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TRYING THEIR WINGS:
ASPIRATIONS, ATTRIBUTIONS, AND VOCATIONAL
DECISION-MAKING AMONG RURAL HIGH SCHOOL GRADUATES

by
Carolyn Germain Smith
B. Ed., University of Alberta, 1977

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS (EDUCATION)
in the Faculty
of
Education

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SIMON FRASER UNIVERSITY
July 1992

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TRYING THEIR WINGS: ASPIRATIONS, ATTRIBUTIONS, AND VOCATIONAL DECISION-MAKING AMONG RURAL HIGH SCHOOL GRADUATES

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July 21/92

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ABSTRACT

The purpose of this study was to examine a small group of students in depth and provide further information and/or confirmatory data about the factors that influenced their vocational aspirations and decisions. One of the purported reasons for the current discrepancy between male and female wages is the self-handicapping that many girls exhibit when they complete high school. The wage-gap between Canadian males and females can, in part, be accounted for by the vocational decision-making patterns made by students. During the 1970s, attribution theory was used to explain women's underachievement through the apparent female pattern of externalizing success and internalizing failure, but current research suggests that gender is not as important a variable in attribution style as achievement level is.

This study investigated attribution styles, aspirations, and vocational decision-making patterns among rural youth. Thirty-six high school students were interviewed twice: once at the time of their graduation, and again a year later. They were asked about short and long term aspirations, vocational experiences, role models, family life preferences and migration intentions. The data were analysed by gender and by scholastic achievement level.

Gender differences were observed in migration intentions, role models, and parental influences on vocational planning. Scholastic achievement levels in high school appeared to be related to employment levels in the twelve months following graduation.
It is recommended that high school counselling programs be more responsive to the affective element in their clientele's vocational decision-making process, and introduce programs at the beginning of high school to assist students in developing goal-setting skills. More attention and energy needs to be devoted to the General Diploma students.
DEDICATION

To Delburne School's "Class of 1989"
and to all the other young people
1973-1987
who filled my classroom
with their ideas, their enthusiasm, and their laughter.
It was a privilege to be your teacher.
ACKNOWLEDGEMENTS

I wish to express my appreciation to my supervisory committee: Drs. Adam O. Horvath, Jack Martin, and Ronald W. Marx for their guidance and encouragement; to Jeff Sugarman, Janet Beggs, and Dr. Tim Siefert for the assistance they provided in data analysis; and to my family, my friends, and my counselling cohort for their continued confidence, interest, and support.
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CHAPTER I:
INTRODUCTION AND OVERVIEW

"Life is what happens to you while you're busy making other plans."
John Lennon

Most of the questions in this study arise from my experiences during the fourteen years I taught Grade 10, 11, and 12 students in a small, rural school in Central Alberta. During that time I enjoyed an opportunity that teachers in urban areas rarely experience: I observed the lives of several hundreds of my students after they graduated. Some students moved away, but their parents remained in the rural area and recounted the experiences of their adult children. Many former students became my neighbors and those who remained in the community often had news of their classmates who had migrated to larger centers for education and work. This rich tapestry of life stories was fascinating to me and I never tired of learning what my former students were doing. I had been privileged to know them when they were filled with the idealism of youth and I was eternally interested in learning how each story was unfolding. Some students were living far different lives than they had anticipated; some were doing exactly what they had predicted they would do.

I began to notice that, year after year, there appeared to be a substantial number of bright, articulate girls who had worked very hard to graduate from high school with university entrance qualifications and then ended up in low-paying, unskilled jobs. I was attempting not to impose my criteria for success on these young women, but I had seen what they were capable of achieving and I believed that they and the world were poorer
because they had not developed themselves to their full potential. When one class valedictorian - a girl who had achieved an honors average in her matriculation subjects - enrolled in a secretarial school my questions began to crystallize. What was happening in many girls' lives that precluded further education and occupational status? Was it the scarcity of professional women role-models in the community? Reluctance to leave the security of the small town? A belief that girls didn't need higher education because their future husbands would support them? Then the questions broadened: were the vocational aspirations of rural girls any lower than those of urban girls? I was bristling over the statistic that fully-employed Canadian women were earning 62¢ for every dollar that men were earning, but at the same time I could clearly see a big reason why: in the community I lived in, many girls appeared to have lower levels of aspiration than those expressed by their male peers and were handicapping their earning potential by not continuing their educations, by entering into marriages at young ages, and/or by going directly from high school to unskilled, poorly-paid work.

Researchers during the 1980s examined gender differences in occupational behavior. Perun and Bielby (1981) suggested that the traditional human development model used to explain female occupation patterns has changed over the past quarter century and requires updating. Gilligan (1982) supported the contention that the traditionally accepted models of vocational behavior do not apply to women because gender strongly affects career development. There is a large body of literature to support the belief that men and women have different attributions about success, different needs for attachment and achievement, and different developmental patterns. Some of this literature will be discussed in Chapter Two.
This study is an attempt to learn more about the vocational decision-making process of rural young men and women as they make the transition from school to work. The members of the 1989 senior class at a rural high school were interviewed during the week of their graduation regarding their vocational aspirations, the people and things that had influenced their decisions, their perceptions of optimism and control, and the attributions they made for their decisions. They were interviewed again a year later to determine how their actual experiences compared to their aspirations and what attitudinal changes had occurred.

The school the participants attended is situated in a village of 450 people. About 18% of the students live in the village and the remainder are bussed in to the school from surrounding farms, acreages, and hamlets. The most common occupations in the region are farming and farm-related activities such as grain elevator operator, mechanic, and bulk fuel agent. Many women from the area commute thirty miles to the city where they work in service jobs at hospitals and hotels. The professionals in the district are teachers and nurses. The village population also includes many retired people and, in recent years, a number of families receiving social assistance who have been attracted by the relatively low cost of housing. All the students are of European ancestry, as are 99% of the village residents.

The purpose of this study was to examine a small group of students in depth and provide further information and/or confirmatory data about the factors that influenced their vocational aspirations and decisions. One of the purported reasons for the current discrepancy between male and female wages is the self-handicapping that many girls exhibit when they complete high school. It is hoped that this study will provide more information about this process, if it exists. According to relevant literature, (e.g. Archer, 1985;
Chandler, Shama, & Wolf, 1983; Hubner-Funk, 1983) it appears that girls feel and exercise less control over their occupational choices than boys do. This study addresses this issue, predicting that boys will report the most self-perception of control over their post-secondary school lives. If the participants in this study follow the occupation and attribution patterns described in the literature, low ability girls will have the greatest tendency to make external attributions for their decisions.

Information was also collected regarding the following questions:

What are the occupational aspirations and expectations of rural high school students? To what extent do these students perceive that they have control over their futures? What is the degree of optimism and pessimism regarding the future expressed by this group of students? What attributions do these students make regarding their vocational decisions? Do the answers to these first four questions appear to be related to gender and/or to academic stream? What attitudinal changes occur in the subjects during the first year following graduation?

Additionally, confirmatory information was sought regarding the intended patterns of migration for rural youth, as described in the literature. Are the migration intentions of these students similar to the pattern described by Morrisson (1975) who said most rural moves are made by previous migrants? Bogue (1969) said that out-migrants from rural areas tend to be disproportionately better-educated and more skilled. The present study will attempt to corroborate this finding. Further, possible gender differences in migration intentions will be examined.

Several studies (Carpenter & Western, 1984; Dunne, 1980; Marjoribanks, 1986) have attempted to find correlations between gender, social class, family environments, and adolescent vocational aspirations.
Does parental occupation status appear to affect adolescents' participation in post-secondary education? In this study, the following issues were monitored: effects of parental occupational status on further education, whether maternal employment affects girls and boys similarly, and the relationship of parental occupation status to advice giving. Further, after a year, how do students' occupational goals compare to the mean of their parents' occupational status? Is there a gender difference in these means?

Archer (1985) states that neither girls nor boys in their final year of school give much thought to the difficulties of combining careers and family life, while Corder and Stephan (1984) say that the possibility of future family responsibilities does limit female life-style choices. Do the data from this study support either of these views?

On a broader level, many economists are forecasting an imminent decline in population in rural areas as the family farm ceases to be a viable production unit. If the most pessimistic of these scenarios happens as predicted, and the rural way of life changes dramatically over the next decade, studies such as this one may be valuable for the information they provide. It is my hope that this study will be a snapshot, taken with a wide-angle lens, of the aspirations, expectations, and experiences of one small group of rural youth as they leave school and encounter the world.
CHAPTER II
LITERATURE REVIEW

In order to provide a context from which to examine research on gender differences in occupational decision making and attributions, this chapter opens with a brief overview of various theories that describe the transition from school to work, then describes gender differences that have been observed in occupational decision making, effects of parental influence, aspiration, and lifetime achievement. Findings regarding the effects of rural locale on occupational decision making are also discussed. Finally, attribution theory is briefly examined and a detailed review of the literature relating to gender differences in attribution concludes the chapter.

The Transition from School to Work

**Original theory.** The transition period from school to work has been studied widely. Some of the original theory in the area was written by Erik Erikson who described this psychosocial crisis in his 1968 book, *Identity: Youth and crisis*. He states that in late adolescence an individual's psychosocial responsibilities include Task Identification and Anticipation of Roles. He writes "The end of childhood is...a crisis of wholeness. The young person...must feel a progressive continuity between that which he has come to be during the long years of childhood and that which he promises to become in the anticipated future; between that which he perceives himself to be and that which he perceives others to see in him and expect of him...Here society has the function of guiding and narrowing the individual's choices" (1968, p. 87). Erikson's earlier writings in this area, notably his 1956 article "The problem of ego-
identity" and Childhood and society (1963), influenced James Marcia (1966) who identified and described four ego states on an ego-identity continuum. Marcia labelled these four ego states "Identity Diffused" (exhibits a lack of commitment and concern regarding occupational choice), "Foreclosed" (has not undergone a crisis of indecision but has made a firm commitment to an occupation, often based on parental goals and expectations), "Moratorium" (in the midst of the crisis period and struggling to make a decision), and "Identity Achieved" (has gone through the crisis, weighted several options, and committed himself or herself to an occupation). Marcia's work is viewed as a foundation for studying youth in transition and is widely cited.

Gender differences in occupational development. Archer (1985) has taken Marcia's continuum and applied it to male and female subjects to determine similarities and differences in the identity crisis as experienced by gender. She describes the decision process as more difficult for girls because they have more complex identities to establish and more societal norms to consider than boys do. Archer postulates that there are three career orientations that categorize females: Traditional (consistency with conventional expectations), Liberated (choices made irrespective of societal conventions), and Transitional (vacillation between the other two) (p. 295). Hartman et. al (1985) described three career-decision categories: decided, changing, and chronically undecided, stating that these apply similarly for males and females. But the belief that the process is similar for both genders is not one that is widely held. Gilligan (1982) is one of several theorists who contend that the traditionally accepted models of vocational behavior do not apply to women because of the strong effect gender has on career development. Horner (1972, p. 172) describes a major difference by stating "The expectation that negative
social consequences will follow success leads to a fear of success on the part of young women and to their deliberate underachievement in education and occupationally relevant activities." On top of the difficulties in the job market resulting from sex-typing and discrimination, and the problem of blending parental responsibilities with job demands, women appear to add the self-handicapping behavior of setting low occupational goals for themselves because to be occupationally successful is at odds with the definition of femininity accepted by many adolescent women (Horner, 1972).

Gilligan explains this female fear of success through a feminist re-examination of the widely-accepted work by Erikson on identity formation. According to Gilligan, the genders have different understandings and experiences regarding the relationship between self and others. Males seek separation from others and value autonomy, while females seek connection with others and value interdependence. The psychodynamic reasons for this difference are explained by Chodorow in The reproduction of mothering, (1978). Stated briefly, Chodorow's thesis is that in traditional families where the mother is the primary caregiver, mothers represent regression and lack of autonomy. A boy associates these issues with his gender identification as well. Dependence upon the mother, attachment to her, and identification with her represent that which is not masculine; a boy must reject dependence and deny attachment and identification (p. 181).

Women's relatedness and men's denial of relation as they form their masculine identity are appropriate for the traditional work and family patterns. Women's roles are basically familial, and concerned with personal, affective ties (p. 178). Though men are interested in being husbands and fathers, and most men do occupy these roles during their lifetime, their chief identity comes from their participation in the occupational world.
Erikson's description of identity resolution followed by intimacy seems to be typical of males but not of females: for females, identity and intimacy are fused and mutually defining. Men tend to describe themselves through their work and achievements; women tend to define themselves through their relationships to others (Gilligan, 1982, p. 86). In her re-examination of Kohlberg's work on moral development, Gilligan pointed out that when women make decisions they are much more likely to take relevant others into consideration than are males. As men and women mature, they become much more alike in this realm, but the biggest divergence appears to be between the ages of 21 and 26, which is when most people make their major occupational decisions. The general pattern for men appears to be to establish themselves in a career, or at least begin this process, before seeking intimacy and taking on the responsibilities of a family. Many young women see the major task to be accomplished at this age as the establishment of intimate relationships: career considerations are second. If Chodorow's theory is correct, these patterns are established in infancy and early childhood, and may be almost imperious to change. It appears that, as long as our present system of child-rearing is in place, males and females will have far different attitudes regarding autonomy and connection. In the world of work, the male pattern is presently more functional: it yields higher earnings, achievement, and power. Many females follow a pattern of low early aspirations which may later be adjusted when life events force a re-examination of earlier beliefs. Divorce, single parenthood, widowhood, a difficult marriage, financial reality, boredom, permanent single status: these are all reasons cited by women who, in their thirties and forties, re-assess their earlier occupational plans and set their sights higher. Our society needs to re-evaluate the messages that boys and girls receive while they're growing up about work. Most boys are very aware that they will work for most of
their adult lives and set about establishing themselves in careers in their early twenties, while fewer girls internalize this message or exhibit vocational behavior that is in accordance with this reality.

The observations that Gilligan and Chodorow have made on gender differences in vocational aspirations have been supported by Cochran (1983) who found that among Grade 12 students boys tended to have stronger career orientations than girls; by Hubner-Funk (1983) who found that most unemployed teenagers are girls although they tend to have more schooling than boys; Kerr (1983) who noted that girls, even when they are academically gifted, choose from among fewer occupations than boys; and Saha (1985) whose study found that girls tended to achieve higher grades in school than boys but have lower career expectations.

