

CAREER ASPIRATIONS OF UPPER YEAR UNIVERSITY STUDENTS

by

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Abstract

One hundred and six female and 53 male upper year university students participated in a questionnaire study of career aspirations. The questionnaire covered the topics of perceived parental closeness, support, and sex role endorsement; maternal employment, career commitment, influences on career choice, career values, and desired adult role commitments. Measures of eight personality traits were included: Abasement, Achievement, Affiliation, Autonomy, Dominance, Endurance, Nurturance, and Succorance. The women respondents were divided into two groups based on whether their career choices were traditionally or nontraditionally feminine. Three groups were formed: traditional women ($N=48$), nontraditional women ($N=58$), and men.

As hypothesized, the two groups of women differed. More of the nontraditional women had mothers who were employed during the respondent's childhood. The traditional women reported being influenced, in making their career choice, by a greater number of factors. In terms of career related features the traditional women more often valued being able to help others while the nontraditional women were more concerned with salary potential, freedom from supervision, and job availability.

Discriminant function analysis revealed that the two groups of women could be differentiated by the eight

personality trait measures. Univariate analysis revealed that the traditional women scored higher on Affiliation and Nurturance.

The nontraditional women desired fewer children than the traditional women. They reported being somewhat more liberal in their conceptions of their future marital roles. The men studied indicated more traditional conceptions of their future roles than both groups of women. Few men indicated willingness to limit their job participation to attend to child care.

The realism of women's career aspirations was discussed in terms of both academic preparation and marital role demands. Changing trends in adult roles for both sexes were considered. Methodological problems inherent in the study of women's career aspirations and career participation were discussed along with recommendations for further research.

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Statement of Problem

Until recently a young woman could expect to embark upon a fairly predictable life course. It was generally assumed that she would, upon completion of her formal education, enter the labour force for a short period--until marriage or the impending birth of her first child--and then withdraw from employment for an indefinite period (Douvan & Adelson, 1966). This expectation of a career as a homemaker often resulted in a young woman either failing to make any substantial career plans or in her choosing an occupation in which women have traditionally predominated. Many of these occupations were characterized as having a short preparation period (i.e. in terms of post secondary education) and as being easily left and reentered.

Many women have preferred employment in service and clerical occupations. These offer regular working hours and the possibility of temporarily discontinuing employment (to attend to childrearing, for example) without severely jeopardizing the chance of returning to a similar position. Women in these fields are also afforded considerable geographic mobility. This permits them to relocate with their husbands without threatening their employment status (Agassi, 1977). Part time and temporary employment are also available in these fields, providing women with more time to spend on home and child care

responsibilities.

Women are entering the full time labour force in rapidly increasing numbers (Statistics Canada, 1980) and more women are pursuing university education; fewer young women are pursuing the traditional life and employment plan. In the past, social scientists have been interested in the differences between employed and nonemployed women. Recent trends show a shift in focus to the examination of factors related to the choice of occupation.

The majority of university educated women still show a preference for employment in areas which have been female dominated, for example nursing, elementary education, social work, and librarianship. These will hereafter be referred to as traditional career choices. However, an increasing number of women are seeking the challenge and potential upward mobility offered by careers that traditionally have been masculine domains. Such fields as law, management, medicine, and science require both long term commitment and persistent dedication. They often feature long and erratic working hours which preclude part time participation (Rossi, 1972) and career disruption is usually detrimental to advancement (White, 1970). These careers will be referred to hereafter as nontraditional career choices.

The purpose of this research was to examine some of the factors which may be related to women's choices of either traditional or nontraditional careers.

Review of the Literature

For some time the question has been raised as to why so few women have chosen to use their intellectual potential in careers and why, in turn, so few women have attained social and intellectual prominence through their endeavours (Tyler, 1965). Given the similarity of the sexes in terms of general intelligence (Maccoby & Jacklin, 1974, p. 65) it appears that women are not hampered by lack of ability. Other factors seem to be operating which have discouraged or prevented women from aspiring to and achieving in areas in which they could attain prominence. Despite having been granted access to graduate and professional training, relatively few women pursue many of these programmes (Lenney, 1977).

O'Leary (1974) has suggested that girls and women are hindered by barriers, both external and internal, which block them from nontraditional employment. The external barriers are comprised of stereotypes of women in relation to employment and employment roles. The internal barriers are those factors relating to women's own beliefs and self perceptions. Both the external and internal barriers will be examined in the following sections.

1. External barriers to women's achievement in employment

External barriers may block women's entry to careers, or limit their possibilities for advancement. In some cases women may be aware of these barriers prior to entering a career. In others, women may not be aware of these barriers until they enter the labour force. Both types of external barriers will be discussed. Although the present study focuses on internal barriers it must be emphasized that external barriers play an important role in determining career plans.

Research on sex role stereotypes (Bem, 1974; Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972) has indicated that women are seen by members of society as being warm, nurturant, and emotionally expressive. Men are perceived to be achieving, independent, and competent. As O'Leary (1974) noted, the ideal characteristics of the individual who is seen as being suited to positions of power are masculine characteristics and not feminine characteristics. Moreover, men who are in positions to promote women perceive them as being unsuited for supervisory positions because of both their personalities and the negative responses they would evoke in their subordinates.

Women are hindered by societal beliefs about their commitment to employment (Biles & Pryatel, 1978; O'Leary, 1974). It is believed that women are less concerned about salary, challenge, and career advancement and are more

concerned with the socioemotional aspects of their employment situations.

A number of experimental studies support the notion that women are perceived in ways that are detrimental to their advancement. Bass, Krusell, and Alexander (1971) found that women were seen as being capable, emotionally stable workers by male managers but they were also seen to lack supervisory potential. The managers further stated that women's family commitments should be their highest priority and that women should defer to men in exchange for being afforded chivalrous treatment.

Male managers, in a study by Rosen and Jerdee (1978), viewed male employees as being more dependable and promotable than women because of their interests, aptitudes, attitudes, and temperaments. Female employees were viewed as having mainly clerical skills and interests as well as possessing such undesirable traits as jealousy and timidity which serve to make them unpromotable.

Cecil, Paul, and Olins (1973) found that a male white collar worker (position unspecified) was judged to be acceptable if he possessed such executive qualities as aggressiveness and decisiveness. A female white collar worker, however, was judged on the basis of her clerical skills, poise, and attractiveness.

Managers do not view women employees as potential executives. They see women as fulfilling, at least in business, the traditionally feminine clerical or support

roles. Women are seen as lacking the necessary personality traits for management. This suggests the possibility of a barrier of discrimination in the hiring of women in at least one nontraditional field. Women's chances of success may be diminished by the attitudes of men who are in positions of hiring and promoting staff.

Different expectations exist concerning male and female managers' family obligations. In a study by Rosen, Jerdee, and Prestwich (1975) male managers rated an hypothetical female supervisor as being less suited than an hypothetical male for a position that involved travel. In proposing solutions to supervisors' family conflicts male managers more often expected women than men to conform to their spouse's demands.

A study by Bartol and Butterfield (1976) similarly demonstrated the existence of different standards for judging male and female supervisory personnel. An hypothetical male manager was seen as more effective than a female when he was active in initiating the structure of the work for his subordinates. The woman was judged to be a more effective manager when her management style stressed concern for her subordinates' well being. Again, the supposition is that women are expected to behave in a manner consistent with the female stereotype by expressing their concerns for the welfare of others. This runs contrary to the notion of the tough, independent manager.

These studies do not indicate whether women

experience discrimination in recruitment or promotion; they do indicate that men view women differently than they do men as employees. The assumptions that men hold can readily be interpreted as reflecting the traditional roles that many women play in the labour force and in society in general.

Terborg and Ilgen (1975) addressed the question of discrimination within business organizations by having male business students evaluate the resume and work performance of an hypothetical male or female employee. They found that the decision to hire was made independently of the applicant's gender but that the initial salary recommendation was lower for the woman applicant. The recommended salary increase following one year's employment failed to eliminate this discrepancy. There was also some indication that the woman was more often given routine work assignments than was the man. Terborg and Ilgen suggested that these subtle discriminatory tactics serve to discourage women from entering or aspiring to management positions.

Two field studies of the role of women in predominantly male work groups (Frank & Katcher, 1977; Wolman & Frank, 1975) suggest that women may also face overt discrimination. The women in these studies were not treated as part of their work team and, for the most part, were ignored. Their male colleagues rated them as lacking in task orientation. Many of these women reacted to this

overt rejection with depression or anxiety over their failure to achieve equal status. This type of reaction from men may discourage women from aspiring to male dominated fields.

Women may be discouraged from pursuing career aspirations by negative attitudes displayed by men with whom they interact socially. In an attributional study, Pines (1976) found that college men who viewed a videotaped conversation with a young woman rated her as more interpersonally attractive when she expressed a preference for the roles of wife and mother than when she indicated a preference for a full time academic career. Komarovsky (1972) similarly discovered that although male students approved of women assuming broader social roles (including full time careers) they preferred to marry traditionally supportive, nurturant women.

Kanter (1977) has emphasized that society views women as having major responsibility for the domestic maintenance of the family. Family and employment are seen as separate domains for men. For women these domains are seen as interconnected. Women are expected to give their family responsibilities higher priority, accommodating employment in other available hours. This view of women can affect the types of employment viewed as appropriate for them. Positions that demand travel or irregular hours may be seen as interfering with women's family responsibilities. Women may thus not be offered positions

or given promotions in fields where career demands would conflict with family responsibilities.

