similar "values and priorities" (p. 172). Girls pleased their mothers by being similar. "To a little girl, being liked means being like" (p.171).

The women interviewed for this study still put motherhood and taking care of the family as their primary role, leaving them to alter their career ambitions, making them similar to the women Josselson (1987) interviewed in college almost 30 years earlier.

One way to explain the similarities between Josselson's (1987) students and the students interviewed in 1999 for this study is the Social Reproduction Theory. Lorber (1994) defined social reproduction as "passing on the family's cultural capital to children - style of life, and ethnic rules, and social position" (p.175).

For women in industrialized societies, social reproduction placed them at the center of the family. This did not mean that women did not have a career, but it did not take priority in their lives. Further, placing the family first meant the women settled for less prestigious and less lucrative careers. Conversely, men placed higher priority on their careers (Lorber, 1994). Glenn (1998) stated that placing women in the private sector, the family, relegates them to subordinate positions. The public sector role, work, is more often dominated by men and has more economic rights and privileges.

The women in this study voluntarily set the stage for themselves to have traditional roles in their families in the future. The latent messages from society caused the cycle to continue through each generation with the women modeling the lives of their mothers.

Recommendations for Practitioners

Twelve of fourteen women in this study ultimately changed their career paths to careers that yielded less prestige and economic rewards. While there are several valid career choices, the women in this study reported selecting new majors and careers based on the need for time for their future family, or their belief that they could not achieve in a certain area. They expressed conflicting messages that made it difficult for them to make decisions, and ultimately, based life choices on latent and manifest messages from others.

In order to prevent college men and women from limiting their options, this section lists some recommendations that university faculty and staff can implement at their institutions. The five major areas to be discussed are diversity of faculty, mentors, peer groups, experiences, and life-planning courses.

Diversity of Faculty

The findings in this study, as well as other research (Seymour & Hewitt, 1997; Hackett, 1995), showed that the women were strongly influenced by others. Therefore, it is important at the college level to make conscious efforts to recruit a diverse faculty in areas where it is deficient, e.g. more male faculty in nursing, more female faculty in SME fields, and Hispanic and African-American faculty where needed, thus providing role models for all students in all areas.

Particularly in nontraditional fields for women, female faculty are crucial to student success (Seymour & Hewitt, 1997). Seymour and Hewitt cautioned that women faculty were needed so that the students can find women they can identify with and feel that they belong in the major.

Mentors

Further, mentors in nontraditional fields for women are critical to their success. Research has shown that women tend to need positive relationships with others to find value in what they are doing (Farmer & Associates, 1997; Josselson, 1987; Seymour & Hewitt, 1997). Additionally, watching someone similar achieve can be

very effective in improving self-efficacy (Bandura, 1995; Hackett, 1995).

One reason women reported changing their major was they did not think they could balance their chosen career with the rest of their life components. Hackett (1995) and Seymour and Hewitt (1997) stated that it is important for women to see other women achieve in their careers as well as achieve in their families and personal lives. Successful women that Rimm (1998) interviewed reported having positive role-models and mentors that encouraged their success.

While mentors can come from various sources, Seymour and Hewitt argue that for mentoring to make a difference in women's achievement, the main commitment must come from the faculty.

Peer Groups

Both Astin (1993) and Holland and Eisenhart (1990) have shown that college peer groups have a strong influence on college students. Over time in college students tend to become more like their peers. Therefore, it is important to have a large concentration of peers in the major to foster a peer culture that

supports the major and encourages success in the field (Astin & Astin, 1992).

Efforts can be made by the institution to ensure that this culture is fostered among students in non-traditional fields through organizations and clubs, support groups, and placement of majors in one particular section of a residence hall (Astin & Astin, 1992).

Experiences

The men in this study were more likely to select their majors based on interests and experiences while the women in this study were more likely to select their majors based on the influence of others. The women in this study were not as likely as the men to report having previous experiences in their selected majors. This is another component of self-efficacy, which is having previous experiences that foster feelings of confidence that a student can be successful in a particular field.

Farmer and Associates (1997) suggested giving women "hands on experiences" in certain fields and observing and interviewing successful women in nontraditional fields. Astin & Astin (1992) and Hackett (1995) stated that women could gain some of these experiences through

research opportunities within the departments and internships in the field.

Life Planning Courses

As stated above, the majority of women in this study did not make independent decisions. Instead they were guided by the latent or manifest messages of others. Courses on life planning can assist in helping students learn how to make decisions and how to attain life goals. At the institution where the study took place a Career and Life Planning Course is taught. Some components of the course include decision-making skills, self-awareness exercises, and learning to make obtainable goals with measurable objectives. Teaching students how to set goals with measurable objectives increases the likelihood of success (Sukiennik, Bendat, Raufman, 1998). Farmer and Associates (1997) found that similar courses in various schools across the country increased self-efficacy and increased students' decision-making abilities.