Sharp and Roberts (1983) are British researchers who believe a different view is needed to examine the transition from school to work: they claim that jobs lead to ambitions and not vice versa. According to Sharp and Roberts, because girls are more likely to find themselves in low-paying occupations they set their sights lower.

**Parental influence and gender.** Carpenter and Western (1984) are among those who agree that the process is different for males and females and also state that parental influence varies by gender. In their study of 1286 Australian school-leavers they found that fathers' occupation had a positive effect on boys' further education but not the same linear effect on girls. In fact, they found that girls are just as likely to pursue tertiary education if their fathers are clerical and service workers (p. 263). Having an educated, fully-employed mother had a positive effect on girls' career aspirations but among boys having
a better educated mother who was not employed had the most positive effect (p. 265).

**Gender and aspiration.** Researchers have hypothesized that traditional sex-role socialization leads women to lower their vocational aspirations. Gilligan's belief, contrary to Erikson's, is that life patterns are different for young men and women: during their twenties the major developmental task for males appears to be establishing a career, while for their female peers the major task appears to be establishing a marriage bond. Corder and Stephan (1984) believe that women's occupational choices are characterized by a two-part process, and that, early in adolescence, females begin to restrict their aspirations to those which will enable them to combine marriage and motherhood with a career. In late adolescence, when males and females begin to crystallize their decisions, females have already eliminated most career choices from consideration because of their perception of future family responsibilities. Corder and Stephan examined their hypothesis by administering a questionnaire to 948 eighth through twelfth grade students. Females were asked about their future plans for combining labor-force participation, marriage, and motherhood while males were asked how they would like their future wives to combine these roles. About 70% of the females aspired to combine all three roles, taking minimal time away from the labor force to raise preschool children. Only about 40% of the males wanted their wives to follow this pattern (p. 394). The researchers stated that females are aware of these attitudes among men and take them into consideration when planning careers, a claim that was supported earlier by the work of Hawley (1971).

A path analysis of Corder and Stephan's data indicated that the model of female decision-making appears to be more complex than that of males.
Having a mother who is employed in the labor force; the perception that the spouse desires a high status job for the respondent; valuing work over family; the belief that employed wives have more prestige than those who do not work outside the home; and non-traditional sex-role attitudes were associated with the greater probability that a female would aspire to combine marriage, motherhood, and labor-force participation (p. 397). This American research supported the findings in the Australian work by Carpenter and Western (1984): both studies found that maternal employment has a positive effect on girls' aspirations while maternal education without maternal employment has a positive effect on boys' aspirations.

Unfortunately, Corder and Stephan do not indicate how and if attitudes towards careers change over time among their subjects. It would be informative to compare the attitudes of the eighth-grade students to those of the twelfth-grade students, and it would seem that this data would lend support to their hypothesis regarding a two-stage process. They concluded their study by stating that it appears that males do not make an initial lifestyle decision about combining work and family, and do not limit potential occupations on the basis of possible conflict with family roles, while females as young as thirteen are already concerned about these issues.

Gottfredson (1981) also found evidence of very early decision making among females, and explains what happens in her Theory of Circumscription and Compromise. This is a cognitive theory which attempts to integrate social systems variables (e.g., gender, socioeconomic class) into our thinking about the decision making process. Gottfredson explains, in agreement with Corder and Stephan, that circumscription is the successive narrowing of the range of occupational alternatives during childhood and adolescence. Personal attributes such as gender are built into the self-concept and they influence
career preferences at an earlier age than social class, which in turn influences preferences at an earlier age than do interests and values. Circumscription means that when a young person defines his or her occupational interests gender and social class, in that chronological order, have already limited the range of possibilities. Compromise refers to the fact that elements that are internalized at an earlier age (e.g., sex-typing of jobs) will be more resistant to change than elements internalized later in development. This is offered as an explanation for the apparent resistance of most young women to consider nontraditional occupations, despite the best efforts of counsellors and educators.

Gottfredson's work has been challenged by several researchers, most notably by Hesketh, Elmslie, and Kaldor (1990). These authors cite several studies, including two of their own, which appear to indicate that an alternative theory of career compromise may be more valid. Adult participants in their studies were asked to make hypothetical career decisions based upon their own values and the results of vocational typology testing. The findings support the idea that interests are considered more important than prestige in career selection, and prestige is more important than a job's sex-typing. This is a reversal of Gottfredson's claim and of the findings of Corder and Stephan. In the work by Hesketh et al. the results for males and females of high social class and those for females of low social class were almost identical; however, males of low social class rated the sex-type of a job as more germane to them than their interest in the job, than its importance, or its prestige (p. 53). These results would appear to indicate that low social class males are the most susceptible to sex-typing of occupations.
Gender, academic achievement, and occupational development.

Research has been conducted on the occupational development of females who exhibit high academic achievement (Card, Steele, & Abeles, 1980; Kaufmann, 1981; Kerr, 1983, 1985). Kerr studied gifted girls by examining the seminal work by Terman that was begun in 1921. Terman's study followed a group of students who were identified as being in the top one percent of the population according to the Sanford-Binet. Scholars continued the work so that data is available on the original subjects from ages 11 to 62. Kerr also examined other longitudinal studies which included gifted girls among their subjects. In all studies it appeared that gifted girls outperform boys through all grades of public school until just past high school graduation (Kerr, 1985, p. 94). Terman had observed a drop in IQ points over adolescence which averaged 3 points for males and 13 points for females (p. 98) but provided no hypothesis as to why this takes place. In 1928, 87% of the men and 84% of the women in Terman's study entered college, and the women's grades were higher than those achieved by the men. By 1955, one-half of the gifted women were housewives with no employment outside the home. Among those females who worked, annual salaries ranged from $3000 - $24,000 while the range for their male counterparts was $50,000 - $400,000. The last interviews in the work originated by Terman took place in 1972, when the mean age of the subjects was 62. The group with the largest number of highly satisfied women were head-of-household income workers with no children (Kerr, 1985, p. 116). It is noteworthy that these women, born before the First World War, cited meaningful work outside the home, excellence in work, and opportunity for advancement after age 40 as being the most important components of their satisfaction in old age. There is a tendency for us to think that women's desire to blend work and family is a relatively new phenomenon (Perun & Bielby, 1981) but Terman's
work shows us that, among gifted women, the desire for meaningful work has existed for at least several decades. The fulfillment of this desire appears to be related to a feeling of satisfaction with life in old age.

Card, Steele, and Abeles (1980) looked at women’s occupational development from what they called a "human capital perspective" - that is, the idea that each person only has so much time and energy to invest in life. For women, more so than for men, marriage and parenthood reduce drastically the time and energy they might otherwise invest in education and the workplace.

Card et al. measured the actual achievement of people 6-10 years after their high school graduation by combining the factors of educational attainment, annual income, and job prestige. Poor and rich women alike turned out to be underachievers. Socio-economic status had little influence on their realization of potential. Women with average potential achieved less than men with average potential while high potential women achieved far less than high potential men. Underachievement in women was also related to the number of children borne. For people with high potential, gender was more important in predicting achievement than affluence, SES background, or any other factor. The study concludes by stating "Sex differences in achievement will not disappear with time. Men’s prior investments manifested in terms of greater seniority and experience on the job, should keep them ahead of women for the duration of the cohort’s working lives." (p. 19). According to the work of Terman and of Card et al. women are penalized in two ways if they take part of their adult lives to engage in homemaking and/or childrearing: they lose out immediately in terms of seniority and work experience, and in old age they report lower levels of life satisfaction.

The work of Groth (1969) has implications for women’s occupational development. This study involved people aged 10-70 years. Each subject was
asked to list three wishes; the researcher then applied Maslow's Hierarchy of Needs to the lists. Females appeared to have strong self-esteem and achievement interests until age 14, when desires for love and affection replaced them. This is a regression, according to Maslow's Theory. The need for love and affection remained paramount in females until age 40, when self-esteem regained importance. Males maintained strong desires for achievement throughout adolescence, adulthood, and until retirement age. Groth speculated that females appear to become preoccupied with their relationships rather than personal achievement, and this preoccupation remains strong during the years when males are preoccupied with post-secondary education, career establishment, and career advancement.

**Rural locale and occupational decision making.** Growing up in a rural area affects career decisions. Seyfrit (1986) has reviewed the literature on this topic and has described migration patterns that rural youth appear to follow. He cites Bogue's finding (1969) that out-migrants from rural areas tend to be disproportionally better-educated and more skilled, and Morrisson's observation (1975) that most rural moves are made by previous migrants. Most rural areas have little or nothing to offer young people in the realms of further education or trade apprenticeship so that an individual's aspirations and opportunities are often connected to his or her willingness to relocate to a more populated area, either temporarily or permanently. According to the literature, a student with a low level of academic achievement who has always lived in the same rural area is the least likely person to move away and thus is the least likely to make use of the education and career opportunities that exist in larger centers.
We have seen that female gender and rural locale both have negative affects on career expectations so it would appear that girls graduating from rural high schools face the most obstacles as they proceed through their ego-identity crises. Faith Dunne (1980) succinctly sums up this dilemma:

"The young rural woman appears to be in an unenviable position. Like her male peers, she faces the constraints which come with rural origins. Like metro females, she must struggle with the social factors which affect women... Finally, she must come to terms with the traditional expectations associated with rural culture, expectations which place particular limitations on women." (p. 397)

**Attribution Theory**

In an effort to make sense out of the world, people attend to the negative and positive feedback they receive from their environment and attempt to impose some order on this myriad of information by imposing heuristics and searching for causes for their failure and success performances. Attribution theory is based upon Fritz Heider's original proposal that people perceive an internal-external dichotomy of causality; that is, "the result of an action is felt to depend on two sets of conditions, namely factors within the person and factors within the environment" (1958, in Weiner, 1986, p. 44). To this concept Weiner added the idea in 1971 that stability and instability were also attributional dimensions, and in 1972 Rosenbaum (in Weiner, 1986) was the first to suggest that the degree of perceived volitional control was a third dimension. Thus
Attribution theory is concerned with three dimensions: locus, stability, and controllability, each of which is considered to be a bipolar continuum. Weiner demonstrated that a person's expectations for success can be mediated by the causal attributions made to explain past successes and failures. Attributions made to stable causal factors (e.g., ability, task difficulty) lead people to expect that future performances will match previous ones. Conversely, attributions made to unstable causal factors (e.g., effort, luck) reduce the confidence with which people can predict future performance outcomes. Individuals develop their own attributional styles through experiences, self-evaluation, and by accepting or rejecting performance feedback received from others. The implications that this theory has for education and motivation are great: by researching how individuals develop attribution styles and which styles are most functional, psychologists and educators hope to provide information that will increase performance. Attribution theory also has implications for vocational decision making. People set goals and aspirations for themselves that are related to their perceptions of their own control and ability. This study will look for a relationship between attribution style and vocational aspiration.

**Attribution and gender: Early research.** An Australian researcher, Feather, did work in the late 1960s to determine what influences success and failure had on attribution style. He predicted (1969) that when initial self-evaluation is positive, success at a task will be attributed to internal factors such as ability, while initial failure will be attributed to external factors such as bad luck. He further hypothesized that if an unexpected outcome occurs it will be attributed to variable environmental factors. When the data were analyzed, supplementary findings emerged: there were significant differences in attribution by gender. Although males and females performed similarly on the
task, females had higher inadequacy scores (p<.05), lower initial confidence scores (p<.005), and higher external attribution scores (p<.01) than did males. Feather reported that these findings paralleled an earlier study he had carried out in 1967 and concluded that "lower estimates of expectation of success, higher ratings of inadequacy...and a greater tendency to attribute success or failure to luck rather than to ability among females may indicate the way they perceive the feminine role in our culture, that is, that the female should appear modest and dependent, and that assertiveness and self-confidence is a masculine trait" (p. 143).

Feather's suggestion was provocative to researchers in the 1970s, a decade which saw a re-evaluation of prescribed female roles in western society and the re-emergence of feminism which had been dormant to a large extent since the attainment of female suffrage in the 1920s. The dismal statistics on women's earnings, opportunities, and share of the formal power structure prompted the examination of many previously-unasked questions. Several researchers postulated that female attribution styles were dysfunctional and contributed a great deal to women's inferior patterns of achievement. Weiner had demonstrated that the more one ascribes failure to ability and task difficulty the lower the expectancy of future success will be. This will result in less persistence, particularly following a failure. There appeared to be a link between stereotypic female attribution styles and poor performance. Feather's work had indicated that even in success situations, females tended to make dysfunctional attributions, crediting their success to external factors such as good luck and lack of task difficulty. These findings stimulated further research in an attempt to confirm these beliefs, look for causes, and suggest remedial action.
Deaux and Emswiller (1974) suggested that the greater tendency for females to use external attributions to explain both their success and failure performances, as observed by Feather, was a function of the perceived gender-suitability of the task. They designed a 2 x 2 x 2 factorial study with Sex of Subject, Sex of Stimulus Person, and Type of Task as the independent variables. Their subjects, (55 male and 75 female undergraduates) evaluated another person's performance on a gender specific task and made attributions about the ensuing success or failure. The expected Sex of Subject x Sex of Task interaction was significant (p<.0001), that is males expected they would do better on the masculine task and females expected to do better on the feminine task. Deaux and Emswiller reported sharp differences in the attributions made to male and female performers: independent of task, males were rated as more skillful than females (p<.05). Performance on the masculine task was seen as better than equivalent performance on the feminine task and male and female subjects shared these biases equally. Although the performances of the observed males and females were identical by objective measures, they were viewed very differently by both male and female subjects, and Deaux and Emswiller stated that these results support the conception that masculine accomplishments are viewed as better accomplishments. They subtitled their article "What is skill for the male is luck for the female" which was a succinct summation of their findings, and the piece became a classic in Women's Studies anthologies.

Etaugh and Hadley (1977) attempted to replicate the findings of Deaux and Emswiller, using Grade Two subjects who were told one of four stories (Girl Succeeds on a Feminine Task, Girls Succeeds on a Masculine Task, Boy Succeeds on a Masculine Task, or Boy Succeeds on a Feminine Task), then asked to explain the success through six paired-comparison choices to
determine their attributions. (e.g., "Was it an easy game or did she try hard?") (p. 20). Effort (M=2.07) and ability (M=1.83) were chosen overall more often than task difficulty (M=1.14) and luck (M=.94). Significant differences in responses according to gender and grade level of subjects were observed. The younger children were more likely to attribute success to ability and low task difficulty. Success on the feminine task was attributed to effort more often by female subjects (M=2.32) than by male subjects (M=1.72), and to ability more often by male subjects (M=2.15) than by female subjects (M=1.57). There were no attributional differences between males and females for the masculine task. A female's success on a masculine task was attributed by all subjects more to effort (M=2.27) than to ability (M=1.65), consistent with Deaux and Emswiller's findings. This difference did not occur for any other combination of performer and Sex of Task. Etaugh and Hadley believed that their study not only supported previous findings on gender differences in attribution, but indicated that traditional sex-role standards about achievement were operational at a very early age. In their 1982 work Bond and Deming criticized this study, saying that the researchers did not clearly establish that the children were aware of the gender-appropriateness of the tasks in the stories. While this appears to be true, it does not however detract from the observations about gender-related attributional styles among the very young that Etaugh and Hadley observed.