The literature thus supports the contention that there are external barriers discouraging women from aspiring to nontraditional career roles. It does seem unrealistic to expect that members of society would view women as ideal executives or leaders when most of them have experienced women largely in supportive roles. It might be questioned how important the views of men are in shaping women's futures and to what extent women themselves reject high prestige, high responsibility occupational roles. It therefore is relevant to examine some of the internal barriers that may block women's strivings toward nontraditional careers.

2. Internal barriers to women's employment achievement

While it seems obvious that women follow different career paths than men it is not clear that this results solely from external barriers. The greatest barrier to women seems to be the difficulty of combining the demands of a career with those of marriage and motherhood. Hennig and Jardim (1977) have asserted that it is the role of future others (husband and children) in women's lives that causes the procrastination and passivity often characteristic of women's career planning.

Studies (Meissner, Humphreys, Meis, & Scheu, 1975; Williams, Zabrack, & Harrison, 1980) indicate that men are not hampered in their career advancement by marriage and

children. Women are responsible for the majority of home and child care duties whether they have careers or not.

As Kipnis (1976) has suggested, the early age at which marriage and childbearing typically occur prevents women from training for and establishing careers. Women who choose to pursue careers may feel it necessary to postpone or forego childbearing. Women who desire children may restrict their career aspirations. Rand and Miller (1972) found that girls in junior high school were aware of the conflicts inherent in having children and a career. Spence (1974), used the fear of success paradigm with college students and found that although the incidence of negative themes was generally low, the greatest number of negative stories was written in response to a married woman cue; the stories centering on conflicts between home and career.

Rather than indicating support for Horner's (1972) contention that women have an internal motive to avoid success, these results suggest that young women are aware of the reality of possible home-career conflicts. In examining the literature related to career barriers faced by women, Terborg (1977) found that employed women often reported strains due to conflicts between employment and their family responsibilities.

The extent to which concerns about the responsibilities of home and childrearing figure in young women's career choices was investigated in the present

study.

Because they perceive men to be important for their future happiness, the attitudes women believe men hold may be as important in shaping women's futures as the attitudes that men actually hold. Matthews and Tiedman (1964) found that the young women they questioned believed that men hold negative views of intellectually competent women. These women therefore chose, for the most part, to reject careers in order to gain male esteem. Athanassiades (1977) found that while women described their private selves as self-centred and stable they described their public selves as more social and personable. While this may not be a result of women's relations with men it seems to reflect the role conflicts that women face in attempting to adopt a career orientation.

Another barrier to women aspiring to nontraditional careers is the relative lack of female professional role models (O'Leary, 1974). As Douvan (1976) has suggested, active, married professional women demonstrate the possibility of combining career and family responsibilities successfully. Happy, single career women can serve to dispel the stereotype of the unfulfilled spinster which deflects young women from jeopardizing their marriage opportunities through strong commitments to study and career. Role models also demonstrate that women can succeed in nontraditional careers. Douvan noted that

women with strong career commitments often had female role models (such as childhood heroines or female faculty members). Almquist and Angrist (1971) found that young college women with career commitments were more often influenced in their career choices by teachers and women they had observed at work than were women whose plans were uncertain or who were predominantly oriented toward marriage. The possible impact of role models on nontraditional career choice is investigated in the present study.

Another approach to the question of women's apparent underachievement has been provided by Lenney (1977). On the basis of an extensive literature review she concluded that women frequently underestimate both their performance and their ability to succeed. This may lead to less than maximum performance and a decrease in initiative. This underestimation is most apparent in situations in which the social environment is salient (e.g. in competition or where supervision is present), where the task is seen as sex role inappropriate, or where feedback about the woman's performance is absent or equivocal. All of these conditions are often present in academic and nontraditional working environments. To some extent, women may be handicapped because they perceive themselves as incompetent.

O'Leary (1974) has suggested that women are motivated by fear of failure. This causes them to select easily

attainable goals rather than to risk failure by striving to reach more difficult goals. Hennig and Jardim (1977) have asserted that women are overly cautious and avoid risk taking because they see risk as implying danger rather than challenge. They suggest that this attitude not only keeps women from striving toward difficult goals but also makes them cautious about striving for advancement and greater responsibility on the job.

In sum, there is evidence that women's underachievement in employment is not simply a function of exclusion by males but is also a product of women's beliefs about their own worth, the value of achievement, and the adult roles they desire (or are socialized to assume).

While some argue that women underachieve, it has also been argued (Stein & Bailey, 1973) that women, rather than being deflected from achievement, are channelled into achieving in activities that are not valued when judged by masculine standards. For example, women are socialized toward the expression of affiliation. Thus for women success might consist of establishing successful interpersonal relationships. Such behaviour is typically viewed as affiliative in motive and not as achievement motivation. Kipnis (1974) has suggested that men's achievement behaviours are often recognized and enhanced through their dealings with large numbers of persons (as in bureaucracies). Women often achieve in more solitary

pursuits (e.g. writing), being more concerned with the intrinsic worth of the task than with recognition. This, she suggested, limits the evaluation of women's achievement through such criteria as promotions and salary. Kipnis also noted that women have, throughout history, accomplished a great deal as a result of their voluntary services (e.g. fund raising) in such fields as religion, the arts, and education. These achievements, again, go largely unrecognized due to the absence of monetary incentives.

Women face a variety of barriers blocking their access to high status professions. Some of these are the products of prejudice or beliefs about women's personalities, interests, abilities, and aspirations. Other barriers are the products of the roles women are socialized to assume. Women are socialized to be concerned about others, helpful, and nurturant; they tend not to be socialized to assertiveness, independence, or dominance. Women are also socialized to fill the roles of wife and mother, perhaps at the expense of planning an independent existence. Most women also anticipate and desire the traditional marital role which creates ambivalence about career aspirations. A young woman will ask herself if she is willing to forego marriage and childbearing in order to dedicate her time and energies to professional training. Women's and men's career paths differ in this respect. Women are expected to assume the

domestic responsibilities. If they pursue careers they are faced with two jobs, whereas men are able to focus more of their time on career concerns (e.g. Williams et al., 1980).

3. Socialization variables associated with achievement

Despite the existence of barriers that thwart or discourage many women from aspiring to professional careers, some women, albeit a minority, have pursued career paths that are clearly different from the traditional feminine life plan. As will be seen, these women can be differentiated from others by a number of factors which are, to a great extent, related to the socialization process. These women are characterized by attitudes and future plans that separate them from other women.

It has been suggested that boys are socialized to be independent and girls are socialized to be dependent and reliant upon others. Rosen and Aneshensel (1976) have hypothesized that girls are socialized to conform to the wishes of others as part of their preparation for the feminine domestic role. These authors suggest that women are victims of the "chameleon syndrome" which causes them to adapt to a hostile environment through specific sex role behaviours. These behaviours centre on: sensitivity to or concerns for others' emotions, compliance or the willingness to place the needs of others before one's own, and an exaggerated concern with their own appearance.

Some women in Rosen and Aneshensel's study were highly aware of these sex role requirements and perceived that negative consequences would result from their violation. These women avoided behaving in a manner that would manifest the primacy of their own independent needs. Rosen and Aneshensel state that the "chameleon syndrome" is a product of close parental control and stress on popularity. Through a questionnaire study they found that women who reported behaving in a "chameleon-like" way also reported having had restrictive parents who emphasized the importance of interpersonal relationships while discouraging assertive behaviour. These women reported a high degree of domestic orientation in their lives when compared to women who did not endorse "chameleon syndrome" behaviours.

Walsted (1978) has suggested that women are socialized to accept the subordinate status of being the "other" in relationships, especially with men. Women, particularly in adulthood, defer to men (employers, fathers, husbands). Rather than assert themselves they use altruism toward men as a compensatory mechanism for their powerlessness. Girls, she hypothesized, view their mothers in this "altruistic other orientation" while also experiencing the encouragement of their fathers to behave in a similarly deferential manner. Walsted found that married women who described themselves as being low in "altruistic other orientation" were more often

self-supporting and had more education than those who described themselves as being high in "altruistic other orientation". The low group also reported that their fathers had encouraged gender atypical behaviours and that both parents stressed achievement. The women who reported behaving consistently with the high "altruistic other orientation" reported that their fathers had been concerned with their feminine development. They were aware of their fathers' concern about their sexual conduct during adolescence.

Both of these studies stress that many girls become aware of demands placed on them to mold their lives, not according to their own inclinations, but according to the demand that they be reactive to the needs or wishes of others. Such girls may grow up deriving greater pleasure from anticipating and satisfying the needs of others than from striving to develop competencies which lead to independent achievement. This pattern of socialization may result in women preferring to prepare for an occupational role that stresses serving others even when they do not primarily orient themselves to a domestic future.

Parental endorsement of nontraditional sex role behaviours may be related to women's choice of nontraditional careers. This will be examined in the present study.