There are no magic answers in assisting students to examine a broad range of options as they make decisions about their future. However, the suggestions above can assist in increasing self-efficacy for women in non-

traditional fields and improve students' decision-making skills, which will hopefully help them examine a broader range of life options as they make decisions about their future life paths.

Recommendations for Further Research

The descriptions given by male and female college students on how they describe and decide upon their life paths have given some insights into why men and women were making different life choices. The findings, however, were not generalizable to the entire population without further research. Also, the findings of this study have raised new questions that could be pursued in further research.

Recommendations for further research include:

1. Replication of this study at other institutions in other regions of the country to investigate regional differences in the described future life paths of college students.
2. Replication of this study with a primarily African-American college sample. Two African-American females in this study described different future goals than the larger group.

Research from Holland and Eisenhart (1990) and Seymour and Hewitt (1997) have also shown that African-American women have different reasons than Caucasian women for persisting or not persisting in selected majors.

3. Replication of this study in 20 years to examine change over time in the way men and women describe and decide upon their anticipated life paths.
4. Follow-up with the students from this study in 10 years to investigate if they have achieved their future vision as planned.
5. Investigate the effect that female university administrators and professors acting as role models and mentors have on the persistence of female undergraduate students in non-traditional majors. Josselson (1987) stated that females must have a human relationship to find any activity worthwhile.

Conclusion

In conclusion, several factors distinguished the anticipated choices of women from those of their male

counterparts. The women discussed starting college primarily influenced by others in selecting their major and one-half did not describe any individual experiences to reinforce this decision. This did not appear to be a strong foundation that would keep them committed to their chosen field. The men, on the other hand, were more likely to select majors based on their interests and childhood experiences. They appeared to have a better understanding of their major from the outset.

Without a firm foundation in their original major selection, it appeared that other priorities or distractions could easily lure the women away from their original majors. The women changed their goals because of perceived lack of ability to achieve or because they chose motherhood over a time-consuming career.

These factors placed the women on a track for a traditional, female role in society. They expected to make less money and work less time in the public sector, leaving them dependent on their husbands for primary financial support. They were committed to giving time to a family that was not yet a reality.

The women were setting the stage to live a similar life to the one they had as children. As Josselson (1987) stated,

Throughout history, a woman's place has been defined by her society. Even when these definitions are more implicit, women are susceptible to cultural definitions of how they ought to be and sensitive to social guidelines that tell them whether they are doing a good job of being a woman (p. 17).

Regardless of opportunities and choices afforded to women in 1999, the women interviewed in this dissertation were committed to repeating the cycle of their families' history.

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Appendices

Appendix AInterview Guide

- I. College
 - A. When you first came to UTC, what were you planning to do? Why?
 - B. Reflecting back, how would you evaluate that decision? Why?
 - C. Have you changed your major? What were your thoughts, when you were changing majors? (I will explore this question for each major the student has held.)
 - D. What are you currently planning to do? What thoughts led you to this decision?
- II. Future
 - A. What are your plans for the next few years?
 - B. What do you wish for most in your future?
 - C. What do you worry about most in your future?
 - D. What do you look forward to in your life after college?
 - E. What do you fear the most about your life after college?

Areas of focus for probes

- 1. Family considerations
- 2. Career/ Major
- 3. Peer groups
- 4. Romantic relationships
- 5. Self-efficacy

Appendix B
Informed Consent Form
Students Future Plans after College

PURPOSE

The purpose of this study is to describe and compare how undergraduate men and women describe their future life plans after graduation. The study seeks to determine why men and women are making different life choices concerning majors, careers and family in their early adult lives. The researcher will conduct an interview that will last approximately 45-60 minutes.

With your permission, the interview will be audiotaped and transcribed. Approximately 30 undergraduate students will be interviewed.

RISKS

There are no anticipated risks to you as a result of participating in this study. Your status at the university will not be affected by either participating or not participating.

CONFIDENTIALITY

The information in the study records will be kept confidential. Tapes will be destroyed after the study is completed. No identifying information will be used in the transcripts or any other oral or written documents that could identify you. The researcher will store consent forms at a secure location in a locked file cabinet in room 233 Claxton Addition on the UTK campus for three years before being destroyed.