Bond and Deming (1982) furthered this aspect of the research by working with third, fifth, and eleventh grade students in two experiments. On "gender-appropriate" tasks, males' unsuccessful outcomes were attributed primarily to lack of effort but female's unsuccessful performances were attributed to lack of skill (p<.05). Failures on "gender-inappropriate" tasks were most often explained by two stable factors: skill for males and task difficulty for females. Explanations differed for male and for female performances. Bond
and Deming postulated that female failure may function as a relatively anticipated outcome in our society: it elicited more stable, internal attributions at all three grade levels. Unfortunately, their study was not designed to support this belief: they had not pretested for subjects' expectations. It is important to note that this piece of research did not find gender differences in the production of attributions but in the way attributions are applied to male and female actors. The authors conclude that "different attributional patterns for explaining male and female performance appear well-established by 7-8 years of age and remain strikingly stable through development" (p. 1205).

In Britain, C. G. Rogers (1980) also researched the developmental aspects of attribution, and designed a study where children aged 9, 12, and 15 years evaluated other children's success and failure performances. The study used a 3 x 2 x 2 x 2 x 2 x 2 design (Age of Subject x Sex of Subject x Sex of Person Judged x Ability x Effort x Outcome), and the data were subjected to a six-way ANOVA with repeated measures over the last three factors. Rogers demonstrated that girls used essentially the same pattern when judging either girls or boys but boys differed in their evaluations according to the sex of the person being judged. The male tendency to judge females less harshly increased with age. By age fifteen, boys' evaluations of girls' performances placed little value on the outcome and numerically, they actually rewarded girls for failure (p. 248). Rogers concludes that when males are the evaluators, other males are rewarded for success and females are excused for failure. It appears that these male attitudes develop between the ages of 9 and 15. Because 15 was the upper age-limit of Rogers' subjects, we don't know if these protective attitudes exhibited by males towards females peak in adolescence or if they remain constant into adulthood, but this would be an interesting research topic. It was stated in the introduction to this paper that people develop their
attributional styles partly as a result of feedback from others, and it is apparent from Rogers' work that males and females, particularly during the early adolescent years, receive very different messages about the same performances. Another interesting question raised by Rogers' work is this: if adolescent girls are actually rewarded by male evaluators for failure performance, how does this influence future female behavior?

The hedonic bias. Another gender difference in attribution style that was being researched at this time was the self-serving effect or SSE, sometimes referred to as the hedonic bias (Miller & Ross, 1975; Rosenfield & Stephan, 1978; Stephan, Rosenfield, & Stephan, 1976). The SSE is the tendency to accept responsibility for one's own successes but not one's own failures. Stephan, Rosenfield, and Stephan had male and female university-age subjects make personal attributions about their success or failure performances on a competitive mathematical game. They found that males playing males, males playing females, and females playing females all made attributions with an SSE, taking more credit for their success and assuming less blame for their failure than they gave their opponents. Only females playing against males did not make egotistical attributions. Rosenfield and Stephan had questions about the perceived gender-neutrality of the mathematical task in this 1976 study and asked if it had affected the attributions of their female subjects. In 1978 they designed a further study of the SSE where a task involving geometric matching was described to half the subjects as masculine and to the other half as feminine. The results indicated that males expected to do better than the females on both the masculine and feminine tasks, although they were more ego-involved in the masculine one. Males attributed their success on male tasks more to internal factors and their failures more to external factors than
females did, but females demonstrated this same pattern of SSE on the feminine task. Rosenfield and Stephan concluded that when males and females are assigned "gender-appropriate" tasks their ego-involvement and expectancy for success are similar and they make virtually identical attributions for success and failure. They offered this as support for the idea that there are no real differences between males and females either in the use of the SSE or in attributional styles in general.

Disagreeing with these findings, British researchers Callaghan and Manstead (1983) attempted to replicate earlier findings, hypothesizing that females make fewer self-serving attributions than males, experience more anxiety than males in testing situations, and tend to internalize failure and externalize success. They designed their study around adolescent subjects' reactions to the results of their O-level examinations and two experimental tasks involving anagrams. On the anagrams, males tended to make stronger task difficulty attributions than females while females made more internal but temporary attributions to explain their success. This was one of the few studies to observe females making internal success attributions. However, on the questions regarding the O-level examination outcomes, no gender differences were found in the subjects' attributions to ability, effort, task difficulty, or luck. Callaghan and Manstead speculated that the attributions made on short-term experimental tasks may not be representative of what happens in real-life situations, and went on to question the research value of limiting subjects to only four causal factors, a challenge taken up later, as we shall see, by Bar-Tal, Goldberg, and Knaani (1984). Callaghan and Manstead also noted the absence of consistencies between their study and previous attribution research and suggested that caution is advisable before generalizations about gender differences in attribution are made. The absence of consistencies may be due
in part to their relatively small subject size (n=80), but their caution would be verified by subsequent research.

Frieze had observed in 1975 that females appear to make attributions which result in them feeling less pride and more shame than males. These attributions consequently produce low expectations for success, although it was acknowledged that sometimes the data in this area were contradictory (Bar-Tal & Frieze, 1977, p. 303). An explanation for mistakes in research was suggested by Bar-Tal and Frieze (1977), who said that the error was in the then-current assumption that males and females composed two distinct, internally homogeneous groups. They hypothesized that high achievement-motivated women would exhibit an attributional pattern similar to that of high achievement-motivated men and very different from that of more traditional women. They administered the Revised and Condensed Achievement Scale (Mehrabian, 1969, in Bar-Tal & Frieze, 1977) to 125 male and female undergraduates, assigned them to a success or failure condition on an anagram task, then measured their attributions on 7-point Likert-type scales. Outcome manipulation had the greatest effect upon attributions. The male subjects with high achievement-motivation attributed their success mainly to ability and effort and saw failure more as the result of external factors. The high achievement-motivated women were more external in their attributions for success than the high males and exhibited a strong belief in effort as a factor in both success and failure. Low achievement-motivated females made their strongest attributions to task difficulty and low achievement-motivated males cited ability as the main determinant of outcome. Bar-Tal and Frieze concluded from these results that achievement motivation as well as gender affect attributional styles and called upon future researchers to stop treating "males" and "females" as homogeneous groups.
Marsh also questioned the research practice of treating males and females as homogeneous groups. He studied the Self-Serving Effect and attribution patterns among fifth and ninth grade students (n=1007) in Australia (1986), and found that high-ability students are significantly more internal in their attributions for success and external in their attributions for failure than low-ability students. The SSE and its relation to academic achievement appears to be age-related, decreasing among older students. Gender was not substantially correlated with SSE, which Rosenfield and Stephan (1978) had also observed in their "gender appropriate" task study. Based on these observations, Marsh speculated that perhaps it is achievement that causes attribution patterns, not attribution that causes achievement, as several previous researchers (e.g., Dweck et al., 1978) had stated.

Levine, Gillman, and Reis (1982) also examined the SSE and the self-derogatory bias. This study contained the elements that were being criticized in the literature of the time: an artificial task and a limited range of experimenter-determined responses. The analysis of the data revealed no significant main effects for sex of subject or sex of partner. It was revealed in the ANCOVA that achievement motivation was consistently the best predictor of attribution patterns. The authors suggested that the differences in achievement attributions observed by other researchers are better explained by differences in achievement motivation rather than differences in gender, which repeats the conclusions made five years previously by Bar-Tal and Frieze (1977).

Attrition and gender: Later research. Robison-Awana, Kehle, and Jenson (1986) were in agreement with Marsh that academic competence may affect attribution and self-esteem in girls. In their study, grade seven boys and girls responded to a self-esteem inventory twice: once as themselves, and once
as they believed a peer of the opposite sex would respond. For all subjects, self-esteem was positively related to academic achievement. The researchers went on to speculatively link androgyne in academically competent girls with high esteem levels and thus, success attributions related to ability. This is however a quantum leap in thinking and not substantiated in any way by their study. It is unfortunate that these researchers did not follow the examples of Crombie (1983) or Erkut (1983) and administer a sex-role inventory to their subjects to add credence to their interesting claim about androgyne which did not appear in their hypothesis and appears as an afterthought in their paper.

The line of questioning regarding the relationship between female attribution styles, sex-role orientation, and achievement motivation, was carried on by Crombie (1983) who designed a study involving two independent variables: achievement level and sex-role orientation. From an original sample of 228 women, she selected 62 who were classified as either androgynous (n=30) or stereotypic feminine (n=32) for a within-sex analysis. The subjects were divided into four groups depending upon their sex-role and their academic achievement. All four groups of women attributed their academic standing to the causal dimension of effort rather than ability. No differences were found in the actual achievement performance of women who made ability attributions as compared to those who made effort attributions. This finding is contradictory to the information presented by Weiner who believes that attributional style is linked to performance (1986, p. 170-173), and to the conclusions drawn by Dweck, Davidson, Nelson, and Enna (1978), and Bond and Deming (1982), who claim that the stereotypic female attribution patterns lead to low expectancies and subsequent low performance levels. According to Crombie, androgynous women did not differ from stereotypic feminine women in
attribitional styles and additionally, levels of achievement and sex-role orientation were found to be relatively independent.

Sumru Erkut also found no relationship between attribution style and performance when she carried out two studies on a total of 412 college freshmen (1983). Agreeing with Callaghan and Manstead (1983) that attribution research should be carried out in real-life situations, not on artificial tasks, she questioned her subjects on their attributions regarding recent examination scores they had earned. Consistent with the literature, she found that women made more attribution to effort and men made more to ability. Erkut administered the Bem Sex Role Inventory to a subsample of 49 subjects. The results show that gender differences in expectancy and attributions were related to sex-role orientation. Among both male and female subjects, a high femininity score was negatively associated with actual grade received, contradicting Crombie's finding that sex-role orientation was not related to performance. For the subjects in this study, expectancy of success and attribution patterns were related to sex-role orientation, however feminine men did not internalize failure feedback to the extent that feminine women did. The seemingly dysfunctional pattern of low expectancy and internal failure/external success attribution appears, Erkut says, to be found mostly among women with a stereotypic feminine orientation.

In 1982 an entire issue of the journal Sex Roles (vol.8, no. 4) was devoted to the subject of gender differences in attribution, and most of the articles were critical of much of the research on this topic published to this point. Frieze, Whitley, Hanusa, and McHugh presented a meta-analysis of 21 studies which examined gender differences in success/failure attributions. [It is interesting to note that these authors credit Frieze's former supervisor and co-author, Bernard Weiner with the idea of controllability as a causal factor (p.
Frieze et al. outlined three basic models that have been proposed to explain gender differences in attribution patterns. These are: general externality (women, like other low status groups, perceive power as originating externally), self-derogation (women generally have low self-esteem and they accept negative information about themselves while rejecting positive information), and low expectancy (women do not expect to do as well as men in achievement situations which leads to unstable attributions for success and stable attributions for failure). The authors wished to assess which of these models is best supported by the literature, so they conducted a meta-analysis of 21 published studies, using the effect size index when it could be calculated. They concluded that none of the models was empirically supported. Males make stronger attributions to ability and females make slightly more failure attributions to luck, but otherwise, there were no strongly supported gender differences in attributions, according to Frieze et al. Cheryl Travis (1982) agreed with these conclusions. She administered an anagram task to 82 subjects and, when analyzing the data found that gender accounted for less than .5% of the variance. Travis said that this placed her in the "awkward position of confirming the null hypothesis" (p. 379), and criticized the bias that exists in the literature towards publishing significant results almost exclusively. This leads, she believes, to unwarranted conclusions and generalizations about gender differences which are based primarily on select studies rather than representative results.

Berndt, Berndt, and Kaiser (1982) compared attributions by males and females in an attempt to support the learned helplessness model of depression. This model suggests that the experience of learning that the outcomes of one's actions are uncontrollable will result in cognitive, motivational, and emotional
deficits related to helplessness and depression (p. 434). Their hypothesis was that the incidence of depression is considerably higher in females and attribution patterns may play a role. They looked for a correlation between scores on the Attributional Style Questionnaire, the Beck Depression Inventory, the Situational Control Scale and gender. Their results, based on data from 78 female and 34 male college students failed to support the presence of significant gender differences in attribution. Regardless of the outcome, attributions of internality or stability did not differ between their male and female subjects and this finding was true for both achievement and affiliation situations. While Berndt, Berndt, and Kaiser conceded that the reliability and construct validity of the instruments they used has not been verified, they believed that their results challenged the attributional learned helplessness model and that the model deserves closer scrutiny.

Travis, Burnett-Doering, and Reid (1982), publishing in this same issue of Sex Roles, criticized the methods used to do attributional research, much as Callaghan and Manstead were criticizing them in Britain. In their study with 143 undergraduate students, they instructed subjects to write a short account of an achievement and a failure they had experienced in the past year, then provide their attributions for these events. They hypothesized that males and females would follow the gender-stereotypic attribution patterns that had been observed before, and in addition, that male accounts would tend to deal with mastery and control events while female accounts would deal with the affiliative-personal domain. Their findings partially support their first prediction: compared to males, females had higher scores for variable, external attributions for success. When subjects of both genders recalled failure events there appeared to be no difference either for attributions or subject matter. Their second hypothesis was not supported: both males and females tended to recount failures in the mastery
rather than the affiliative domain (85%). The authors found that, regardless of
gender, a process orientation as recounted in the anecdotes was correlated
with a different attributional style than an impact orientation. There was no
support found in these data for the male ego defense pattern (SSE) or the
female self-derogatory pattern that had been seen in other work. The authors
called for an end to attribution studies based on artificial "laboratory exercises"
and for further investigation of the process/impact orientation as a dichotomy in
attribution style rather than gender.