Heilbrun's (1973, 1976) research has suggested that

girls may acquire the traditionally feminine, nonachieving sex role orientation as a result of identifying either with their mothers or their fathers. He stressed that girls may derive vicarious satisfaction from observing the accomplishments of their fathers rather than striving to emulate them. This would suggest that women may derive as much satisfaction from occupying a position in which they can observe the power and success of men (e.g. husbands, fathers, or coworkers) as they would from achieving their own successes. Boys who identify with their fathers are hypothesized by Heilbrun to emulate their fathers' achievement. This results because achievement is consistent with the masculine role.

It has been implied that girls are socialized to be dependent, to value maintenance of close interpersonal relationships, and to be responsive to the needs of others. While these may be desirable attributes for the traditional roles of wife and mother they may be hindrances to achieving career success (e.g. Prather, 1971).

Moderate maternal warmth during a girl's childhood has been related to achievement motivation in adulthood. A lesser degree of nurturance tends to foster independence (Manley, 1977). Kagan and Moss (1962), in a longitudinal study, found that maternal protectiveness during a female's childhood correlated with: conformity, anxiety about social relationships, and withdrawal from stressful

situations in later life. They also noted that girls who performed well on problems requiring complex reasoning tended to be nontraditional in their sex role orientations.

Crandall and Battle (1970), in another longitudinal study, found that girls who were high on intellectual effort (i.e. striving to enhance intellectual skills for intrinsic reward) had received a relatively low degree of protectiveness during childhood while receiving a relatively greater degree of encouragement to achieve from their mothers. In adulthood these intellectual strivers were less concerned about: fulfilling the traditional feminine role, having secure employment, or holding socially desirable attitudes than were other women.

Hoffman's (1972) review of a large number of studies suggests that girls receive inadequate independence training during early childhood. Hoffman asserts that girls receive less pressure than boys to establish a separate identity from their mother. Girls' achievement strivings are seen as motivated by a need for affiliation rather than a need for mastery, as is the case with boys. Hoffman suggests that the need for affiliation interferes with adult achievement strivings. The desire to establish rapport in interpersonal relationships may take priority over the demonstration of excellence (in debate, for example) for women. Childrearing practices that encourage dependency in girls are hypothesized by Hoffman to lead to

less confidence in ability and low performance expectations. Adult achievement environments (employment and postsecondary education) do not offer many opportunities for affiliation and women may not demonstrate maximum performance.

In summary, achievement striving in women is to some extent the product of a childrearing style that permits the young girl to explore and develop her interests independently. However, while achievement motivation may be necessary for career success it is not sufficient. A woman may satisfy her achievement needs through other avenues, such as hobbies or volunteer service. These would not be considered to be within the realm of career achievement.

4. Background variables associated with achievement motivation in careers

What factors help to guide women who are motivated to achieve to aspire to careers? Hennig and Jardim (1977) retrospectively examined the backgrounds of fifty successful women executives and ascertained that they differed in several ways from other employed women. The successful women were all either first born or only children and none had brothers. They typically described themselves as being close to their fathers while rejecting the feminine lifestyle which their mothers typified. They indicated a preference for male companionship and masculine activities throughout their lives. This often

began with frequent, close associations with their fathers. These women, who were born in the early part of the century, were apparently socialized into a more masculine mode or role than were most of their peers. They were encouraged to explore and to achieve while little emphasis was placed on the acquisition of feminine skills. These socialization factors were treated as dependent variables and it therefore cannot be concluded that these were the determining factors in career development. It may be that other women without career achievement were socialized in a similar manner. These managerial women may have shown more masculine personality traits that may have resulted in their being more desirable companions to their fathers during their childhoods.

It is possible that the type of socialization the women studied by Hennig and Jardim (1977) reported was biased by inaccurate or incomplete recall of their childhoods. Their atypical adult life experiences may have made the unusual aspects of their childhoods more readily remembered.

Rossi (1972) surveyed women graduating from university in the early 1960's. She grouped them according to their future plans into: homemakers, those choosing a traditionally female dominated career, and those choosing a nontraditional career. She found that the nontraditional group anticipated their careers playing

major roles in their adult lives. They derived relatively less satisfaction from family activities. They also showed a lesser need for intense interpersonal relationships while being confident that they could sustain egalitarian relationships with men and older people.

Helson's (1971) study of women mathematicians revealed that the most creative women (those who had outstanding published work) reported they were raised in a family where the father was a well educated professional who served as a role model for his daughter. Although the family was often insecure financially, both parents stressed intellectual and cultural values. Within the family, the father was usually the dominant parent with the mother having considerably less education than her husband. Few of these creative women had brothers. Through a battery of psychometric tests Helson found that the creative women were lower on measures of social skills and were highly introverted but were not more intelligent than the group of less creative mathematicians. On the basis of clinical interviews they were characterized as being independent and original but not different in femininity from the comparison group.

Again, much of the data Helson (1971) presents is questionable because of the possibility of retrospective bias. It is also not clear whether the differences in personality style between the two groups of women were the

cause or the result of their adult achievement experiences.

Studies by Kriger (1972) and Oliver (1975) suggest that career women differ from homemakers in their recollections of parental behaviour. These researchers found that career women remembered their parents to have been less controlling and accepting than did homemakers. While this may be the result of retrospective bias it is also possible that such parental behaviours foster achievement strivings and the desire to achieve through employment.

Lemkau (1979) recently reviewed a number of studies of women employed in nontraditional fields. She noted that these women differed from other women on a number of personality and background characteristics. The nontraditional women tended to score high on measures of competency usually associated with the masculine ideal (e.g. autonomy) but did not differ from other women on traits associated with the feminine ideal (e.g. interpersonal warmth). These women were further characterized by their perceptions of parental supportiveness and encouragement of sex role inappropriate behaviours. They were noted to have had well educated parents and, contrary to the previously cited studies, mothers who were employed during their childhoods. Lemkau does point out that many of the studies she reviewed were plagued with methodological problems. Several researchers

failed to ensure that control groups were equated on such potentially relevant variables as level of education and ability. Samples were sometimes comprised of the reasearchers' acquaintances and thus may not not have been representative samples of the population of employed women. Lemkau purposely reviewed only those studies that sampled groups of women employed in nontraditional fields or those who were in the latter stages of academic preparation for nontraditional careers. Because of this restriction much of the data she reviewed was retrospective in nature. It is altogether possible that career women may remember their parents as being more liberal in their endorsement of atypical sex role behaviours, for example, as a result of their adult experiences. It would seem unwarranted to conclude on the basis of this type of evidence that parental behaviours played a causal role in women's choice of career. Lemkau defended her choice of career involved women as the subject of study by stating that "...it is critical to distinguish those who arrive at full career participation from those who drop out along the developmental path" (p. 223). While this procedure does assure that the women studied are members of different populations it precludes the possibility of obtaining data about the processes involved in making career choices.

The present study was designed to investigate factors involved in making a career choice. Women in the latter

stages of their undergraduate education should be aware of both the possible barriers to their career choices and the attractive aspects of their career choices.

Because the role of women in society has been changing over the past couple of decades it is difficult to generalize from women such as those who were growing up in the twenties and were studied by Hennig and Jardim to contemporary young women. Women's lives have been greatly influenced by the availability of reliable methods of birth control which have freed them from unwanted pregnancies. Social changes, including the feminist movement, have made advanced education, full time employment, and greater social participation more acceptable for women.

5. Studies of nontraditional career aspirations

Although some women may leave the career path, plans and aspirations are the first step on its course. The literature pertaining to factors differentiating women aspiring to nontraditional careers from those aspiring to traditional careers is therefore important.

Almquist and Angrist (1970) have suggested two models to explain why some women aspire to nontraditional careers. The first model, "career choices as deviant", is based on the assumption that masculinity-femininity is a bipolar construct. When a young woman aspires to a career (behaviour considered to be masculine in nature) she is hypothesized to have developed a largely masculine or

instrumentally oriented self concept and to not have developed the nurturance oriented self concept traditionally associated with femininity.

It is important to note, particularly with regard to the research by Hennig and Jardim and by Helson, that the women studied were planning and establishing careers at a time when most women either did not expect to be employed for an extended period of time or aspired to positions in a small number of female dominated fields. Because of this, the nontraditional women were, in a sense, "deviant", and likely possessed such characteristics as assertiveness and achievement orientation that are considered to be primarily masculine traits. However, there is little evidence to suggest that these women did not also possess feminine traits.

Almquist and Angrist's (1970) "enrichment model" of career choice seems more tenable. This suggests that career oriented women have not rejected their femininity but have expanded their conception of the feminine role through their diverse experiences and the influences of role models. This model is similar to Bem's (1974) model of androgyny in that the dimensions of masculinity and femininity are examined as independent personality constructs. A woman may aspire to a career and have some masculine personality characteristics but this does not imply that these have been developed at the expense of her femininity.

To test the applicability of these two models Almquist and Angrist (1970, 1971) examined some of the concomitants of career aspirations among college women. They grouped their participants according to their strength of career commitment and whether their career choice was typically or atypically feminine. The results indicated that career plans were generally more salient for those making atypical choices. Both the strong career commitment and atypical choice groups were less likely to be sorority members, and were more likely to have mothers who were employed outside the home. Women in these groups also reported having held a greater variety of part time jobs and indicated that they were influenced by people working in their chosen field in making career choices. Those aspiring to atypical careers differed from their complement group in their future work values. They were relatively more interested in earning potential and less interested in holding positions in which helping others or working with people would be a major feature. The group with strong career commitment was more interested in being able to work with minimal supervision. Almquist and Angrist (1971) noted that those with strong commitment had made their occupational choices earlier and indicated greater certainty that they would pursue them. These women were also less apt to be married or engaged at the time the study was conducted. There was little evidence that either strong career commitment or atypicality of

career choice was related to an overt rejection of femininity.