CONTACT

If you have any questions about the study, the procedures followed, or experience any adverse effects as a result of participating in the study, you may contact the principal researcher, Ellen Neufeldt. The researcher can be reached by phone at 423-755-4260, e-mail at Ellen-Neufeldt@utc.edu, or in writing at University of Tennessee at Chattanooga, 215 University Center, 615 McCallie Avenue, Chattanooga, TN 37403. If you have any questions about your rights as a participant, contact the Compliance Section of the Office of Research at 423-974-3466.

PARTICIPATION

Your participation in this study is voluntary. You can decline to participate in this study without any penalty. If you agree to participate, you may withdraw from this study at anytime without any penalty. If you withdraw before data collection for the study is completed, your data will be returned to you or destroyed.

CONSENT

I have read the above information and agree to participate in this study. I have received a copy of this form.

Participant's name (print) _____

Participant's signature _____

Date _____

Appendix CTranscriber's Pledge

Appendix C

Confidentiality of Transcriber

I, Anne Neufeldt promise to maintain the information on the tapes to be transcribed in total confidence. If any questions need to be asked, I will ask them only to the researcher, Ellen J. Neufeldt.

Anne Neufeldt
Signature

8-25-99
Date

Appendix D

Office of Records Consent
 THE UNIVERSITY OF TENNESSEE
 AT CHATTANOOGA



June 9, 1999

Appendix D

Office of Records and Registration
 128 Hooper Hall Dept 5155
 615 McCallie Avenue
 Chattanooga, TN 37403-2598
 (423)755-4416

Permission to Conduct Research

As Director of Records and Registration at The University of Tennessee at Chattanooga I, Brenda Davis, grant permission for Ellen J. Neufeldt to conduct research related to her doctoral dissertation on the university campus.

I understand and agree that:

The purpose of this study is to describe and compare the thought process as reflected through the students goals and priorities in the description of their life choices;

This research will involve interviews of current UTC student with 60 hours or more;

The researcher will obtain a printed list of students who:

1. have completed 60 or more credit hours
2. have an ACT score of 23 or higher
3. entered UTC on or after the 1995-96 school year
4. gave permission to release directory information;

The researcher will have the following information on the printout:

1. students' home and local address and telephone numbers
2. students' ACT or SAT scores
3. students completed hours at UTC
4. a list of majors the student has held at UTC;

The student printout will be returned to the records office upon completion of the research;

The college and individual participants will be given pseudonyms to protect confidentiality of all participants;

All interviews will be audiotaped and transcribed;

All field notes, interview tapes, transcriptions, surveys and permission forms will be used exclusively by the researcher and will be kept in a locked file cabinet in her office for a period of three years, after which they will be destroyed;

Each participant will be asked to sign a consent form indicating willingness to participate in the study. Each participant will be given an opportunity to ask questions of the researcher prior to the interview, and each participant may refuse to answer any question and may withdraw from the study at any time for any reason without penalty.

My signature below indicates my agreement to allow the research project to be conducted at UTC.

Brenda Davis

Appendix E**FORM B**

IRB # _____

Date Received in Office of Research _____

THE UNIVERSITY OF TENNESSEE, KNOXVILLE**Application for Review of Research Involving Human Subjects**

I. IDENTIFICATION OF PROJECT**A. Principle Investigator**

Ellen Neufeldt
918 Sherry Circle
Hixson, TN 37343
(423) 877-6576
Ellen-Neufeldt@utc.edu

Education: Leadership Studies

Faculty Advisor

Dr. Jeff Aper
Leadership Studies in Education
233 Claxton Addition
Knoxville, TN 37996-3400
(423) 974-6151
Aper@utk.edu

B. Project Classification

Dissertation project

C. Project Title

Anticipated Life Paths: A Study of Male and Female College Students

D. Starting Date

Upon IRB Approval

E. Estimated Completion Date

May, 2000

F. External Funding

N/A

II. PROJECT OBJECTIVES

The purpose of this study is to describe and compare the thought process of male and female college students as reflected in the description of life choices. This study will examine the goals and priorities of male and female college seniors by looking retrospectively at the choices made during their college years. The questions the study seeks to answer are:

1. How do female and male and female undergraduate students describe and decide upon their life paths?
2. How do male undergraduate students describe and decide upon their life paths?
3. How do the life paths of females compare to the life paths of males?

The portions of the study requiring human subjects will be an interview with the researcher, which will last approximately 45-60 minutes.

In addition, the researcher will select the participants based on their entering major and select participants, which have an ACT of 23 or higher.