McHugh, Frieze, and Hanusa (1982) continued the challenge to
established findings by repeating Travis' (1982) contention that a bias exists
among journal editors: studies that find gender differences are published while
studies documenting gender similarities often are not. They believe the early
research articles claiming differences fail to take into consideration individual
beliefs about gender appropriateness of task, the subject's ego involvement, or
the novelty/familiarity of the task. There is no reason, they concluded, to expect
all women to act alike, nor all men.

Chandler, Shama, and Wolf (1983) added more support to the questions
being raised about gender and attribution by studying attributions for failure and
success among 684 university students in five countries: India, Japan, South
Africa, the United States, and Yugoslavia. Subjects answered a 48-item
questionnaire and care was taken in the translation to make the material similar
for all participants. Twenty-four items concerned the affiliation domain and 24
cconcerned the achievement domain. A 5-point Likert format was used for the
answers. Overall, they found females (M=5.20) slightly, though significantly,
more internal than males (M=4.12) (p<.01). Both males (M=11.52) and females
(M=11.42) attributed their successes to ability, while males attributed failures
significantly more to unstable causes (M=4.03) than females (M=3.60) (p<.05).
Gender differences were stronger in the affiliation domain when compared to the achievement domain. Step-wise multiple regression analyses were performed on the data and attributions predicted gender in three of the countries: India, the U. S. and Japan. However, the attribution patterns differed across these three so that it was not possible to describe a "global" style of female attribution.

In Israel, Bar-Tal, Goldberg, and Knaani (1984) examined seventh-grade children's attributions for their academic achievement, allowing their subjects to produce a repertoire of self-generated causal attributions rather than restricting them to the usual four. Later, these responses were classified into main groups of causes by other grade seven students: the authors defended this interesting practice by saying that their subjects' peers would understand what was meant better than adult researchers would. (The interrater reliability rate was 85%). The children were all of the same ethnic background but from widely different socio-economic backgrounds due to the deliberate choice of their school locales. No gender differences were found in attribution style: the differences in this study were related instead to SES, leading the authors to suggest that lower- and upper-class children may have different affective, cognitive, and behavioral reactions to academic success and failure. A main effect for SES was found in the locus of causality, stability, and controllability dimensions (p<.01). Although their method of having subjects generate their own causes is unusual, the authors defended it by saying that it is the job of researchers to investigate the subjective world of the layman and analyze the findings, not to restrict people's responses to those that fit the framework provided. This is a worthwhile consideration and a valid criticism of much of the work done on attribution.
Welch, Gerrard, and Huston (1986) wished to dispose of the labels "masculine" and "feminine" altogether in the study of attribution. In an earlier piece of research they tested the hypothesis, also investigated by Crombie (1983) and Erkut (1983) and reported earlier in this paper, that sex-typed personality attributes, as measured by the Bem Sex Role Inventory would predict women's responses to success and failure. They did find differences in responses to success and failure feedback between androgynous and feminine female university students. They speculated that the higher a subject's "masculinity" (instrumentality) score the more egotistical the performance attributes would be (SSE). They wanted to know why women scoring high and low on scales measuring instrumentality exhibit different levels of performance and different patterns of attribution after success and failure. Three variables were investigated: perceptions of competence and expectancies of success, self-esteem, and perceived gender-appropriateness of the task. Significant main effects were found for instrumentality (p<.001) and success/failure (p<.001) but not for gender of task. High instrumental women (HIW) succeeded more readily and attributed their success to ability and effort more than low instrumental women (LIW) and exhibited more SSE. In addition, the HIW scored higher on perceived ability, expectancy of success, and self-esteem. Multiple regression analyses were performed which indicated that perceived ability and performance expectancy each accounted for a significant amount of variance on task performance. The pattern of post-test reactions to failure demonstrated by the HIW are more likely to preserve their feelings of competence and confidence than is the pattern demonstrated by LIW. This lends support to Weiner's contention that attribution patterns are important components of motivation (1986, p. 177). The differences between the high and low instrumental women are similar to the average differences between men
and women: the scales measuring "instrumental" personality characteristics were originally used to measure "masculinity."

Conclusions. The work by Welch, Gerrard, and Huston appears to have replicated the findings of Feather (1969) and Deaux and Emnswiller (1974) that we began our discussion with except that in this case the subjects are all women. The key to attribution and performance differences would appear to be an individual's instrumentality rather than his or her gender per se. In fact, the authors suggested that the categories "masculine" and "feminine" be discarded because they are subjective terms. It can be seen that the pattern of performance and attribution exhibited by low instrumental women is not adaptive: these women appear to lack confidence in their abilities and respond to failure feedback by lowering their effort and expectancy for future success. The work of Erkut (1983) showed that low instrumental ("feminine") men shared these attribution patterns but not the subsequent low motivation. Thus, despite two decades of research in the area of gender differences in attribution, educators concerned with increasing motivation and performance seem to still be asking Henry Higgins' question: "Why can't a woman be more like a man?" Even so-called "feminine" men do not exhibit the dysfunctional attribution patterns described by Weiner: internalization of failure feedback and a lower subsequent effort.

It is important to put this era of research into historical perspective. Research methods in psychology have become more sophisticated and women and men in 1991 appear to have different attitudes than they did in 1969. The concept of what is socially-acceptable feminine behavior has broadened (no pun intended) immensely and it is unlikely that any research on women done in the industrialized world today could replicate the findings of the early 1970s.
What generalizations can be made from the literature in this area? As previously mentioned, it has been widely accepted that some attribution patterns are more functional, namely those that allow individuals to increase their self-efficacy and consequently maximize their performance levels. We can accept the claim that males and females are judged differently and that this difference begins as early as five years of age. The connection between gender, attribution patterns, and performance has not been firmly established, and other variables have been added. Socio-economic standings, instrumentality, and the process/impact orientation dichotomy appear to be stronger determinants of attribution patterns than gender and each of these areas deserves further attention by researchers.

The work of Chandler, Shama and Wolf (1983) on cross-cultural aspects of attribution and gender make us hesitant to generalize in this area because it appears that attribution patterns are not universal. The encouraging note here for psychologists is that if these patterns are not universal then they are learned, and if they are learned, they can be "unlearned". While it is true that females are economically disadvantaged in the world, it does not necessarily follow that attributions are the main cause. This seemed like a ready answer to the question in the 1970s but the issue is no longer so clear. Further research needs to be done in the areas mentioned earlier: the relationship of SES, instrumentality, achievement motivation and process/impact orientation with attribution styles. The finding by Rogers (1980) that 15-year old boys actually reward female failure creates questions about how long this behavior stays in place in males and what effect it has on female performance. Travis (1982) and Bar-Tal, Goldberg, and Knaani (1984) have raised important questions about the methodology employed thus far in this field of enquiry and have offered interesting alternatives. The present study will attempt to examine the extent to
which attributions remain stable over time, particularly during the late adolescent period.

Cary Mitchell (1987) has begun to examine the area of gender and its relationship to the attribution of responsibility: responsibility for causes and also responsibility for solutions. His research with 250 male and female college students indicates that a significant relationship exists between femininity and low internal attribution of responsibility for problem solving. This avenue is a new one, and one that ultimately may be more fruitful for educational research: instead of investigating attributions for perceived *causes* we may serve our students better by investigating attributions for perceived *responsibility for solutions*. There is little or no purpose to all this research unless we can translate it into practical application for parenting, for schools, and for social settings. While attitudes about femininity and masculinity may have changed, there has not been a corresponding change in the lives of many girls and women, and too few of them exhibit power, economic freedom, and self-actualization.
CHAPTER III

METHOD

A general overview of the study is presented at the beginning of this chapter. More specific, detailed information follows that describes the procedures used and the participants.

Overview

This was a longitudinal study. The members of the graduating class of a small, rural high school in Alberta were interviewed at the time of their school-leaving ceremony, approximately four weeks before completion of their senior year, and asked questions about vocational and family aspirations, the career-decision making process, and attributions for these career decisions. This interview is henceforth referred to as Interview One. A second interview, Interview Two, took place thirteen months later, when the participants had completed one full year out of school. The two interviews were identical except that, in Interview Two, participants were asked an additional question that required them to outline, month by month, what their work and education experiences had been during the previous year.

School board approval for the study was sought and granted in March, 1989. The students and their parents received a letter in April, 1989, which outlined the purposes of the study, explained the method, and requested written parental permission for students to be interviewed. The participation rate was 100% of the 36 members of the graduating class for both interviews. Each of the 72 interviews was conducted by myself with an average time of 35 minutes per participant.
Interview One took place in May, 1989 in a small study room at the school. Written notes were taken during the interviews and the sessions were tape recorded.

The participants were contacted by mail in June 1990 to remind them of the upcoming Interview Two, and contacted again by telephone in July, 1990 to arrange an appointment time. Thirty-four of the subjects were interviewed for the second time in July, 1990, and two of the subjects were interviewed for the second time by long-distance telephone in September, 1990.

The Interviews

The interviews followed a semi-structured format: they began with non-threatening, closed questions collecting demographic information, and gradually moved into the more personal realm. The first part of the interview had the following outline:

Name? Age? Years to complete school?
Schools attended?
Siblings?
Mother's Occupation? Father's Occupation?

Which of the following is most true for you?
My parents want me to get more education. (if yes, why?)

My parents don't try to influence me and have left the decision up to me.

My parents don't encourage me to get more education: they discourage it (if yes, why?)

IN THE FUTURE DO YOU PLAN TO: Stay in this community? Move temporarily and eventually return to this community?
Move away permanently?
Explain your choice:

If all goes well for you, what will happen to you over the next year?

How willing would you be to give up these plans if something better comes along?

What work or studies do you expect to be doing this time next year?

What people have influenced your decision and in what way?

Has anyone or anything been a negative influence on you...that is, shown you what you DON'T want to do or be?

Do you plan to get married sometime in your life?
How old do you expect to be when you marry?
How many children would you like to have?
In what ways do you expect marriage and/or parenthood to affect your occupational plans?

Imagine it's ten years from now...the year 2000. You are twenty-eight or twenty-nine years old. Describe your life and the ideal job for you:

Describe the occupation you expect to have during most of your adult life:

Indicate which point on the following scale is closest to your beliefs: (At this point, participants were shown the following scale and asked to respond verbally.)

1. The world is exciting.
2. 
3. The world is dangerous.
4. and full of opportunities.
5. full of barriers & problems.

The penultimate section on both interviews was a nine-item attribution scale adapted from Russell (1982). This section of the interview began with the following two questions:

What are the three things you think have the biggest impact on a young person's career decisions?

Which of these has had the MOST impact on you?
Think about this one influence. The following items concern your impressions or opinions of this cause. Circle one number for each of the following questions:

<table>
<thead>
<tr>
<th>Question</th>
<th>Options (1-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This influence reflects an aspect of you.</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>2. Is controllable by you</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>3. Is permanent</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>4. Intended by you to be an influence</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>5. Is this influence outside of you?</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>6. Is it changing over time?</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>7. Is this influence something about you?</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>8. Is it changeable?</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
<tr>
<td>9. Is this influence something for which no one is responsible?</td>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
</tbody>
</table>

The final question asked subjects to rate their feelings of control over the future on a scale of one (total control) to nine (no control), and to indicate their perception of their peers’ feelings of control:

On a scale of 1 to nine, indicate how much control you believe a young person your age has over his or her future:

<table>
<thead>
<tr>
<th>Scale Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 8 7 6 5 4 3 2 1</td>
</tr>
</tbody>
</table>

TOTAL CONTROL
Debriefing

When the formal interview was over, the participants were asked if
they wished to return to any questions to change or elaborate on their
responses. They were reassured that there were no correct or "better"
answers and that the information they had shared would be kept
confidential. After Interview Two, they were also encouraged to ask
questions about the study and what their answers would be used for. Ten of
the participants requested a copy of the final results of the study.

Description of Participants

The participants in this study were all the members of the 1989
graduating class from a rural high school in Alberta. There were 36
subjects: 18 males and 18 females, ranging in age from 16 to 19 years.
Local school board policy declares that all students who are registered in
Grade Twelve shall be considered graduates, regardless of their scholastic
records. Thus, the sample included a wide range of ability and academic
achievement. In September of 1988 there were 38 students in this class, but
two low-achieving students dropped out of school before the study began.
Three foreign exchange students who attended Grade Twelve with this class
were not included in the study.
Classification of the Participants by Academic Stream

One of the purposes of this study was to examine what differences, if any, appeared in the decision-making process and attribution styles exhibited by high academic achievers when compared with low academic achievers. Bar-Tal and Frieze demonstrated in 1977 that high-achievement motivated females are more external in their attributions than low-achievement males and low achievement females. Levine, Gillman, and Reis (1982) also demonstrated that differences in attribution patterns are better explained by differences in achievement motivation rather than differences in gender. For the purposes of this study, the participants were classified according to the type of high school diploma they would receive following completion of Grade Twelve.

In the Alberta secondary education system students are streamed according to academic ability beginning in Grade 10. Depending upon the courses taken in high school, a student can graduate with a General Diploma or an Advanced Diploma. A General Diploma certifies completion of a non-academic program of studies. An Advanced Diploma certifies achievement in an academic program and provides the recipient with basic university entrance requirements. Students are permitted to move from one stream to another if their performance during high school indicates that the other diploma would be better suited to their requirements. For example, one of the female subjects in this study began secondary school in the General Diploma stream, but due to her excellent academic achievement she was encouraged to transfer to the Advanced Diploma stream for Grade 11 and 12, which she did successfully. Of all the diplomas awarded in Alberta in 1988 to high school leavers, 43.75% were General and 56.25% were Advanced (Alberta Education, 1989a, p. 48). The 36 participants in
this study were grouped according to the diploma they would receive. Ten subjects (27.8% of the total) were studying for a General Diploma, and 26 (62.2%) were studying for an Advanced Diploma. These numbers are not consistent with the statistics for the province. This discrepancy may be due in part to the small size of the school itself, which is unable to offer the vocational training provided in the urban high schools that makes a General Diploma more attractive and useful in such urban settings. Since urban students made up 64.2% of the provincial total in 1988 (Alberta Education, 1989b, p. 2) their experiences affected statistics more than those of rural residents.