From Almquist and Angrist's research it appears that for some young women career achievement is an important part of their future plans. Perhaps because their mothers were employed they were aware of the possibility of combining marriage and career. Other research, too, has suggested the importance of the young woman's mother as a role model.

Ridgeway (1978) found that college women who identified more with their mothers than their fathers more often had high career aspirations when their mothers had extensive employment histories. Altman and Grossman (1977) found a positive relationship between maternal employment and career aspirations. They also noted that young women who perceived their mothers to be dissatisfied with their employment still expressed high career aspirations. The daughters of nonemployed women expressed lower aspirations when they perceived their mothers to be satisfied with their roles. However, when their mothers were perceived to be dissatisfied the daughters had higher aspirations.

Both of these studies underscore the importance of the mother as a model for the feminine role. The employed mother can be seen as providing an example of the possibility of combining the responsibilities of two roles. The mother can also be seen as influencing her

daughter's attitudes toward the value of employment and achievement. Baruch (1972) provided support for this latter notion in finding that young women with more liberal attitudes toward women's roles more often had mothers who valued career related achievement even if they were not employed themselves. In another study (Baruch, 1976) mothers who evaluated themselves as competent indicated more often that they wanted their daughters to be independent, ambitious, and good students. They were less concerned with their daughters being self controlled and responsible. These results were found to be independent of the mothers' employment status. Baruch has suggested that such maternal attitudes help to foster the self esteem and competence that are important factors in girls' educational and career aspirations. Thus, the attitudes of mothers, as well as their actions, appear relevant in socializing girls to aspire to broader adult roles.

Stein (1973) reported that daughters of employed mothers scored higher on trait measures of achievement, dominance, and endurance and lower on succorance and abasement than did daughters of nonemployed women. No difference was found, however, between the groups on ratings of maternal identification.

Here again the strength of the employed mother's influence is demonstrated. The mother does not simply provide a model for a broader feminine role but aids in

the development of competence in areas that women have traditionally been presumed to lack.

Research evidence also indicates that women aspiring to nontraditional careers differ on a number of personality measures from those aspiring to traditional careers. Coplin and Williams (1978), in comparing the strengths of masculine and feminine typed traits in women law students and undergraduates, noted that the law students' means were higher on achievement, dominance, autonomy, and aggression and lower on nurturance, succorance, abasement, and deference. The means for the law students were all in the feminine direction when they are compared to the Adjective Check List norms. Generally for the study, when women with nontraditional aspirations are compared to those with unspecified aspirations their means are greater on masculine traits and lesser on feminine traits. Yanico, Hardin, and McLaughlin (1978) found that the Masculinity but not the Femininity subscale of the Bem Sex Role Inventory tended to differentiate women in home economics from those in engineering. The discrepancy between the studies could be the result of differences between samples or could be due to the content of the instruments used or the normative data upon which scoring was based.

Handley and Hickson (1978) investigated the differences between women studying mathematics who aspired to teaching careers and those who aspired to nonteaching

careers (e.g. business, engineering, or scientific research). They found the nonteaching group to be more independent and creative, as measured by the Cattell 16 P.F. scales. This group generally said they had made their career choices earlier than the teaching group and that their choices were influenced more often by "nonpeople" factors such as challenge in their employment.

Handley and Hickson's (1978) results are potentially unreliable because of the retrospective nature of the investigation. However, they suggest that women making nontraditional career choices are attracted to different aspects of careers than are those making traditional choices. Women making nontraditional choices may also have been concerned with career planning for a longer period of time. These aspects of career aspirations will be investigated in the present study.

Other studies suggest that women aspiring to nontraditional careers differ from those with more traditional aspirations in their perceptions of the conflicts surrounding family and career responsibilities. Trigg and Perlman (1976) reported that a group of women studying medicine and dentistry saw nontraditional careers, in general, as being more compatible with marital and social needs than did a group of women studying nursing and rehabilitation medicine. The former group reported that their families and friends were more liberal in their conceptions of women's societal roles. Crawford

(1978) likewise found that women aspiring to nontraditional careers expressed more liberal views of women's roles and their own marital obligations while indicating less rigid stereotypes of occupations. In a study by Klemmack and Edwards (1973) the rated femininity of women's vocational aspirations was positively related to the number of children they desired and was negatively related to the age at which they wished to marry. Women aspiring to nontraditional careers planned to have fewer children and anticipated briefer interruptions in their labour force participation for childbirth than did those with more traditional career aspirations (Moore & Veres, 1976). Women's perceptions of their desired marital role may be related to the choice of traditional or nontraditional careers. These will be investigated in the present study.

Summary

In summary, women who pursue, or plan to pursue, nontraditional careers appear to value employment and the rewards it can provide. They are committed to their work roles and anticipate being able to combine these roles with marital and social responsibilities. They either anticipate little in the way of conflicting role demands or have considered these and feel confident in their ability to deal with them. While in the past women had to largely renounce the traditional roles of wife and mother to sustain career commitment (Hennig & Jardim, 1977) it

now seems that some women are confident about their ability to combine them with some measure of success. Career committed women appear to view the traditional roles as being desirable but also as being less central in their life plans. Their commitment to career success possibly is related to reduced concern with marriage.

There is some evidence that women who aspire to nontraditional careers score lower on personality traits such as nurturance and abasement and higher on traits such as achievement and dominance than those women with more traditional career aspirations. Other research suggests that women with nontraditional aspirations score higher on masculine traits while not differing on feminine traits. Such a personality pattern may aid women in sustaining career commitment through the crucial periods of their twenties when they might otherwise invest greater concern in marriage and family.

There is some evidence to suggest that women with nontraditional aspirations may have had different childhood socialization experiences than their more traditional peers. Such women report receiving relatively less nurturance and being encouraged toward autonomy, achievement, and independence. They report developing less closeness to their parents. It has been suggested that they received less unconditional acceptance from their parents. This may reflect parental concern with achievement. Rather than having been socialized to be

concerned with the nurturance, submissiveness, and sociability that Block (1973) has indicated to be central to the feminine role, they have been permitted to develop a degree of independence and self reliance that is usually associated with the masculine role. However, this evidence is weak when one considers that the data are mostly retrospective. It is not possible to determine if these differences in self reports are the result of differences in socialization or if they are the result of differences in recall or perceptions. Career women have also described their parents as holding less traditional sex role expectations. Again these may be the result of retrospective bias. Or, the behaviour of the parents may have been a result of the daughters' personalities or interests.

Women with nontraditional aspirations have more often had employed mothers. This suggests that the mother presents a broad definition of the feminine role. The employed mother may value attributes such as autonomy and achievement and thus foster these in her daughter. Employed mothers may display less of the concern and protectiveness that lead to the development of passivity and dependency.

Women who aspire to nontraditional careers may have been influenced by adult role models in making their career choices. This may reflect a long term concern with achievement and a career that has made them aware of adult

work roles or it could reflect the impact of some individual who has proved inspirational. Women may also be negatively affected by female role models. They may see women employed in routine, female dominated jobs and aspire to more demanding nontraditional careers.

It is apparent now that sex role conceptions and social conditions are changing and advanced education and employment are playing greater roles in women's lives. Altman and Grossman (1977) noted that few of the young women they studied indicated preferences for homemaking careers. It is now no longer questioned whether a young woman will plan to be employed during many of her adult years. It seems important to examine some of the factors that may be related to the choice of traditional or nontraditional careers. Because women were not strongly committed to careers in the past, vocational choice theorists and researchers have not extensively studied the factors relating to women's career choices. The question arises as to whether women who aspire to demanding nontraditional careers are still unique in some of the ways that have been outlined or if women are currently making career choices on the basis of interests and aptitudes that are relatively independent of sex role socialization and adult role demands.

Vocational choice theorists (e.g. Super, 1963) have viewed career commitment as a lengthy process of exploring alternatives and developing awareness of abilities and

interests. With knowledge of one's strengths and weaknesses the individual selects a suitable occupational area. Beyond this, he or she becomes specific within this area settling upon a particular occupational goal. This final stage, for the career oriented, typically occurs during the university years.

However, Angrist and Almquist (1975) have argued that this pattern is not applicable to women. They suggest that since most women aspire to a narrow range of careers different factors must be affecting their choices. They believe that when women make career plans their choices are constrained by their future domestic roles. While men are simply choosing a career women are also choosing a lifestyle. Their career plans may affect their chances of marrying, the number of children they will have, and a number of other familial variables that have not traditionally been affected by men's career choices.

The present study was designed to attempt to differentiate women aspiring to nontraditional careers from those aspiring to traditionally feminine careers. Background variables relating to family constellation, parental attitudes, and future role expectations were examined in relation to career choice.

Hypotheses

On the basis of the literature review, thirteen hypotheses were put forth. The studies on which they are based are referenced and the operationalized measures are

indicated by references to the specific questions in Appendix A.