III. DESCRIPTION AND SOURCE OF RESEARCH PARTICIPANTS

1. Participants will be male and female students of the University of Tennessee at Chattanooga.
2. The researcher has contacted UTC and has gained permission to interview these students. Interviews will be strictly voluntary. Students will be contacted by the researcher and asked to participate. Students will be given and informed consent form before the interview and will be free not to participate
3. Student participants will be 14 females and 14 males since the study is focusing on the comparison of the students' life choices.
4. It is anticipated that up to 30 students may be interviewed.

IV. METHODS AND PROCEDURES

Interviews will take place outside of class on a voluntary basis with no incentive other than to be a part of the study. The interviews will require 45-60 minutes. The information on the Informed Consent Form will be discussed, and participants will have an opportunity to ask questions before signing. They will be given a copy of the consent form. Interviews will be audiotaped to help the interviewer to recall all of the pertinent information, including varying inflections and tones of voice. The tapes will be transcribed, by someone other than the researcher, and then destroyed. Complete

confidentiality will be given to each participant in the study. The interview will consist of open-ended questions. The data will be analyzed for common themes.

V. SPECIFIC RISKS AND PROTECTION MEASURES

There are no anticipated risks expected to be encountered by the participants while engaged in this project. Pseudonyms will be used to ensure confidentiality. As stated previously, audiotapes will be destroyed after transcription, and consent forms will be stored in a secure location for three years before being destroyed.

VI. BENEFITS

There are minimal risks to the participants in this study. There are no direct benefits to the participants in the study at this time. It is hoped that the information provided will give insight to why men and women make different choices about their lives.

VII. METHODS FOR OBTAINING "INFORMED CONSENT" FROM PARTICIPANTS

At the institution where the research is being conducted, verbal approval and written approval has been obtained by the institution to conduct the research on the campus. Each participant of the study will be asked to sign a consent form, which explains the purpose and methodology of the study. The elements of the consent form and the explanation thereof will precede the actual interview as well as the participant's signature on the consent form. Participants will be given an opportunity to ask questions before proceeding. They will also be informed that they may refuse to respond to any questions and may withdraw from the study at any time they choose without penalty.

VIII. QUALIFICATIONS OF THE INVESTIGATOR

The principal investigator, Ellen J. Neufeldt, is an Ed.D. Candidate in the Leadership Studies unit of the College of Education at the University of Tennessee, Knoxville. This project will be conducted under the direct supervision of Dr. Jeff Aper, doctoral committee chair and specialist in the area of leadership studies.

IX. ADEQUACY OF FACILITIES TO SUPPORT RESEARCH

The principal investigator's personal recording, storage and computer systems constitute adequate support for the project. Permission has been granted to conduct the interviews on the university campus (see attached).

X. RESPONSIBILITY OF THE PROJECT DIRECTOR

By compliance with the policies established by the Institutional Review Board of The University of Tennessee, Knoxville, the principal investigator(s) subscribe to the principles stated in "The Belmont Report" and standards of professional ethics in all research, development, and related activities involving human participants under the auspices of The University of Tennessee, Knoxville. The principal investigator(s) further agree that:

1. Approval will be obtained from the Institutional Review Board prior to instituting any change in this research project.
2. Development of any unexpected risks will be immediately reported to the Compliances Section.
3. An annual review and progress report (Form R) will be completed and submitted when requested by the Institutional Review Board.
4. Signed informed consent documents will be kept for the duration of the project and for at least three years thereafter at a location approved by the Institutional Review Board.

XI. SIGNATURES

Principal Investigator Ellen J. Neufeldt

Signature _____ Date _____

Student Advisor Dr. Jeff Aper

Signature _____ Date _____

XII. DEPARTMENT REVIEW AND APPROVAL

The IRB departmental review committee has reviewed and approved the application described above. The DRC recommends that this application be reviewed as:

☐ Expedited Review -- Category (ies): _____

OR

☐ Full IRB Review

Chair, DRC _____

Signature _____ Date _____

Department Head _____

Signature _____ **Date** _____

Protocol sent to Compliance Section for final approval on (Date) _____

Approved: Compliance Section
Office of Research
404 Andy Holt Tower

Signature _____ **Date** _____

VITA

Ellen Neufeldt was born in Lansing, Michigan to Canadian parents. She grew up in Cookeville, Tennessee. She attended Tennessee Technological University where she received a Bachelor of Science in Business Administration and a Master of Arts in Educational Psychology and Counselor Education.

In 1995 she accepted a position as Assistant Dean of Students in the Student Affairs Division at the University of Tennessee at Chattanooga. She had the opportunity to interact with students as they made important decisions about their lives during and after college.

She began the pursuit of her Doctorate in Education in 1995 with a concentration in higher education administration. Her degree was awarded from the University of Tennessee at Knoxville in 2000.