The decision to divide participants on the basis of the diploma was discussed with Ms. Scraba, the Assistant Director of the Humanities Diploma Examination Program for the Alberta Department of Education. She informed me that all persons wishing to graduate from high school in Alberta must write a Provincial Examination in English. Thus, Grade Twelve English can be used as an experience common to all graduates. The course for the General Diploma is called English 33 and the course for the Advanced Diploma is called English 30. Scraba indicated (personal communication, Nov. 26, 1990) that the cognitive demands of the two courses are very different. In order to receive a passing grade, an English 30 student is expected to be able to analyze literature, and communicate ideas in writing that would be acceptable at the first year university level. The 26 students in this class who were studying for the Advanced Diploma achieved provincial examination results for English 30 that ranged from 53-87%. A successful English 33 student however is expected to be able to write clearly and indicate satisfactory performance on written tasks that are normed for the Grade 8-9 level of difficulty. Among the General Diploma
students involved in this study, the range of marks achieved on the English 33 provincial examination was 53-68%. It was Scraba's opinion that students achieving marks in this range on the English 33 examination would rank substantially below any passing grade on the English 30 examination in terms of academic achievement. Based on this knowledge, the researcher believed that dividing participants in this study on the basis of the diploma they sought was a reasonable decision, and the participants' achievement on the English provincial examinations appears to support this.

**Data Management**

The data were analyzed after the completion of Interview Two. Quantitative answers were extracted from the transcripts and entered into a datafile for computer analysis; qualitative answers were listed and tallied in preparation for the examination of the results.

**Follow-up**

In September of 1990 all participants were sent a letter expressing my appreciation for the time and the information they had shared with me.
CHAPTER IV
RESULTS

This chapter contains 13 sections: Participants, Family Configurations, Participation in Work and Education, Occupational Expectations, Parental Occupation Status, Perceived Parental Influences, Migration Intentions, Optimism, Perceptions of Control, Family Life Decisions, Influential Others, Attributions, and Predicted Effects of Marriage and Parenthood on Careers. The first 10 sections present the results that are analyzed quantitatively. The final 3 sections present qualitative data.

The Participants

Table 1 illustrates how the 36 participants were broken down by gender and academic stream.

Table 1.
Participants by Gender and Academic Stream.

<table>
<thead>
<tr>
<th></th>
<th>Advanced Diploma</th>
<th>General Diploma</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>Males</td>
<td>13</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Females</td>
<td>13</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>All students</td>
<td>26</td>
<td>10</td>
<td>36</td>
</tr>
</tbody>
</table>
Family configurations

Twenty-nine of the participants (80.6%) lived with both their biological parents. 3 lived with their biological mother and a stepfather, 2 lived with their single-parent mothers, 1 lived with his biological father and a stepmother, and 1 participant lived with her husband. The 36 participants had 64 siblings for a total of 100 children living in their families, or an average family size of 2.78 children. Including parents, the average family size of the participants was 4.7 persons per family as compared to the national average for families with children which is 3.1 persons per family (Canada Yearbook, 1990).

Participation in Work and Education

In the year following high school, the students had a variety of jobs and experiences. Members of the group worked as waitresses, movie extras, carpenters' helpers, nannies, oil rig hands, farm laborers, and cashiers. Individuals studied mechanics, psychology, hairdressing, political science, art, and industrial electronics. Two of the participants had babies, one opened a small business, one travelled the rodeo circuit, one spent time in jail. Among them, during the year between interviews, these 36 young people lived a total of 36 X 12 = 432 months. They utilized this time as follows: 235 months of employment (54.4% of the total time); 137 months (31.7%) at secondary school upgrading, technical school, college, or university; 43 months of unemployment (10%); 17 months of housekeeping (3.9%). Figures 1, 2, 3, 4, and 5 illustrate the amount of time spent in the aforementioned four activities by gender and by academic stream.

The figures illustrate the fact that participation in work, further education, and unemployment was similar for males and females, and if we
collapse the category of "housekeeping" into "work", the activities by gender are almost identical. The major differences in how the year after graduation was utilized are seen when we compare the Advanced Diploma and General Diploma holders. Advanced Diploma holders made up 72.2% of the subjects but they accounted for 96.4% of the time spent in further education, and only 34.8% of the time spent in unemployment. General Diploma holders, who made up 27.8% of the subjects had only 3.6% of the participation in further education, and experienced 65.1% of the unemployment.

Figure 1
Participation in Work and Education

All Participants

- work 54.5%
- school 31.8%
- unemployment 9.7%
- housekeeping 3.9%
Females

- work: 49.5%
- school: 32.4%
- unemployment: 10.2%
- housekeeping: 7.9%

Males

- work: 59.7%
- school: 31.0%
- unemployment: 9.3%
Figure 4

Advanced Diploma

- work: 48.9%
- school: 42.4%
- unemployment: 4.8%
- housekeeping: 3.9%

Figure 5

General Diploma

- work: 69.2%
- school: 4.2%
- unemployment: 22.5%
- housekeeping: 4.2%
Occupational Expectations

On both interviews the subjects were instructed: "Describe the occupation you expect to have during most of your working life." Eight males and 4 females, a total of 33.3% of the participant group, gave the same answer on both interviews; the remaining 24 participants changed their lifetime occupational expectations within the year after school ended. Several participants were unable to answer this question and said they didn't know what occupation they expected to have, a response which increased from Interview 1, when it was the reply of 1 male and 3 females (11.1% of the subjects) to Interview 2 when it was the reply of 4 males and 5 females (25%). One female participant gave this response on both interviews.

These occupational expectations were rated according to Dunne's 4-point occupational status scale. As previously explained in the Introduction, Dunne (1980) has suggested the use of a continuum when analyzing rural occupation structure, which is as follows:

Domestic.....Unskilled Labor.....Independent.....Professional

Dunne's occupation scale was also applied to both parents of each participant. This scale evaluates rural occupational status for individuals from 1-4, so that the range for both parents is 2-8, with a score of 8 indicating two professional parents. The occupational status for the parental units of the participants in this study ranged from 2-8 with a mean and a mode of 5. For each participant a parental occupation total (P. Occ) and a parental occupation mean was calculated (i.e. the P. Occ. divided by 2). Table 2
compares the mean of the participants' occupational expectations for the two interviews and, in addition, compares these to the means of their parents' occupations.

Table 2

Occupational Expectations by Gender and Academic Stream.

<table>
<thead>
<tr>
<th></th>
<th>Interview One Mean (sd)</th>
<th>Interview Two Mean (sd)</th>
<th>Parental Status Mean (sd)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>3.31 (.74)</td>
<td>3.09 (.49)</td>
<td>2.46 (.59)</td>
</tr>
<tr>
<td>General Dip.</td>
<td>3.00 (.50)</td>
<td>3.00 (0)</td>
<td>2.20 (.45)</td>
</tr>
<tr>
<td><strong>All Males</strong></td>
<td>3.18 (.68)</td>
<td>3.07 (.46)</td>
<td>2.38 (.61)</td>
</tr>
<tr>
<td><strong>Females:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>3.08 (.94)</td>
<td>3.00 (.79)</td>
<td>2.46 (.54)</td>
</tr>
<tr>
<td>General Dip.</td>
<td>3.00 (.71)</td>
<td>2.00 (.82)</td>
<td>2.25 (.57)</td>
</tr>
<tr>
<td><strong>All Females</strong></td>
<td>3.06 (.85)</td>
<td>2.69 (.85)</td>
<td>2.41 (.55)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.12 (.69)</td>
<td>2.85 (.80)</td>
<td>2.40 (.58)</td>
</tr>
</tbody>
</table>

At the time of the first interview, 33 of the participants had an answer to this question, and the mean occupation status they aspired to was 3.12. There was no statistically significant difference between the mean for males (3.18) and the mean for females (3.06), $t(31) = 0.46, p > .1$. The lowest aspirations were expressed by General Diploma males (2.75). There was a
tendency for participants to expect to work at a higher occupational status than the mean of their parents' occupational status.

On the second interview, 29 participants expressed an occupational aspiration, and the mean had dropped to 2.85. The gap between all male aspirations ($M = 3.07$) and all female aspirations ($M = 2.67$) had widened, $t(27) = 1.40, p > .1$.

Most participants' expectations had decreased in status in the year between interviews, with the exception of General Diploma Males. The differences in aspiration expressed by all males on the first interview ($M = 3.23$) did not differ significantly on the second interview ($M = 3.08$), $t(13) = 0.81, p > .1$. However, the decline seen in female aspirations from the time of the first interview ($M = 3.06$) to the time of the second was significant, ($M = 2.69$), $t(13) = 2.48, p < .05$. As illustrated in Table 2, this decrease was most dramatic for General Diploma Females who had become the only group whose expectations on either interview were lower than the mean of their parents' occupations. This would appear to support the contention of Sharp and Roberts (1983) that jobs lead to ambitions and not vice versa. The research suggested that when people find themselves in low-paying occupations they appear to set their aspirations lower, and Sharp and Roberts observed that this happens more noticeably to girls.

A year after graduation, most of the gender difference in aspirations among these participants was due to the change expressed by General Diploma females, among whom the mean had dropped from 3.00 to 2.00. The Advanced Diploma females had decreased slightly, from 3.08 to 3.00, and interestingly, this mean was equal to that expressed on the second interview by the General Diploma males.
T-test results indicate that male aspirations on Interview One ($M = 3.18$), did not differ significantly from their father's status ($M = 2.86$), $t(16) = 2.58$, $p<.05$. Male aspirations on Interview Two ($M = 3.07$), did not differ significantly from their fathers' status either ($M = 2.86$), $t(13) = 0.90$, $p>.1$. The same holds true for females: female aspirations on Interview One ($M = 3.06$) were not significantly different from their fathers' status ($M = 2.87$), $t(15) = 0.82$, $p>.1$, and neither were their aspirations on Interview Two ($M = 2.67$) different from their fathers' status ($M = 2.87$), $t(14) = -0.82$, $p>.1$. Statistically significant differences were observed when the participants' aspirations were compared to their mothers' occupational status. T-test results indicated that on Interview One, male aspirations ($M = 3.18$) differed significantly from their mothers' status ($M = 2.35$), $t(16) = 6.42$, $p<.001$, and continued to do so on Interview Two, when the males' mean aspiration was $3.07$, $t(13) = 3.68$, $p<.01$. On Interview One, female aspirations ($M = 3.06$) differed significantly from their mothers' status ($M = 2.00$), $t(15) = 4.00$, $p=.001$, but did not continue to do so at the time of Interview Two, when the mean female aspiration was $2.69$, $t(14) = 2.09$, $p<.01$.

Parental Occupation

The data were examined to determine if a relationship existed between either the Mean Paternal Occupation Status (MPOS), or the Mean Maternal Occupation Status (MMOS) and the likelihood of subjects attending post-secondary school. The results are shown in Table 3.
Table 3
Mean Paternal (MPOS) and Maternal (MMOS) Occupation Status and Participation in Post-secondary Education

<table>
<thead>
<tr>
<th></th>
<th>MPOS (sd)</th>
<th>MMOS (sd)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-post-secondary participants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>2.7 (.48)</td>
<td>1.9 (.57)</td>
</tr>
<tr>
<td>Females</td>
<td>2.1 (.99)</td>
<td>2.7 (.48)</td>
</tr>
<tr>
<td><strong>Post-secondary participants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>3.1 (.83)</td>
<td>2.9 (.64)</td>
</tr>
<tr>
<td>Females</td>
<td>2.9 (.35)</td>
<td>2.0 (1.1)</td>
</tr>
<tr>
<td><strong>All subjects</strong></td>
<td>2.8 (.56)</td>
<td>2.2 (.89)</td>
</tr>
</tbody>
</table>

Paternal occupation and participation in post-secondary education. There appeared to be little relationship between paternal occupation status and the likelihood of children seeking post-secondary education. The participants in this study who attended university or technical school after graduation came from families where the father's status was slightly higher than the mean for the entire group. This difference between male attenders ($M = 3.1$) and non-attenders ($M = 2.7$) was not statistically significant, $t(16) = 1.36, p > .1$. Similarly, when comparing the paternal occupation status of the two groups of females, no significant differences were observed between attenders ($M = 2.9$) and non-attenders ($M = 2.1$), $t(12) = 1.56, p > .1$. 
Maternal occupation and participation in post-secondary education.

I felt it was not appropriate to interpret maternal employment as it has been done by previous researchers (i.e. Carpenter and Western, 1984; Schulenberg, Vondracek & Crouter, 1984) because most of the mothers in this study who ranked as "1" according to Dunne's scale (i.e. "Domestic") were farm wives. These women function as farmworkers and/or working partners in the family farm operations. Only 1 of the 36 mothers was classifiable as a full-time homemaker in the urban sense of the word, i.e. a person who is occupied in full-time, unpaid domestic work in his or her own home. This reveals a difficulty with the Dunne continuum, although it was developed specifically for rural areas: a farmer is classified as "3", but, assuming the farmer is male, how do we classify his wife when she spends part of her day working with him as an unsalaried farm laborer? Is she "employed outside the home"? Therefore, maternal employment (i.e. whether the mother had salaried employment outside the home) was not considered as a variable, but maternal occupation status was.

This analysis (Table 3) shows that for the participants in this study, contrary to what has been reported in the literature previously, maternal occupation status does not appear to be related to females' participation in post-secondary education. When the two groups of females were compared, no significant differences in maternal occupation status were observed between those who attended post-secondary school ($M = 2.00$, and those who did not ($M = 2.17$), $t(12) = -0.28$, $p>.1$). Maternal status seemed to have little influence on girls' participation in post-secondary education, and in fact, the maternal occupation status of the girls who did not proceed to further education was slightly higher than the maternal occupation status of the girls who did.
In the examination of parental status and its relationship to participation in post-secondary education, the only significant difference that was observed was seen in the maternal occupation status of males. The male participants who proceeded on to further education after graduation came from families where the mothers' status (M = 2.87) was higher than the maternal status of males who did not (M = 1.90), t(16) = 3.42, p<.005. This finding is consistent with the literature.
**Perceived parental influence**

The participants were asked about their parents' attitudes towards further education. The results are shown in Table 4.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>&quot;My parents want me to get more education.&quot;</th>
<th>&quot;My parents think I have enough education now.&quot;</th>
<th>&quot;My parents don't try to influence my decision.&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>13</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>General Dip.</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>All Males</td>
<td>18</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>13</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>General Dip.</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>All Females</td>
<td>18</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>36</td>
<td>23</td>
<td>1</td>
</tr>
</tbody>
</table>

According to these results, 50% of the male participants and 77.8% of the female participants perceive their parents as wanting them to receive further education. Of the 9 males who said their parents encouraged them to
get more education, 5 said their mother was more verbal about this, 2 said their father was more verbal, and 2 said their parents appeared to be equally verbal in giving this message. Among the 14 females who said their parents encouraged them to get more education, 11 said their mother was more verbal about this, and 3 said their father or stepfather was more verbal. Of the 23 students who said their parents wanted them to get more education, 16 (69.5%) cited their mother as being more verbal about this, 21.7% said their father was more verbal about this, and 8.8% said their parents equally encouraged them. Thus, regarding parents' attitudes towards further education, two gender differences were observed. Firstly, more females (n=14) than males (n=9) perceived their parents as wanting them to receive further education. Secondly, among the participants who said their parents encouraged more education, 69.5% said it was their mother who was more verbal about this.