1. Women aspiring to nontraditional careers will be more committed in their choices than those making traditional choices. (Almquist & Angrist, 1970, 1971; Rossi, 1972)

Questions 7, 8, 9

2. Members of the nontraditional group will perceive themselves to be less similar to their parents and to be more distant from them. (Kriger, 1972; Manley, 1977; Rosen & Aneshensel, 1976)

Questions 20, 24, 28, 29

3. Members of the nontraditional group will perceive their parents to be less warm and expressive. (Crandall & Battle, 1970; Kagan & Moss, 1962)

Questions 21, 25

4. Members of the nontraditional group will perceive their parents to have been less rigid in their endorsement of traditional sex roles. (Hennig & Jardim, 1977; Walsted, 1978)

Questions 31 through 42

5. More members of the nontraditional group will indicate being influenced by extrafamilial role models in making their career choices. (Almquist & Angrist, 1970, 1971; Handley & Hickson, 1978)

Question 11

6. Members of the nontraditional group will have mothers with more extensive employment histories. (Almquist & Angrist, 1970, 1971; Altman & Grossman, 1977; Ridgeway, 1978)

Question 17

7. Members of the nontraditional group will indicate greater perceived similarity to their fathers than will members of the traditional group. (Helson, 1971; Hennig & Jardim, 1977)

Question 30

8. Members of the nontraditional group will score more highly on personality needs sex-typed (Heilbrun, 1963) as masculine (Achievement, Autonomy, Dominance, Endurance) and lower on those sex-typed as feminine (Abasement, Affiliation, Nurturance, Succorance). (Coplin & Williams, 1978; Stein, 1974)

Personality Research Form (Jackson, 1974)

9. Members of the nontraditional group will more often value the power and challenge in the rewards of their chosen careers (such as earning potential). (Almquist & Angrist, 1970, 1971)

Question 12 (first 6 alternatives)

10. Marriage will be less salient to members of the nontraditional group; fewer of them will be married and those unmarried will plan marriage at a later age. (Klemmack & Edwards, 1973)

Questions 43, 44, 45, 46

11. Members of the nontraditional group will desire fewer children and will plan fewer interruptions in their working lives. (Moore & Veres, 1976)

Questions 47, 48

12. Members of the nontraditional group will be more liberal in their conceptions of their desired marital role. (Crawford, 1978; Nagely, 1971)

Questions 52 to 68

13. The members of the nontraditional group will have higher academic averages, completed more grade twelve level mathematics and science courses, and achieved higher grades in these courses.

Questions 69 to 73

In addition, family constellation, levels of parental educational attainment, and parents' socioeconomic status will be examined. Directionality is not hypothesized for these variables. The two groups of women will also be compared to a group of men in order to investigate the ways in which women differ from men on the variables hypothesized to relate to career aspirations.

Method

Participants

The participants were 53 male and 106 female university students enrolled in upper year psychology courses (the women were not equally divided between the

traditional and nontraditional groups). Data from an additional seven students were not used; three participants were deleted due to incomplete questionnaires and four were omitted because they had indicated no career goal. Of the 158 participants reporting their university faculty 57.8% were enrolled in Arts, 13.9% in Commerce, 10.8% in Education, 7.0% in each of Physical Education and Science. The remainder were enrolled in other faculties.

Materials

The questionnaire (Appendix A) was presented in booklet form. Respondents were asked to indicate their age, sex, educational and career plans, certainty about their career choice, and whether they had discussed their plans with someone.

They were also asked which of twenty potential factors had influenced involved in their career choices and also which of twelve career features had most appealed to them.

Demographic variables were tapped by participants' reports of their parents' educational attainment and occupations as well as their mothers' employment status during each of five time periods. Numbers of brothers and sisters were reported. Questions relating to maternal and paternal closeness, warmth, encouragement, and approval of career plans were presented with Likert type response scales labelled at each response point.

Six questions relating to paternal and maternal

endorsement of sex role related behaviours were presented with labelled six point scales. These items were adapted from Walsted's (1978) dimensions which she hypothesized to relate to career involvement.

Respondents were asked to indicate their current involvement in permanent (marriage or marriage like) relationships and the single people were asked if they desired such a relationship in the future and, if so, at what age they would like to enter it. They were asked how many children they would like to have and what their employment status, ideally, would be when their children were in each of six age ranges. They were also asked the relative importance of career and family obligations in their future plans and their perceptions of the importance of these to each of their parents.

The final seventeen items on the first part of the questionnaire, relating to perceptions of marital role demands (career involvement, domestic labour, and childrearing), were presented with labelled six point scales. These items were adapted from Parelus (1975).

The second part of the questionnaire was comprised of eight scales of the Personality Research Form (Jackson, 1974) presented with instructions from the manual. Third person singular pronouns were modified to refer to both genders. The scales included were Abasement, Achievement, Affiliation, Autonomy, Dominance, Endurance, Nurturance, and Succorance.

Procedure

Students were asked to voluntarily participate in a questionnaire study of career aspirations. The questionnaires were administered to groups of students during regular lecture hours under the author's supervision. The time required for administration was approximately 50 minutes.

The career aspirations of the women respondents were coded as traditional or nontraditional based on 1971 census figures on the breakdown of occupations by sex (Statistics Canada, 1974). Thus, three groups were formed: traditional women (n=48), nontraditional women (n=58), and men (n=53). Lists of occupations called traditional and nontraditional appear in Appendix B.

Fathers' and mothers' occupations were coded according to the Blishen and McRoberts (1976) socioeconomic index for Canada.

Mathematics and science averages were determined by coding letter grades as A (80 to 100%)=1, B (70 to 79%)=2, C (60 to 69%)=3, Pass (50 to 59%)=4. University averages were coded: First Class (80 to 100%)=1, Second Class (65 to 79%)=2, Pass (50 to 64%)=3.

The personality scale scores were prorated to deal with missing item responses when a scale was at least 75% completed; otherwise the score was treated as missing data.

Data Analysis

Two discriminant function analyses were performed to test the overall hypothesis that responses of traditional and nontraditional women differed. The first analysis examined variables related to perceptions of parental attitudes and behaviours. The second analysis examined the variables related to the respondents' own attitudes. Support for these hypotheses permitted the examination of the individual hypotheses to investigate which variables are most important in differentiating the two groups.

Individual hypotheses were tested with t-tests comparing the traditional and nontraditional women (one tailed tests of significance were used where directionality was hypothesized). Differences among the men and the groups of women were examined using one way analyses of variance followed by Newman-Keuls post hoc comparisons (probability of type I error set at .05). Where a number of continuous variables were considered within a hypothesis, they were analysed with two group (the two groups of women) and three group (women plus men) discriminant function analyses as well as with the above described univariate analyses.

The conventional level of significance (.05) was generally used but findings approaching significance are also included. The near significant results are presented as guides for further research. Self report data is contaminated by measurement error (responding to social

desirability or response style). This suggests the need for more refined measurement in future research.

Results

The groups were initially compared on the demographic variables (maternal and paternal socioeconomic status, parents' educational attainment, numbers of brothers and sisters, and age). With the exception of parents' education, the variables were analysed with t-tests and analyses of variance. Parents' education was analysed with Chi-square tests. Since few of the mothers had postgraduate education, this category was combined with the next category (undergraduate degree). No differences were found on any of these variables. The means, standard deviations, number of respondents, and test statistics are presented in Table 1. The Chi-square contingency tables are presented in Tables 2 and 3. Any differences occurring among the groups are not due to demographic differences.

Studies reviewed by Auster and Auster (1981) and Lemkau (1979) suggest that high socioeconomic status is a predictor of nontraditional career choice. These studies involved women who grew up several decades ago. Generalization from the past to the present is difficult because of possible economic and social differences.

Auster and Auster (1981) assert that socioeconomic status remains an important determinant of nontraditional aspirations. The present results indicate that women with

nontraditional aspirations come from a cross section of socioeconomic backgrounds. The difference may be due to generational differences. There has been an increase in the number of married women in the labour force (Statistics Canada, 1980) and, thus, preparation for a career is congruent with preparation for adult life. Economic pressures and changing social conceptions of women have created a climate in which female employment is not merely condoned but is expected and often necessary.

Parental education was examined as another index of socioeconomic status. The results again indicate that the three groups are comparable on this variable.

The present results do not support the findings of Helson (1971) and Hennig and Jardim (1977) that indicated that nontraditional women had fewer brothers. This is likely due to generational differences. These authors suggested that the parents of the women they studied probably considered education to be more important for boys. Because of this, women without brothers were more apt to receive advanced education. Currently, parents may be more likely to recognize the importance of education for children of both sexes. Having no brothers may no longer play a role in women's access to further education. Finally, there has been a consistent trend over the century toward smaller families. The expenses of education for women may be more readily borne when fewer demands are placed on parents' finances.

Hypothesis 1

Women aspiring to nontraditional careers will be more committed to their choices than women making traditional choices.

The variables of interest for this analysis were certainty of pursuing the chosen career, certainty about wanting to pursue the career, and length of time since the career goal had been chosen. No differences occurred for these variables (see Table 4).

Related to this hypothesis, respondents were asked if they had discussed their career goals with someone in their chosen field and, if so, what their position was and how they were known to the respondent. The first part of this question was analysed with Chi-square tests. Comparisons between the groups of women indicated, $\chi^2(1) = 2.97$, $p < .10$, that the traditional women had somewhat more often discussed their career plans with someone than had the nontraditional women, $\chi^2(1) = 2.97$, $p < .10$, (77.1% versus 61.4%). No sex differences were found. These results are presented in Table 5. The latter parts of the question were coded, first, to indicate whether the person was a student or a faculty member, or a person working in the field and then to show whether the person was a relative, or was known through the university, employment experience, social contact (e.g. a family friend), or arranged interview (this last category was omitted from analysis because of infrequent

endorsement). No differences were found on these variables (see Table 6).

There is no support for the notion that traditional women are less committed to their career plans than are nontraditional women based on these measures. If discussing career plans with others is an index of commitment, then in this study the traditional women were, if anything, more committed to their plans. On the other hand, the finding that fewer nontraditional women had discussed their careers with others may reflect greater independence and less reliance on others' opinions.

Future studies might benefit by measuring commitment in other ways. For example, the extent to which individuals are willing to sustain continuous commitment to their careers could be investigated. Differences in commitment measured by these types of variables are discussed under Hypothesis 12.

Hypothesis 2

Members of the nontraditional group will perceive themselves to be less similar to their parents and to be more distant from them.

On the closeness to mother variable the traditional group ($M=5.19$) rated themselves as somewhat closer than did the nontraditional group, $M=4.75$; $t(102) = 1.86$, $p < .05$. This also occurred for closeness to father, $t(100) = 1.69$, $p < .05$; $M=4.66$ for the traditional group, $M=4.15$ for the nontraditional group. No differences were

found for the ratings of similarity to either parent. Maternal and paternal encouragement and approval of career plans were also examined with the only difference being that the traditional group ($M=5.39$) perceived their fathers to be more approving of their career plans than did the nontraditional group, $M=4.84$; $t(93) = 2.51$, $p < .01$. Comparisons of the three groups on these variables revealed a difference on closeness to mother, $F(2,154) = 2.43$, $p < .10$, with the mean for the men ($M=5.13$) falling between those of the two groups of women. The post hoc comparisons failed to reveal any significant differences among the means.

Differences among the three groups were found on perceptions of father's approval of career choice, $F(2,141) = 2.85$, $p < .10$. The traditional women perceived more approval than did the nontraditional women; the mean for the men ($M=5.08$) fell between, not differing from either group of women. No other differences were found on the variables in question and the hypothesis received only partial support. These results are presented in Table 7.

The differences revealed might be interpreted as indicating that the nontraditional women, as a group, were raised in family environments where relatively less nurturance was given. This would be in agreement with Manley's (1977) contention that relatively less nurturance is beneficial in fostering independence and concern with

achievement. However, since these measures were, first self report, and, second, partly retrospective, the differences may be due to differing self perceptions rather than actual differences in parental behaviour. For example, the nontraditional women may desire to be independent of their families and to see themselves as somewhat removed. Further evidence suggesting this is presented under Hypotheses 3 and 5. Longitudinal research and direct observation, or at least parental as well as child self-report, would be necessary to investigate the impact of actual parental behaviours.

Hypothesis 3

The members of the nontraditional group will perceive their parents to have been less warm and expressive.

The nontraditional women ($M=4.88$) perceived their mothers to have been less warm than did the traditional women, $M=5.35$; $t(103) = 2.74$, $p < .01$. The members of the nontraditional group ($M=4.31$) also perceived their fathers as less warm, $t(99) = 1.75$, $p < .05$, than did the traditional group ($M=4.78$).

For comparisons of the three groups, maternal warmth reached significance, $F(2,155) = 3.64$, $p < .05$. The post hoc comparisons revealed that the two groups of women differed but the men ($M=1.87$), who scored between the two, differed from neither.

The results generally support the third hypothesis (see Table 7).

Again, one must question whether these results are the product of different parental behaviours. The effect could be due to different perceptions of the parents or to the desire to be separate from the parents. Only longitudinal research could determine if parental closeness is related to the choice of a traditional or nontraditional career.

Hypothesis 4

The members of the nontraditional group will perceive their parents to have been less rigid in their endorsement of traditional sex roles.

The variables of concern here were the six paternal and maternal sex role behaviour statements (scale endpoints were labelled 1=very true, 6=very false). Initial attempts at combining these items to create scales did not yield adequate coefficient alphas to justify this procedure. The six questions for the mother and six for the father were analysed first with discriminant function analyses. For the two groups of women the discriminant function was not significant nor was the first discriminant function significant in the three group analysis. The discriminant function coefficients and classification tables are presented in Tables 8 and 9.

Univariate examination of these items revealed no differences between the two groups of women. A difference among the three groups was found only on the item "My father discouraged behaviours that are more typical of the

opposite sex" $F(2,147) = 7.86, p < .01$. Post hoc comparisons indicated that the men ($M=3.39$) differed from the two groups of women ($M=4.18$ for traditional group, $M=4.57$ for the nontraditional group) in that they perceived their fathers to be less encouraging of opposite sex behaviours. This is in keeping with North American society's greater acceptance of cross-sex behaviour for girls than for boys.

This hypothesis was not supported. These results are presented in Table 10.

The failure to find support support for this hypothesis may be interpreted in different ways. The hypothesis was based on retrospective research (Hennig & Jardim, 1977; Walsted, 1978). Differences found between traditional and nontraditional women in these studies may have been the result of biased recollections. Possibly there are no actual differences in parental endorsement of sex role related behaviours. Another possibility is that there are generational differences between the earlier studies and the present study. In the past, parental behaviours could have played a role in women's career aspirations. These may no longer be a factor. A third possibility is that because the measures used in the present study were self reports and retrospective they were contaminated by measurement error. However, the Hennig and Jardim and Walsted studies suffer from the same methodological limitations.

A more stringent test of this hypothesis is needed. A better inventory of sex role related behaviour statements could be developed to investigate the hypothesis that traditional and nontraditional women differ in their perceptions of parental behaviours. However, longitudinal research would be required to investigate the hypothesis that actual parental behaviours are related to career choice.

Hypothesis 5

More of the members of the nontraditional group will indicate being influenced by extrafamilial role models in making their career choices.

To test this hypothesis each of the potential person influences on career choice from question 11 was examined with Chi-square analyses. The traditional group reported somewhat more often being influenced by their fathers, $\chi^2(1) = 2.89, p < .10$; 37.5% of the traditional and 24.4% of the nontraditional women checked this category. Similarly, mother as an influence was checked by 50.5% of the traditional women but by only 27.6% of the nontraditional group, $\chi^2(1) = 5.62, p < .05$. No differences were found on the other two familial categories. Turning to the extrafamilial categories, it was found that 22.4% of the nontraditional women versus 8.3% of the traditional women reported having been influenced by male professors, $\chi^2(1) = 3.87, p < .05$. The only other category to demonstrate a differential

endorsement rate was "A woman working in my chosen field", $\chi^2(1) = 3.70$, $p < .10$; 41.7% of the traditional and 24.1% of the nontraditional women endorsed this category. This last result is not surprising since there are more women working in traditional than in nontraditional fields. Women with traditional aspirations are more likely to have encountered women in their chosen field. While it appears that traditional women were somewhat more influenced by family members, it does not appear that the nontraditional women were more influenced by extrafamilial persons.

The numbers of familial and extrafamilial influences endorsed were also computed for each person and subjected to t-tests. It was found that the traditional group ($M=1.10$) checked more familial influences than did the nontraditional group, $M=0.74$; $t(104) = 1.78$, $p < .05$. No difference was found for extrafamilial influences. Also, the number of male and female influences was computed with a difference being observed only for the latter category, $t(104) = 2.48$, $p < .01$; the traditional group checked more female influences ($M=1.63$) than the nontraditional group ($M=1.05$).

When nonperson influences were examined, a differential endorsement rate was seen for "Work or volunteer experience" with 68.8% of the traditionals and 39.7% of the nontraditionals indicating this to have been influential in their career choice, $\chi^2(1) = 8.92$, $p < .01$. The only other difference was found for

"Hobbies" with 29.2% of the traditionals and 10.3% of the nontraditionals checking this category, $\chi^2 (1) = 6.08$, $p < .01$. It is also notable that the traditional women ($M=4.60$) checked more influential factors than the nontraditional women, $M=3.62$; $t (104) = 1.96$, $p < .05$.

The hypothesis was not supported. The nontraditional women did not indicate having been influenced more by extrafamilial role models (see Tables 11 and 12).

The differences obtained for the rate of endorsement can be interpreted in different ways. They may be the result of response bias. The traditional women may have responded to the items more thoughtfully than the nontraditional women, for example. The traditional women could actually have had more contact with potentially influential factors through employment and hobbies. The nontraditional women may have been or may have perceived themselves or wished to present themselves as more independent in their career planning. This last possibility is in agreement with the previous discussed results suggesting that the nontraditional women present themselves as being independent of their parents. Whether they indeed are more independent cannot be determined, but it stands to reason that women who contravene societal expectations may be more independent than women who do not.