Participants supported their responses with statements such as these:

"My parents boost me up and tell me I can do it."

"My family has never thought of me not going to school."

"They don't want me to struggle like they are."

"My Mom recently went back to school so she's always telling me to get a career first, then marriage. She did just the opposite."

"My parents gave me money for college and paid my rent while I was here [at college] last year."

"My dad is more verbal about it. He says, 'A girl has to be able to make it on her own.' He offered me money to go to college."

"Right now it's just push, push, push to get a job. They tell me it's time to go to work."
"They don't want to see me doing hard labor jobs when I'm older. I can't go far on the education I've got now."

"My Dad's pushier because he never went on and he ended up doing crappy jobs. He's not as bad now, but there's money available when I go to college."

"My parents got all the information for me about my course and they paid the tuition."

"Mom was just there for me. Nobody else had went past Grade 12 and she wanted me to do better."

**Migration Intentions**

**Migration intentions by gender.** The high school that these participants attended is situated in a village of approximately 500 people. There are no facilities for post-secondary education and few job opportunities, thus migration intentions are likely related to aspirations. The participants were asked: "In the future do you plan to stay in this community, move temporarily then return to this community, or move away permanently?" They were also asked to state the reason for their choice. The results for all subjects appear in Figures 6 and 7. The results, by gender, are summarized in Figures 8, 9, 10 and 11.
Figure 6: Interview One

All Subjects

- Stay 16.7%
- Move Temporarily 25.0%
- Move Permanently 58.3%

Figure 7: Interview Two

All Subjects

- Stay 11.1%
- Move Temporarily 38.9%
- Move Permanently 50.0%
Figure 8: Interview One

**Females**

- Stay: 5.5%
- Move Temporarily: 27.8%
- Move Permanently: 66.7%

**Males**

- Stay: 22.2%
- Move Temporarily: 38.9%
- Move Permanently: 38.8%
Figure 10: Interview Two

Females

- Stay: 11.1%
- Move Temporarily: 16.7%
- Move Permanently: 72.2%

Figure 11

Males

- Stay: 11.1%
- Move Temporarily: 50.0%
- Move Permanently: 38.9%
Intentions of in-migrants compared to permanent residents. Eight of the participants (22.2%) were in-migrants to the district and had joined the class sometime during the previous twelve years. The remaining 28 participants had lived in the same rural area all their lives. This information is illustrated in Figures 12, 13, 14, and 15.

When migration intentions for these two groups are compared it is apparent that the in-migrants have a greater tendency to plan to move away permanently from this community once they are done high school and this tendency continues for the year following graduation. This finding follows the pattern described by Morrisson (1975) who said that most rural moves are made by previous migrants.
Figure 12: Interview One

Lifetime Residents

- Stay: 14.3%
- Move temporarily: 42.8%
- Move permanently: 42.8%

Figure 13

In-Migrants

- Stay: 12.5%
- Move temporarily: 0.0%
- Move permanently: 87.5%
Figure 14: Interview Two

Lifetime Residents

- Stay: 17.9%
- Move temporarily: 32.1%
- Move permanently: 50.0%

Figure 15

In-Migrants

- Stay: 12.5%
- Move temporarily: 0.0%
- Move permanently: 87.5%
**Intentions of advanced and general diploma holders.** The migration intentions of the participants were analyzed according to the diploma they were studying for. The results are shown in Figures 16, 17, 18, and 19. When migration intentions are examined according to academic achievement, it can be seen that the advanced diploma holders have a greater tendency to plan to move away permanently from this area and that this tendency continues for the year following graduation. This data follows the finding of Bogue (1969) that out-migrants from rural areas tend to be better educated.
Figure 16: Interview One

Advanced Diploma

- Stay 8.0%
- Move temporarily 22.0%
- Move permanently 70.0%

Figure 17

General Diploma

- Stay 40.0%
- Move temporarily 30.0%
- Move permanently 30.0%
Figure 18: Interview Two

Advanced Diploma

- Stay: 9.0%
- Move Temporarily: 29.0%
- Move Permanently: 62.0%

Figure 19

General Diploma

- Stay: 20.0%
- Move temporarily: 60.0%
- Move permanently: 20.0%
From the data, it appears that the student who is most likely to leave this rural area permanently is an Advanced Diploma female who moved to this area during her school years. Conversely, the student who is most likely to stay is a General Diploma male who was born in this community.

These are examples of the explanations participants provided for their migration intentions:

"There's no future, no jobs, no school here."

"I want to go and try something different for a while, but I think my friends and family will bring me back."

"I don't want to sound conceited, but I've done all I can do here."

"I'll probably come back and take over my Dad's position at the shop."

"I want the city things - there's more people. Everything's there."

"I like it here: I've been here all my life. There's family and friends."

"Small towns bug me. You're lazy if you stay here."

"This place is a dying community. I'd like to start fresh."

"At first I was afraid of the city, but now I find it exciting. There's new people and new pastimes."

"This town is nothing."

"Calgary's boring: there's nothing to do there. My social life is all here."

"I just can't see myself anywhere else."
Optimism

The participants were asked to tell how optimistic or pessimistic they felt about the future by responding to a one item, 5-point Likert scale. The question said: "Indicate which point on the following scale is closest to your beliefs.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The world is dangerous; full of barriers and problems.</td>
<td></td>
<td></td>
<td>The world is exciting and full of opportunities.</td>
<td></td>
</tr>
</tbody>
</table>

The answers were examined according to gender and academic stream, and multiplied by 10 for purposes of analysis. They are summarized in Table 5.

Table 5

Expressions of Optimism

<table>
<thead>
<tr>
<th>Interview:</th>
<th>One</th>
<th>Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (sd)</td>
<td>Mean (sd)</td>
</tr>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>33.38 (5.84)</td>
<td>33.92 (6.30)</td>
</tr>
<tr>
<td>General Dip.</td>
<td>31.60 (7.50)</td>
<td>26.00 (6.52)</td>
</tr>
<tr>
<td>All Males</td>
<td>33.72 (6.71)</td>
<td>32.28 (7.80)</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>38.85 (5.61)</td>
<td>40.00 (5.78)</td>
</tr>
<tr>
<td>General Dip.</td>
<td>33.20 (5.40)</td>
<td>29.40 (10.70)</td>
</tr>
<tr>
<td>All Females</td>
<td>37.28 (5.99)</td>
<td>37.06 (8.62)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35.50 (6.53)</td>
<td>34.67 (8.45)</td>
</tr>
</tbody>
</table>
The differences among expressions of optimism were examined by gender, by diploma sought, and over time. No significant differences were observed. A year after graduation, Advanced Diploma students showed a slight increase in optimism, and General Diploma students showed a slight decrease, however these were not statistically reliable.

**Perceptions of Control in Self and Others**

The participants were asked to indicate their feelings of control over the future one a one-item, 9-point Likert scale. The question said: "On a scale of one to nine, indicate how much control you feel over your future". On the scale, one indicated no control and nine indicated total control. Participants were also asked to indicate what they believed the mean response of the other participants would be to this question. The results were analyzed according to gender and academic stream, and appear in Table 6. For purposes of analysis, the responses were multiplied by 10.
Table 6

Perceptions of Control

(Total Control = 90)

<table>
<thead>
<tr>
<th>Interview</th>
<th>One</th>
<th>Interview</th>
<th>Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean for</td>
<td>Mean for</td>
<td>Mean for</td>
</tr>
<tr>
<td></td>
<td>Self (sd)</td>
<td>Others (sd)</td>
<td>Self (sd)</td>
</tr>
<tr>
<td>Males:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>63.85 (21.03)</td>
<td>60.00 (14.72)</td>
<td>62.30 (19.22)</td>
</tr>
<tr>
<td>General Dip.</td>
<td>66.09 (18.17)</td>
<td>62.00 (14.83)</td>
<td>62.30 (16.73)</td>
</tr>
<tr>
<td>All Males</td>
<td>64.44 (19.77)</td>
<td>60.00 (16.82)</td>
<td>60.56 (14.34)</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>74.62 (8.78)</td>
<td>54.62 (9.67)</td>
<td>66.92 (11.66)</td>
</tr>
<tr>
<td>General Dip.</td>
<td>60.00 (17.32)</td>
<td>58.00 (21.68)</td>
<td>54.00 (20.74)</td>
</tr>
<tr>
<td>All Females</td>
<td>70.56 (13.04)</td>
<td>63.61 (15.32)</td>
<td>55.00 (12.49)</td>
</tr>
<tr>
<td>Total</td>
<td>67.50 (16.80)</td>
<td>61.81 (16.82)</td>
<td>57.78 (13.55)</td>
</tr>
</tbody>
</table>

For all groups of participants, there appears to be a trend of decreased perception of control over the future from the time of Interview One. This decrease was smaller among males (3.88 points on a 90-point scale) than among females (15.56 points). Approximately two-thirds of the participants expressed a greater sense of control over the future than they believed their classmates would express. On the first interview, 25
participants (69.4%) said they felt more control than they believed their classmates felt; on the second interview, 22 participants (61%) said they felt more control than they believed their classmates felt. A gender difference was observed among those who felt less control. On Interview One, 72.7% of the participants who felt the same amount of control or less than they believed their classmates would express, were male. On Interview Two, 57.1% of these respondents were male. T-tests on the responses to this question revealed that the differences in perceptions of control according to gender were not statistically reliable.

There was a tendency for General Diploma students to express less of a sense of control over the future than they felt their classmates would express. General Diploma students made up 27.8% of the participants. On Interview One, 45.5% of the participants who felt the same amount of control or less than they believed their classmates would express, were General Diploma students. On Interview Two, 35.7% of these respondents were General Diploma students.

When participants were asked to elaborate on their feelings of control over the future they responded like this:

"I've been watching what I've been doing and trying to do it right."

"We think we can make life what we want it but we haven't had enough experience."

"Others are more determined than me."

"I'm responsible to this man that I'm going to be married to for the rest of my life. So I feel like I'm losing control...they're joint decisions now."
"I'm doing something that's going to take me somewhere. A rig-pig* makes money now but what about after?"

"Inside of me I want to do better than the average person."

"I know what I have to do up ahead. Some people go to college but they don't know why. I know where I'm headed."

"The field I've chosen is hard to get into. It's a big gamble for me."

"Some people my age don't use their heads, but I like to think I do."

"Around here there's a lot of low self-concept...the idea that you have to what your Mom and Dad have done...as if your childhood has already set your lot in life."

"I've known where I'm going to go and how I'm going to do it longer than most people. I'm taking bigger steps."

"There is no control. Sometimes you're lucky and sometimes you're not."

"I don't have as much confidence as some, and that will affect me. I'm hesitant."

"We might think we have control but we don't. There's always something that's going to surprise you - I've learned that the hard way."

* Slang term for an unskilled oil-rig worker.
Family Life Decisions

Marriage intentions. There were 3 items in the interview that dealt specifically with marriage and family aspirations. The first of these asked "Do you plan to get married sometime in your life?" All 36 participants responded "Yes" to this item on both interviews.

Preferred age for marriage. Participants were asked how old they preferred to be when they married. The results are summarized in Table 7.

Table 7

Preferred Age for Marriage

<table>
<thead>
<tr>
<th>Interview</th>
<th>One</th>
<th>(sd)</th>
<th>Two</th>
<th>(sd)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Dip.</td>
<td>25.5</td>
<td>2.09</td>
<td>24.5</td>
<td>1.26</td>
</tr>
<tr>
<td>General Dip.</td>
<td>24.4</td>
<td>.65</td>
<td>25.4</td>
<td>2.90</td>
</tr>
<tr>
<td>All Males</td>
<td>25.1</td>
<td>1.86</td>
<td>24.8</td>
<td>1.80</td>
</tr>
</tbody>
</table>

Females

| Advanced Dip. | 25.5 | 2.44 | 24.3 | 2.89 |
| General Dip.  | 24.3 | 1.67 | 23.5 | 2.14 |
| All Females   | 25.2 | 2.20 | 24.1 | 2.61 |
| Total         | 25.2 | 1.99 | 24.5 | 2.21 |
When the responses to the preferred age for marriage were examined, no statistically significant differences according to gender were observed.

**Others: Positive influences.** The participants were asked to list persons other than their parents who had been an ameliorative influence in their career decision-making process. On Interview One, the most commonly cited influences, mentioned by 50% of the participants, were older siblings and other relatives. Fifteen of the participants (41.6%) listed adult role models such as coaches, family friends, and older students. In addition to these adults, employers were mentioned by 7 students (19%). Nine students (25%) said their friends had exerted a positive influence and 7 (19%) mentioned their high school teachers. There were few gender differences observed in the responses to this question.

On Interview Two, older siblings and other relatives were again cited most frequently. Nineteen of the participants (52.7%) listed these as a positive influence. Fourteen participants (38.8%) listed friends, and 7 (19.4%) listed other adults. A year after completing high school, only 3 participants (8.3%) mentioned teachers as being a positive influence on them, and 2 of these mentions were for college instructors. One gender difference was observed in these responses: females tended to list friends as a positive influence more often than males did. Ten females (55.6% of female subjects) cited friends, while only 4 males (11.1% of male subjects) cited friends.

In response to this question, participants said things such as:

"My aunts and uncles have told me what's out there and what I should watch out for."
"My brothers are always there for me to lean on."

"My professor and some of the grad students have told me not to be superficial in my work. Just watching them, I see the possibilities out there."

"My coaches have given me lessons about life. They tell me 'If you want to do something bad enough you have to work at it.'"

"My sister always says 'Don't do what I did.'"

"My sister - she has dedication and push."

"It was my friend who made the phone call to get me into my course."

"My uncles, my aunts, and my grandparents all say, 'You have to get an education.' They'd all be disappointed if I quit."

"My boss tells me this job won't advance me - I need to go to school. I met his son who also went to SAIT [Southern Alberta Institute of Technology] and he gets a lot of respect."

"My grandpa always said 'Farming's the ideal career.'"

"My aunt taught me to stand up for myself. She told me to get out and do what I wanted to do."

"When this job came up my uncles both told me it was the right move."