When the two groups of women were compared with the men, differences were found for "Father", $\chi^2 (2) = 5.08$,

$p < .10$, with the nontraditional women endorsing this category less than the other two groups; "Mother", $\chi^2(2) = 5.71$, $p < .10$, with the traditional group giving the greatest endorsement; "Female friend", $\chi^2(2) = 5.39$, $p < .10$, with the traditional group giving the greatest endorsement; "Female professor", $\chi^2(2) = 4.74$, $p < .10$, with the men giving the least endorsement; "Woman working in my chosen field", $\chi^2(2) = 23.46$, $p < .01$, with men giving the least endorsement; "Work or volunteer experience", $\chi^2(2) = 20.57$, $p < .01$, with the traditional women giving the greatest endorsement; and "Hobbies", $\chi^2(2) = 6.35$, $p < .05$, with the nontraditional women giving the least endorsement.

Men and women and women recall different influential factors in their career choices. This may reflect actual differences in influences but could reflect the traditional women's greater thoughtfulness or willingness to endorse influential factors. Thus the resulting differences may be a function of response style.

For the total number of female influences checked, it was found that the men ($M=.62$) checked the least, followed by the nontraditional and traditional groups, $F(2,156) = 11.35$, $p < .01$, with all groups differing significantly. Differences also occurred for the number of nonperson influences endorsed, $F(2,156) = 3.85$, $p < .05$. The traditional women ($M=1.92$) checked significantly more than the men ($M=1.25$); the

nontraditional women ($M=1.45$) fell in between and did not differ from either group. For the total number of influences checked, $F(2,156) = 3.92$, $p < .05$, the traditional women endorsed significantly more than either of the other groups, which did not differ ($M=3.32$ for men).

Again, the results suggest that the traditional women are either more aware of influences on their career choice or are more willing to admit to influences, or were less independent and more influenced by others. Response bias and/or a greater amount of introspection on the part of the traditional women must be considered along with actual differences in experience as explanatory of the findings.

The question of influential factors is difficult to investigate. The data these questions generate are both introspective and retrospective in nature. The possibility of individual differences in memory arises. If the career choice was made a number of years ago, few influential factors may be remembered. A more recent choice could evoke memories of a greater number of factors.

Hypothesis 6

Members of the nontraditional group have mothers with more extensive employment histories.

Mother's employment status (Full time, Part time, No paid job) was examined for each of five age periods of the respondent's life. Chi-square analyses were performed.

During the preschool period of their lives, 9.1% of the traditional and 25.9% of the nontraditional women had mothers who were employed either full or part time, $\chi^2(2) = 4.70$, $p < .10$. During the next period of the respondents' lives (Grades 1 to 4) there was again a difference in employment rates, in the predicted direction, $\chi^2(2) = 6.07$, $p < .05$; 22.2% of the traditional versus 44.4% of the nontraditional women had employed mothers. No significant difference was found for the period "Grades 5 to 8" although the proportions were in the expected direction (31.8% of the traditional and 68.2% of the nontraditional women had mothers with full time employment), but differences were again found for the periods "Grades 9 to 12", $\chi^2(2) = 4.78$, $p < .10$, and "during university years", $\chi^2(2) = 9.57$, $p < .01$. During the former period 25.5% of the traditional women versus 46.3% of the nontraditional women had mothers who were employed full time. In the latter period the percentages were 28.9% and 58.5%, respectively (see Table 13).

Hypothesis six was largely supported.

Results of these analyses generally suggest that maternal employment is related to daughter's career aspirations (e.g. Almquist & Angrist, 1970, 1971). Employed mothers could have provided first hand experience that employment and family obligations can be combined successfully, or alternatively, that employment is an accepted, and even expected adult female role

(e.g. Hoffman, 1979). These results indicate that the nontraditional women had different childhood experiences than the traditional women. It is possible that their perceptions of less closeness to their parents resulted from different childhood experiences. However, the link between these is tenuous and requires further investigation.

Hypothesis 7

Members of the nontraditional group will indicate greater perceived similarity to their fathers than will members of the traditional group.

Question 30, "Considering yourself and both of your parents, which are you more like?" was of interest here (the scale end points were labelled: 1="much more like mother" and 6="much more like father"). The two groups of women and the women plus men were analysed with no significant differences resulting. This hypothesis was not supported (see Table 7).

The hypothesis was derived from the retrospective data of Helson (1971) and Hennig and Jardim (1977). The women in these studies may have viewed their fathers as role models. They could have perceived themselves as more similar to their fathers than their mothers. However, this perceived similarity could be the result of similarity between their own and their father's adult experiences. The women in this study were younger and had not yet begun their careers.

A greater number of women (including employed mothers) are presently available to serve as role models for young women. Nontraditional women do not necessarily have to emulate their fathers as a model of achievement.

Hypothesis 8

Members of the nontraditional group will score higher on personality needs sex typed as masculine and lower on those sex typed as feminine.

For the two groups of women the discriminant function analysis was significant, $\chi^2(8) = 30.35$, $p < .01$, but the percentage of correct classifications of group membership was only 69.9% (versus 50% expected by chance). For the three group analysis the first discriminant function was significant, $\chi^2(16) = 59.03$, $p < .01$, with 50% of the cases correctly classified (versus 33.3% by chance). Tables 14 and 15 contain the coefficients and classification tables for these analyses.

The univariate analyses revealed that the traditional women, as a group, scored higher on Affiliation, $t(101) = 1.93$, $p < .05$; $M=10.47$ for the traditional group, $M=9.10$ for the nontraditional group, and Nurturance $t(101) = 4.86$, $p < .01$; $M=12.46$ for the traditional group, $M=10.24$ for the nontraditional group, only.

These results contradict those presented by Coplin and Williams (1978) and Yanico et al. (1978). This is possibly due to the different measures used in the three studies. Differences could reflect item content or style

of presentation. However, it may be that women with traditional and nontraditional career aspirations no longer differ on competence traits. Perhaps it is the greater concern with affiliation, and particularly nurturance, that is related to women's choice of traditional careers. This suggests that over time some women are becoming freer to express less strength in these traditionally valued feminine traits. It would be unwise to conclude from these results that career aspirations are influenced by personality traits. It is possible that the choice of career influences personality style or, at least, response to personality measures.

There is some support for the hypothesis that the two groups can be discriminated on the basis of sex typed personality traits.

In the three group analysis differences were found on Affiliation, $F(2,153) = 3.41, p < .05$; Autonomy, $F(2,153) = 4.99, p < .01$; Nurturance, $F(2,153) = 16.41, p < .01$; and Succorance $F(2,153) = 5.82, p < .01$. On Affiliation the traditional women scored significantly higher than the men ($M=8.52$) with the nontraditional women, as a group, not differing from either. On Autonomy the men scored ($M=8.32$) significantly higher than the traditional group ($M=6.24$) with the nontraditional group ($M=7.23$), again, not differing from either. On Nurturance the traditional group scored significantly higher than the other two groups whose means did not differ ($M=9.42$ for

men). On Succorance the men scored ($M=6.01$) significantly lower than the other two groups' whose means did not differ ($M=8.43$ for the traditional group, $M=7.63$ for the nontraditional group). See Table 16 for the results of the univariate analyses. It is interesting that for the personality variables Affiliation, Autonomy, and Nurturance the nontraditional women did not differ from the men, and fell between them and the traditional women. This suggests that on these personality variables as well as in their career choices they were indeed nontraditional.

Hypothesis 9

Members of the nontraditional group will more often than traditional women value the power and challenge rewards of their chosen careers.

The twelve employment value categories from question 12 were examined by rate of endorsement using Chi-square analyses. A difference was found for salary potential, $\chi^2(1) = 2.93$, $p < .10$, with 43.1% of the nontraditionals but only 27.1% of the traditionals endorsing this reason for choosing their career. The nontraditionals also more often valued freedom from supervision, $\chi^2(1) = 2.93$, $p < .10$, with 43.1% of this group versus 27.1% of the traditional group endorsing this. The traditionals more frequently endorsed "Helping people", $\chi^2(1) = 12.39$, $p < .01$; 95.8% of this group endorsed this reason compared to 69.0% of the nontraditionals. The only other variable

on which a difference was found was "Job availability", $\chi^2(1) = 2.74$, $p < .10$, with 44.8% of the nontraditionals versus 29.2% of the traditionals endorsing this (see Table 17).

There is some support for hypothesis nine. The traditional women's greater endorsement of helping people may reflect their greater interest in nurturance. Their lesser concern with earning potential is somewhat consistent with the stereotype of earnings being less important to women (e.g. O'Leary, 1974). The difference seen on job availability may reflect greater commitment to employment by the nontraditional women. These women may be somewhat more concerned with being able to establish a career and thus indicate concern about openings in the job market.

When these analyses were repeated with the group of men included, differences were found only for "High salary potential", $\chi^2(2) = 14.14$, $p < .01$, and "Being able to help people", $\chi^2(2) = 21.79$, $p < .01$, with the men having the highest and lowest response rates, respectively.

Hypothesis 10

Marriage will be less salient to the nontraditional group; fewer of them will be married and the unmarried will plan marriage at a later age.

A methodological problem was encountered in testing this hypothesis. Judging from the early ages at which some respondents indicated having entered a permanent

relationship it would appear that some interpreted engagements or long term dating relationships, for example, as permanent. The question, however, was intended to relate only to marriage or cohabitation. Both parts of the hypothesis were affected by this problem. The results, therefore, must be examined with this restriction in mind.