**Others: Negative influences.** The participants were asked, "Has anyone been a negative influence on you...that is, shown you what you don't want to do or be?" On Interview One, 9 participants answered "no" to this question. Among the 27 (75% of participants) who replied "yes", 14 mentioned specific people, and 13 described lifestyles that they wished to avoid experiencing. The responses were largely gender consistent: the male participants who answered this question all cited males they did not wish to emulate, and of the 15 females who responded, 12 (80%) cited females they did not wish to emulate. The 3 females who provided male
examples all cited older brothers who had not attended post-secondary school as being their negative influence.

On Interview Two, 3 participants responded "no" to this question. Among the 33 who replied "yes" (92% of the participants), 12 described specific people, and 21 described lifestyles they wished to avoid. The responses were more gender consistent than they were in Interview One: all the males cited male examples, and 16 of the 17 females who responded to this question (94%) cited female examples.

In response to this question, participants described the following people and lifestyles as negative influences:

"People who have a family before they can provide for them...always in debt, making payments, not holding down a job."

"Hard labor. I know guys whose body is worn out from working too hard."

"People I see in town. I don't want the dirtiness...they've got no ambition, low prestige jobs, uneducated, and not wanting anything different."

"The guys at my summer job. They're just waiting for their next pay cheque so they can buy more drugs."

"My brother - works too long and too hard, is already tied into making payments. His life is a struggle."

"Guys that are still working rigs at fifty because they have no other skills."

"My aunt just sits at home with her kids in a messy house. I'm going to wait until I'm good and ready to have kids."

"Some of my friends don't have a lot of ambition. This makes me more strong."

"Kids aged 25-26 who are still stuck here and living with friends, partying...they get into trouble...they're a gang and this is their turf."
Attributes

Subjects' self-generated attributions about careers and other students. The attribution literature (Callaghan & Manstead, 1983; Erkut, 1983) is critical of the tendency among researchers in the 1970s to study attributions based upon limited ranges of experimenter-determined responses. In more recent research (Travis, Burnett-Doering & Reid, 1982; Bar-Tal, Goldberg & Knaani, 1984) subjects have been requested to generate their own attributions: that is, to cite causes freely without referral to a list prepared by the researcher. The present study followed the subject-generated response method. Before the administration of the Causal Dimension Scale (Russell, 1982), participants were asked "What are the three things you think have the biggest impact on a young person's career decisions?" The most frequently cited responses were: parents, friends, and future income. Table 8 lists the most common responses and indicates the number of times each response was given.
Table 8

Responses to the question: "What three things have the biggest impact on young people's career decisions?"

<table>
<thead>
<tr>
<th>Influence</th>
<th>Interview One</th>
<th>Interview Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males (times mentioned)</td>
<td>Females</td>
</tr>
<tr>
<td>Parents</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Friends</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Future Income</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Observing Others</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Media</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Ambition</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Teachers</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Education</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

The attributions cited by females remained more constant over the two interviews while those cited by males showed a decrease in parental influence, an increase in job-related attributions, and a wider variety of total influences listed (20) as compared to their first interview (13) and for both
female lists (13 and 12). Females cited job-related attributions (e.g. "job opportunities") 8 times on the first interview and 10 times on the second interview. These figures include the 6 citations on each interview for "future income". Males cited job-related attributions 8 times on the first interview and 18 times on the second, listing such specific influences as "security", "location of work", and "job satisfaction." It appears from the responses to this question that, a year after graduation, the male subjects were far more aware of specific job characteristics that were influencing their decision-making.

Subjects' self-generated attributions about their own careers. The next question was "What influence has had the MOST impact on you?" During the second interview, 8 subjects (7 females, one male) gave the same response to this question as they had a year earlier and 28 subjects gave different responses. The responses are summarized in Table 9.
Table 9

Responses to the question: "What one influence has had the biggest impact on your career decisions?"

<table>
<thead>
<tr>
<th>Influence</th>
<th>Interview One</th>
<th>Interview Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males (times mentioned)</td>
<td>Females</td>
</tr>
<tr>
<td>Parents</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Friends/Role Models</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Future Income</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Job Opportunities</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Personal Characteristics</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

Eight of the participants responded by naming the same major impact in both interviews. Of these, 5 cited "parents", 2 cited "observing others", and 1 cited the personal characteristic of "ambition". Again, males were more likely to cite job-related influences, while females were more likely to cite other people or intrinsic characteristics as being most influential.
The Causal Dimension Scale.

After identifying the most influential factor(s) regarding their career decisions, participants were asked to complete the Causal Dimension Scale (CDS). To increase the uniformity of comprehension, the interviewer read the questions aloud while each subject followed on a blank copy of the CDS and gave his or her responses orally.

The results of the CDS were subjected to item analyses. These analyses yielded inconsistent results. Low reliability was observed among the items in each of the subscales of the CDS. When the raw data were examined it was apparent that there were a high number of unreliable responses and/or respondents. The small number of participants made it impractical to eliminate these.

Russell cited high internal consistency for the CDS, and Groenewald (1990) utilized it successfully with school aged children. However, in the present study I could not replicate those results. Consequently, the data cannot be interpreted at a scale level.

Predicted effects of marriage and parenthood on careers

Subjects were asked to describe the impact they believed marriage and/or parenthood would have on their occupational plans. On the first interview, 7 males (38.9% of the male subjects) and 6 females (33.3%) said they had not considered this question before and had no answer. On the second interview, 1 male (5.5%) and 0 females had no answer. The most frequent reply on the first interview by males (n=7) was that they would
most frequent reply on the first interview by males \( n=7 \) was that they would attempt to work regular hours and avoid shift work so that they could spend more time with their families. Females \( n=6 \) most frequently answered that they would work part-time when they became mothers. On the second interview, the two most frequent answers by males were again, a desire to work at a job where the hours were conducive to family life \( n=6 \), and a desire to earn a salary adequate to support a family \( n=5 \). In contrast, two males on the second interview indicated that the responsibility of marriage and/or parenthood would cause them to work longer hours. One of these two felt that this responsibility would make him "a more well-rounded person" while the other pessimistically predicted that because he would be putting more energy into his job than his home there would eventually be a conflict. Three males responded that they expected marriage and/or parenthood to have no effects on their occupational lives. On the second interview, the most common response \( n=10 \) for females was that they planned to be absent from the work force while their children were small. Nine of these respondents planned to return to work when their children were school age while one said she would return to work "only if I have to". Five female subjects (27.7% of the female subjects) said they planned to allow motherhood to cause as little disruption to their occupations as possible, and for these respondents acceptable absences from work ranged from a few weeks to a year. One of these young women explained "It's the nineties now" and another said that, regardless of her status as a parent, she always wanted to earn her own money. The remaining 3 subjects, two of whom had extremely high academic achievement, said that they hoped to be well-established in their careers before they began to have children and believed that this would make blending motherhood and a profession
easier. These three females had also set their desired age for marriage at a mean of 27 years: considerably higher than the mean for other Advanced Diploma Females which was 24.3 in the second interview.

Subjects were asked to describe what they hoped their lives would be like in ten years time. On the second interview, eight males and 9 females (47.2% of respondents) included a reference to marriage and/or parenthood in their description. Six responses - 3 from males and 3 from females - mentioned "a happy family" as being part of their ideal future.
CHAPTER V
DISCUSSION

The following discussion of the results and implications of this study is divided into 8 sections. The first 6 sections discuss the major study variables with reference to the initial research questions, results of previous studies, and related issues. The final 2 sections examine the limitations of the study, and suggest applications of the information, and implications of the results for further research.

Gender and Aspiration

At the beginning of this study, questions were asked about the perceived differences between male and female high school graduates regarding their vocational aspirations and achievements. At the time of the first interview, using Dunne's 1-4 continuum, there was little difference between the mean occupational aspiration for males (3.18) and the mean for females (3.06). A year after graduation, the difference between male aspirations (M=3.07) and female aspirations (M=2.69) had increased, mostly due to the change in aspirations expressed by General Diploma females, among whom the mean had dropped from 3.00 to 2.00. The Advanced Diploma females had decreased their aspirations slightly, to a mean equal to that expressed on the second interview by the General Diploma males. Thus, a year after finishing school, Advanced Diploma females and General Diploma males were aspiring to a similar occupational status. This is not to say that they will achieve the same status, but that their aspirations are at the same level.

For these young people, it appears that males and females have similar aspirations at the time of graduation, but that a divergence in aspiration levels
according to gender begins during the first year after completion of high school. It would be interesting to examine the group several years in the future to see if this trend continues. Card, Steele, and Abeles (1980), Dunne (1980), Kaufmann (1981), and Kerr (1985) all cited evidence to support the belief that this gender difference will continue, and Groth (1969) predicts that it will continue until the females are in their forties, and they typically begin to replace affiliation with achievement as their strongest need.

At the time of the second interview, three of the female participants had become parents, and a fourth was pregnant. This change in status was having a strong influence on their career decisions. Verbally, these young women all indicated that motherhood was encouraging them to get more schooling and/or job training. The reality was that three of them had stopped going to school for the time being, saying such things as: "As soon as my kid gets into school, then I'll go back to school. I don't believe in a babysitter raising him," and "This will definitely slow things down. I'll take time off. The damage isn't permanent."

None of the male participants indicated that they were affected by parenthood within a year after graduation.

On the second interview, 8 participants - 2 male and 6 female - said that their vocation and migration intentions were being influenced by a romantic partner. This indicates that, a year after graduation, 11.1% of the male participants and 33.3% of the female participants were including affiliation needs in their decision-making. This lends support to Groth's prediction that affiliation is the strongest need for females in this age group. The males who indicated they were being influenced were both General Diploma students, while the females consisted of 2 General Diploma and 4 Advanced Diploma students.
Parental Occupation and Participation in Post-secondary Education

Several studies have examined the relationship between maternal employment and aspirations for further education. These studies all hypothesize that maternal employment will cause children to hold less traditional sex-role attitudes than those held by children from families where the mother is not employed outside the home. Schulenberg, Vondraceck and Crouter (1984) found that maternal employment appears to affect male and female children similarly. If the mother works outside the home there is a greater likelihood for the children, regardless of gender, to seek post-secondary education. Carpenter and Western (1984) and, additionally, Corder and Stephan (1984) found that the effect of maternal employment appears to be greater for females than for males. In their studies, a well-educated mother working outside the home appeared to have a strong positive influence on daughters seeking further education, while a well-educated mother who was a full-time homemaker appeared to have a strong positive influence on sons seeking further education. In the present study, the mothers of males who attended post-secondary school had a higher mean occupation status (2.9) than the mothers of females who attended post-secondary school (2.0). The mean occupation status for the mothers of all participants was 2.2. Higher maternal occupation status appears to have had a positive effect on the males in this study, increasing the likelihood of further education being sought, but the same effect was not observed for the females.

The differences in effects that were seen for maternal occupation status are not apparent for paternal occupation status. There appeared to be little relationship between paternal occupation status and participants' attendance at post-secondary school. This finding partially supports the findings of Carpenter and Western (1984) who say that paternal occupation affects the likelihood of
boys attending post-secondary school, but not the likelihood for girls' attendance.

**Perceived Parental Influence**

When the participants were asked about their parents' attitudes towards further education, two gender differences were reported. First, 50% of the males and 77.8% of the females perceived their parents as wanting them to receive further education. Second, among the 23 students who said their parents encouraged more education, 69.5% said it was their mother who was more verbal about this, 21.7% said their father was more verbal about this, and 8.8% said their parents were equally verbal. Thus, females appear to be more encouraged than males to continue their schooling. Female parents do more of the encouraging, and are more likely to do this for their daughters. It is difficult to ascertain, from these interviews, to what extent this verbal encouragement is backed up with practical help. Currently, education for young women is an idea that is seemingly given much approval in Canadian society, but it is not enough for parents and teachers to merely voice platitudes about it. Young, rural females have few models at home or in their communities of well-educated women. Rural, female graduates who plan to further their educations rarely return to the small town environment, and the intentions of this group are to follow that previously-observed migration pattern. Thus, the rural females who do become educated and enter professional life rarely return to the community to serve as role models or mentors for younger women. Additionally, it is more difficult for girls than for boys to earn the money required to attend post-secondary institutions: thus, we observe how the wage-gap perpetuates itself.
Migration Intentions

Receiving an Advanced Diploma, being female, and being an in-migrant to this community, all increased the likelihood of a participant intending to leave permanently. Conversely, receiving a General Diploma, being male, and being a lifelong resident of the community all increased the likelihood of a participant intending to stay in this village. There is a stereotype of young rural men having what Marcia described as "Foreclosed" identities (i.e., their vocational choice was made early in life, often through family expectations, without a crisis of decision-making). This stereotype is often based on the strong probability that young rural men may inherit the family farm. None of the five participants in this study who matched the profile of "most likely to stay" lived on a farm. Thus, it is not the farm lifestyle that is encouraging these students to stay in the rural community. Those intending to stay often cited family, friends, and the perceived security of their lifestyle as reasons to make this village their permanent adult home.

It appears that, as students become better educated, they are more likely to express a desire to leave permanently. In many rural communities, this loss of the brightest students, year after year, is perceived as a tragedy. There are townspeople who suggest that better facilities and job creation programs are needed to encourage more young people to remain in the rural areas. But the migration intentions of these participants follow the pattern observed in much of rural North America, and it is unlikely that local initiatives will reverse the trend. Rural policy-makers would do better to examine the characteristics of the students who are most likely to stay in the community and expend their efforts towards providing the jobs and facilities that these young people need.
Optimism and Control

Advanced Diploma females expressed the highest amount of optimism during Interview One and expressed increased optimism during Interview Two. Advanced Diploma males expressed a slight increase in optimism at the time of the second interview. Both the General Diploma groups - male and female - expressed a decrease in optimism from Interview One to Two. These results suggest that the year after high school graduation was more sobering for the General Diploma students. This latter group of participants had a higher amount of unemployment, for example, than the Advanced Diploma students experienced.

In response to the question about their own control over the future, Advanced Diploma females again expressed the highest scores on Interview One. All four groups felt less control over the future on Interview Two than they had expressed a year earlier. General Diploma males attribute a greater perception of control to their classmates than any other group does. Overall, it appears that Advanced Diploma females express more optimism and a greater sense of control than other students do. The results for these two questions were each based solely upon a one-item scale, examined for face validity, and the observed differences were not statistically reliable.

Family Life Decisions

There were no significant findings in the responses the participants provided regarding their preferences for marriage and parenthood. Females indicated a preference for more children (M=2.5) than males did (M=1.8). This gender difference was perceived for all females, regardless of academic achievement. The literature suggests (Kenkel, 1985) that high achieving females and low achieving males prefer to produce fewer children, but that
difference did not appear in this study. Perhaps a difference will be noted in the future, after the participants have more experience regarding work and their potential earning power.

At the time of Interview Two, the participants were more likely to have thought about parenthood and how it might affect their career decisions. Regarding this question, the chief concerns of males were: having a career that provided hours that were conducive to family life, and earning a salary adequate to support a family. The chief concern for females was being able to combine career and parenthood timewise: they wanted either part-time work when they became mothers, or a career that they could easily leave for several years while they raised their children. Interestingly, although 100% of the female participants on both interviews said they hoped to have children, not one of them mentioned an adequate salary to raise a family as being either a concern, or a factor that was affecting their present decision-making process. For these young women, it appears that financial considerations do not play a part in their vocational decision-making. They seem to make choices based on such job characteristics as prestige, personal interest, and time flexibility, but not on potential earnings.

One of the original questions in this study concerned the gap between male and female wages in Canada, with females presently earning about 62% of male earnings. From the preceding results, we can identify five reasons why the female participants in this study may earn less over their working lives than their male counterparts. First, marriage and parenthood are occurring sooner in the lives of the females, and are adversely affecting both their involvement in post-secondary education, and their acquisition of job skills and experience. Second, a higher percentage of the females are including affiliation needs in their vocational decision-making. This in itself does not limit earning potential,
but it may result in opportunities being turned down or in decisions being made that are aimed at preserving a relationship rather than advancing a person's career. Third, it was rare for the female participants to indicate concern with potential earnings. Although they all expressed the desire to be parents at some time in the future, and most of them intended to curtail their involvement in their careers when they had small children, not one female expressed concern or interest regarding where the money would come from to provide for this. Additionally, only one female participant out of 18, on both interviews, mentioned future income as being the major influence on her career decision-making process. Fourth, female aspirations are often not in accordance with female ability. The four top academic achievers in this group, based on Alberta Education examinations, were female. Out of the 10 top students in this class, 7 were female. And yet, both groups of females, on both interviews, set lower aspirations for themselves than the males. This combination of little or no regard for potential wages plus aspirations that were not commensurate with proven academic ability was seen in the majority of the girls, and was illustrated most vividly by one young woman who described her vocational indecision in some detail. Academically, she ranked third in the class, ahead of all the males. Her hard work in high school and excellent grades meant that she had achieved clear entrance to most first-year university programs across Canada. She was undergoing much stress trying to decide whether to study teaching or hairdressing. In her eyes, these two careers were equally desirable. As she outlined the factors that she was weighing, it was apparent that she was unaware of the differences in financial security, status, and self-actualization between these two jobs. She was not unusual among the female participants in her disregard for her potential earning power and lack of knowledge about how to maximize it. The last of our reasons for the future differences between male
and female wages can be seen among the General Diploma Females, where aspirations dropped considerably during the year following graduation. It may be argued that these lower aspirations are more realistic for the individuals concerned, but they indicate a dramatic difference between General Diploma Males (M=3.00) and General Diploma Females (M=2.00) and what these young people are striving for. We can speculate that the year following graduation was a difficult one for these young women, and that they had begun to realize what their adult working lives might be like. For the participants overall, 9.7% of the year following graduation was spent in unemployment, while for the General Diploma Females, this time was 22.5%. When they worked, they were employed as either waitresses, chambermaids, or store clerks, usually receiving the minimum wage. We know that early marriage and/or parenthood generally limit a woman's education and job opportunities, but these changes in status may seem like desirable alternatives to the working lives General Diploma Females find themselves in when school ends. Again, the wage-gap perpetuates itself.

Females seemed to have one advantage over males in that they reported being encouraged by their parents to continue their educations more than males did. As stated previously, this study could not ascertain to what extent this encouragement went beyond verbal expression and took the form of practical help.

Positive and Negative Influences

When discussing positive influences it is necessary to mention the parents of the participants. From the interviews a strong sense emerged of rural moms and dads who wanted their children to have a better life than their parents had experienced, and who saw education as the best way of assuring
this. Most of the participants had been encouraged to continue their schooling, and many of them knew that their parents would support them financially if they chose to attend university or technical school. In some families, parental assistance seemed to have stopped with verbal encouragement: parents expressed their approval of further education, but did not appear to know how to provide practical help in this area. In several families, it was mom who had telephoned the college for information, driven to the city for a copy of the prospectus, and/or assisted in filling out the application forms. Fathers provided encouragement, and in several instances were credited with ensuring that financial assistance was available for their children's educations; although mothers must also have made sacrifices so that money was available for further education, of the 7 participants who were receiving financial help only one cited his mother as the source of this help. Mothers were more often credited with providing practical help.

When participants were asked about positive influences other than their parents on their career decision-making process, 50% on Interview One and 52.7% on Interview Two mentioned older siblings and other relatives. A picture emerged of young people who were the center of much interest from their immediate and extended families regarding their vocational decisions. These young people appeared to give credence to the advice and examples of their older relatives, and had often included this information in their decisions. These family influences did not appear to be gender specific, especially when they involved siblings.

When asked about negative influences, 75% of the participants on Interview One and 92% of the participants on Interview Two described people whose example they did not wish to follow. The negative influences were more gender specific than the positive influences. While many of the positive
influences were the result of respected others talking to the participants, many of the negative influences were the result of the participants observing lifestyles and decision-making patterns around them and drawing their own conclusions. In this respect, young people from small communities may have an advantage over their counterparts from the city. In villages and towns, people's lives are much more public, and the long-term results of decision making - vocational and otherwise - can usually be observed by the rest of the community. There are more cautionary tales available to young people from rural areas.

Limitations of this study

The small number of participants in this study (36) places limits on the applications of these findings. The participants have a lifestyle that is not the norm for Canadian adolescents. They attend a very small school, which has provided some advantages in terms of personal attention, but has limited their educational options. Additionally, the rural lifestyle restricts the number of adult role models that these students come in contact with and the variety of occupations that are practiced and observed in the area.

The results of the Causal Dimension Scale were intended to form an important part of this study. It was hoped that more information would be provided regarding gender and achievement variables in attribution patterns. The high internal consistencies reported by Russell (1982) and Groenewald (1990) on the CDS were not replicated with these participants. On this study, the CDS yielded poor reliabilities. This limited the analysis of differences in attributions which was a primary intention of this research. An explanation for these poor reliabilities, when compared to the results achieved by Russell and Groenewald, may be found in the method of administration used. In the studies
performed by the latter two researchers, the participants used a paper and pencil method of recording their own responses to the scale. In the present study, participants followed along on an unmarked copy of the scale while the interviewer read the statements aloud and recorded the responses. Thus, these participants were not able to re-read their earlier responses; if they had been able to do so, their responses may have been more consistent. It would be interesting to administer the Causal Attribution Scale to two groups of participants, using the above two methods, and compare the resulting reliabilities in an attempt to ascertain if the method of administering the scale appears to affect the reliabilities.

A third limitation of this study is the relatively short time span it examined. Participants were interviewed at the time of their high school graduation, and again a year later. This was not sufficient time to observe long-term patterns of decision making. Many of the responses on the interviews consisted of aspirations: it remains to be seen what the participants actually do. The literature (Cochran, 1983; Gilligan, 1982; Horner, 1972; Kerr, 1990) says that men and women continue to diverge in their aspirations and career experiences during the decade following high school.

When designing this research, I did not allow for the possibility of any of the participants experiencing parenthood during the year between interviews. Four of the young women in the study (22% of the female participants) experienced pregnancy and/or parenthood during the course of the research. As a consequence, although motherhood was having immediate effects on the career decision-making of these young women, the original design of the interviews did not provide for inclusion of these effects in this study.
Applications of the findings

Over the past decade, educators have called for affirmative action to assist young women in their vocational choices. Programs for girls have been developed and piloted in high schools in an attempt to influence the career decision-making process and limit stereotypically female behavior (e.g. Amatea, 1984; Kerr, 1990). During the initial phases of this research, I believed that the results I obtained might help me to critically analyze some of these programs and provide me with a theoretical basis from which to lobby for their inclusion in public schools. As I progressed with the review of the literature, I learned that career decision making - and more specifically, career limitation based on gender - begins at a much earlier age than many educators realize.

Corder and Stephan (1984) found that many of the thirteen-year old girls in their study had already sharply limited the careers they would consider pursuing. These limitations were based on perceived conflict with future family roles and on the girls' perceptions of male attitudes towards female careers. The boys that Corder and Stephan interviewed did not show these same limitations. An interesting study would be one that examines successively younger groups of children to determine when this divergence of masculine and feminine career choices appears to begin.

Some feminist writers (e.g. Chodorow, 1978; Dinnerstein, 1976) believe that it is the traditional gender asymmetries in childrearing that produce a desire and capacity for mothering in women and a desire for achievement outside the domestic sphere among men. Until childrearing patterns are changed, these theorists claim, it will be difficult to change achievement patterns. Chodorow states that these patterns begin in infancy: female children tend to form their identities around relatedness and attachment, while male children tend to form their identities around accomplishment and a rejection of dependence. If
Chodorow’s theory is correct, these patterns are established in the first few years of life, and may be almost impervious to change. There appears to be little that a well-intentioned career course for high school girls, operating chiefly at the cognitive level, can do to change these deeply-held beliefs about masculinity and femininity. After reviewing some of the relevant literature, I am pessimistic regarding the likelihood of secondary-school programs having any long-lasting effect on female patterns of career decision-making.

One unexpected result that I observed while conducting the interviews was an affective reaction among the participants to the interview questions. Several of the interviews ended with the participants in tears. Three female and two male participants requested time to debrief the interview experience, and in three instances this developed into an hour-long session discussing family issues. It appeared that the interview process had brought these issues up for the participants and therefore I felt that it was my responsibility to listen further.

I believe this reaction has several implications. The frequency of this reaction was much higher during Interview One, which may have been due to the emotional strain the participants were undergoing as their high school graduation approached. This is a time of life that is generally regarded as celebratory; however, many of the participants expressed uncertainty and even fear as the end of public schooling neared. Parents, educators, and school counsellors need to be aware of the emotional stress that high school seniors experience. The joy that young people feel as secondary school ends is tempered with trepidation regarding their own decision-making skills, the imminent loss of security, and the realization that many of their actions during the next few years will have life-long effects. During both interviews approximately one-third of the participants apologized to me because they had not yet reached a firm decision regarding their life’s work and indicated that they
felt this indecision was a failing on their part. There is societal and parental pressure on high school graduates to have a clear plan for their future, and yet the reality is that many eighteen-year olds are experiencing the ego states which Marcia (1966) called "Identity Diffused" (exhibits a lack of commitment and concern regarding occupational choice) and "Moratorium" (in the midst of the crisis period and struggling to make a decision). School counselling programs need to do a better job of educating young people about typical vocational behavior, and reassuring their clientele that it is neither unusual nor shameful to be confused about vocational decisions as the end of high school approaches.

Despite my counselling experience, I was not prepared for the affective reaction to the interview process which many participants exhibited, i.e., sadness and guilt. The interviews had been designed to be as non-threatening as possible. Many of the participants said that they had never thought about some of these questions before. The experience of describing their ideal life ten years hence appeared to be especially powerful for them. There is no way of knowing what had the strongest effect on the participants: the questions that were being posed, or the fact that someone was spending thirty-five minutes exclusively concerned with them and their goals for the future. If school budgets allowed, I believe it would be valuable for high school students to experience an interview similar to this at the beginning of grade ten and again at the beginning of grade twelve. The theme of the interviews would be "Where are you going? How do you intend to get there? What could you be doing now to ensure the outcomes you want?" Such an experience might help young people to establish short- and long-range goals and to picture themselves as active authors of their life events. Much of the current vocational counselling in
schools is carried out on a group basis and much of the individual counselling that is done in this realm remains at the cognitive level.

Another implication of this work can be seen when we examine the employment patterns for the Advanced Diploma and General Diploma groups. The Advanced Diploma students made up 72.2% of the participants and in the year after high school they experienced 37.2% of the unemployment. The General Diploma students made up 27.8% of the participants and experienced 62.8% of the unemployment. Stated another way, in the year following graduation, the Advanced Diploma students spent a mean of 6.6 months being unemployed, while the General Diploma students spent a mean of 2.7 months unemployed. Many high school counsellors spend much of their time and energy providing advice about colleges and universities, scholarships and student loans. These unemployment rates suggest that it would be expedient to devote more attention to the post-graduation needs of the General Diploma students. If the school system cannot provide this service, perhaps Employment Canada needs to consider extending its counselling services to the secondary school students who are most likely to require them. Because school counsellors were once Advanced Diploma students themselves, and accessed post-secondary education, they may not be the best people to meet the vocational counselling needs of the General Diploma students. Conversely, General Diploma students may assume that the vocational counselling provided in schools is aimed at the more academically proficient students and may not take advantage of the services and information that is available.

An overall impression that the interviews provided was one of males assuming a more utilitarian stance to the process of choosing a career. They mentioned job satisfaction, and job opportunities as influences on their decisions, which no females did, and they were more likely to have a definite
career in mind and know how to go about achieving it than were their female counterparts.

General Diploma females appeared to be the most disadvantaged group in this study. They were receiving the lowest wages, had experienced the most unemployment, and, within a year after high school graduation, voiced the lowest aspirations of any group. As I transcribed their interviews I realized that their attitudes had been influenced largely by their own mothers, several of whom were working for minimum wages, and by media portrayals of the lives of women. It appeared that feminist theory had not affected these young women. Feminist ideas are mostly available at colleges and universities, and they are most often expressed in print form. These ideas need to be more accessible to those young women who have difficulty with reading, who do not plan to participate in post-secondary education, and who currently obtain most of their ideas about femininity and women's lives from television, magazines, and popular music. For many poorly-educated Canadian women, their first brush with feminism occurs at a crisis point in their lives: divorce, desertion, or at the women's shelter. Feminists, particularly those involved in education, need to discover ways of delivering their message of female self-determination to a younger, less-elite group than is presently being reached.

One of the strongest implications of this study is, of course, the temptation to return to the participant group five years after graduation, or ten years after graduation, or...? Will the patterns of seeming female underachievement that have been observed Canada-wide continue, and will this group of young people become further examples of it? Do we need to change females to better fit the world of work or do we need to change the world of work to better fit the female developmental model? Are things changing or are they staying the same?
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