No differences were found either between the two groups of women or among the three groups on marital status, age of entering into the partnership, or age at which the unattached would like to enter into a permanent relationship. Very few of the respondents indicated that they did not wish to enter into a partnership and the small expected cell frequencies precluded statistical analysis. On the question relating to the importance of having a partner in the future, no group differences were found (see Table 18 for these results). On the basis of this evidence, this hypothesis cannot be supported. However, further research is needed to clarify this issue.

Hypothesis 11

Members of the nontraditional group will desire fewer children and will plan fewer interruptions in their careers.

The mean number of children desired was found to be lower for the nontraditionals ($M=1.83$) than for the traditionals, $M=2.39$; $t(100) = 2.28$, $p < .05$. When the group of men was included in the analysis the mean of the

traditional group was significantly higher than were the means of the other two groups ($M=1.84$ for men), which did not differ, $F(2,149) = 3.54$, $p < .05$. For this result see Table 18.

For the latter part of the hypothesis the anticipated employment status of the women was analysed at each of the six child age periods. Because of the infrequent endorsement of the full time employment category for the first two age periods (child less than six months, child aged six months to one year) the full time and part time categories were combined for analysis. A difference resulted only for the period "Have a child aged 1 to 2 years", $\chi^2(2) = 6.38$, $p < .05$, with 64.7% of the traditional women preferring to not be employed versus 52.6% of the nontraditional women (see Table 19).

Inspection of Table 19 shows that few men plan to limit or discontinue their employment participation during any child age period.

The comparison of the two groups of women provides some support for the hypothesis. These results relate to career commitment. The nontraditional group's lower mean number of children desired may be taken as an indication of greater commitment to career. However, when one looks at desired employment status a large proportion of both groups of women plan to discontinue their careers to attend to child care responsibilities. Cole (1981) and White (1970) have both suggested that gaps in career

participation have detrimental effects on advancement. These results may indicate that the nontraditional women are less committed to their careers than are men.

It is also notable that few men indicate that they will discontinue their careers while most of the women expected that they will. It is clear that women assume that they will be responsible for child care. Men also assume that this is the woman's responsibility. Women and men do not appear to be planning similar career courses. This will be discussed further under Hypothesis 12.

Hypothesis 12

Members of the nontraditional group will be more liberal in their conceptions of their desired marital role.

The seventeen questions relating to expectations regarding housework, employment, and childrearing aspects of marriage were included in this analysis. The scale for these items ranged from 1=disagree strongly to 6=agree strongly.

For the two groups of women the discriminant function analysis failed to reach significance. For the three group analysis the first discriminant function was significant, $\chi^2(34) = 96.74$, $p < .01$, with 64.1% of the cases correctly classified. Tables 20 and 21 contain the coefficients and classification tables.

For the women, a significant difference was found on the item "I intend to be employed all of my adult life",

$t(104) = -2.37, p < .05$, with more members of the nontraditional group ($M=4.16$) than the traditional group ($M=3.42$) agreeing with this statement. Members of the nontraditional group agreed more with "I do not expect to do all household tasks myself", $t(103) = -1.96, p < .05$. The means for the traditional and nontraditional groups were 5.13 and 5.52, respectively. The nontraditional group also showed greater endorsement of the items "I expect my partner to help with the housework", $t(104) = -2.65, p < .01$; $M=5.17$ for the traditional group, $M=5.62$ for the nontraditional group, and "I expect my partner to do 50% of the housework", $t(104) = -2.48, p < .01$; $M=3.73$ for the traditional group, $M=4.45$ for the nontraditional group. The nontraditional group also agreed more with the statements "I would marry only if it did not interfere with my career", $t(102) = -1.73, p < .05$; $M=2.33$ for the traditional group, $M=2.84$ for the nontraditional group, and "I would forego children if they would interfere with my career", $t(101) = -2.64, p < .01$; $M=1.94$ for the traditional group, $M=2.73$ for the nontraditional group.

Hypothesis twelve received partial support.

The two groups of women are similar in their expression of the desire to share childrearing responsibilities with their partners. However, when the results discussed under Hypothesis 11 are considered with this there is an apparent contradiction. The women stated

that they planned to discontinue their careers to attend to child care. This would indicate that they do not truly expect equal sharing of these responsibilities.

The nontraditional women were more concerned than traditional women with attaining an equal division of domestic labour. This may reflect their concern with avoiding a position where they would assume unequal demands for two roles in marriage (i.e. financial support and housework).

Support for greater career commitment on the part of the nontraditional women can be seen from this group's greater willingness to forego marriage and childbearing and their greater endorsement of continuous career participation in adulthood.

When the men were included in the analyses a difference was again seen on "I intend to be employed all of my adult life", $F(2,155) = 6.68, p < .01$. The means of the men ($M=4.56$) and the nontraditional women differed from that for the traditional women but did not differ from each other. A difference was also found on the item "I do not expect to do all household tasks myself", $F(2,155) = 2.37, p < .10, M=5.17$ for men, but no significant differences were indicated by the post hoc comparisons. Also, "I expect my partner to help with the housework" showed differences, $F(2,156) = 3.49, p < .05$, with the traditional and nontraditional groups differing significantly whereas the men ($M=5.43$) did not differ from

either. The same pattern of results was found for "I expect my partner to do 50% of the housework", $F(2,153) = 3.29$, $p < .05$, $M=4.24$ for the men. On the item "I would forego children if they would interfere with my career" the traditional women were found to disagree more with this item than were the nontraditional women and the men ($M=2.60$) who did not differ, $F(2,150) = 4.12$, $p < .05$.

Differences were also found on some of the items for which no differences had been found between the two groups of women. Men were found to agree somewhat more strongly with "I expect my partner to do most of the housework", $F(2,153) = 16.28$, $p < .01$. The means were 1.60 for the nontraditional women, 1.62 for the traditional women, and 2.67 for the men. Men, similarly, agreed somewhat more with the statement "I expect my partner to do most of the childrearing tasks", $F(2,149) = 25.70$, $p < .01$. Again, the means of the traditional ($M=1.53$) and nontraditional ($M=1.51$) women differed from the men's ($M=2.90$).

Some difference was found on the item "I think the most important thing for a woman is to be a good wife and mother", $F(2,155) = 2.76$, $p < .10$, but post hoc comparisons revealed no mean differences ($M=2.72$ for the nontraditional group, 2.77 for the traditional group, and 3.40 for the men). A difference was also seen on the item "I think the most important thing for a man is to be a good husband and father", $F(2,155) = 5.20$, $p < .01$, with

the men, as a group, agreeing more with this statement ($M=4.13$) than the traditional ($M=3.29$) or nontraditional ($M=3.17$) groups, which did not differ (see Table 22).

Again, as the results of Hypothesis 11 suggested, men are less willing than women to assume equal responsibility for domestic tasks in marriage. Although women may see equality as desirable it cannot be achieved without the cooperation of their partners.

Hypothesis 13

Members of the nontraditional group will have higher academic averages, completed more grade twelve level mathematics and sciences courses, achieving higher grades in these courses.

No differences were found between the groups of women on any of these variables. In the three group analyses the only difference noted was that the mean mathematics average for men ($M=1.83$) was higher than the means of either group of women ($M=2.27$, for the nontraditional women, $M=2.35$ for the traditional women), who did not differ, $F(2,115) = 3.88, p < .05$.

This hypothesis was not supported (see Table 23).

The role of ability in career planning needs more thorough investigation. The measures used to test this hypothesis were very global in nature. Even if it is assumed that the participants were accurate in reporting their grades, it is possible that more specific abilities play a role in career aspirations. Courses taken at the

secondary school level partly determine what options are available for university programmes. Some women may choose traditional female fields of study because they lack prerequisites for other courses or because they did not excel in some subjects (e.g. mathematics) at the secondary school level.

Research has recently focused on mathematics as an important determinant of career aspirations (Pedro, Wolleat, & Fennema, 1981). It has been suggested that inadequate mathematics training channels many women into traditional careers. This warrants more investigation. Other abilities should also be investigated. Some women may enter fields like elementary education because of strength in verbal skills. Abilities and perceptions of abilities may play a key role in career choice.

Other variables of interest

The respondents' future plans were also evaluated by examining what they thought they would be doing at each of four time periods. Small expected cell frequencies necessitated the collapsing of categories. For the first period (following completion of the degree now being pursued) the categories: Employment, Further education, and Other plans were analysed. No differences resulted. For the remaining periods (five, ten, and twenty years after completion of the degree) the categories: Employment (full or part time) and Other plans (including undecided) were analysed. The only differences seen were at ten

years beyond completion of the degree. For the two groups of women 74.1% of the nontraditional women expected to be employed versus 52.1% of the traditional women, $\chi^2(1) = 5.55$, $p < .05$. In the three group analysis it was found that 73.6% of the men anticipated being employed, $\chi^2(2) = 7.23$, $p < .05$. These results are presented in Tables 24 to 27.

This suggests that the nontraditional women are as committed to long term career participation as men are. The difference between the two groups of women suggests that the nontraditional women are more certain about their career plans in that they believe they will be in the labour force ten years following the completion of their degree.

When the women's plans are examined it is notable that few indicated that they would be staying at home with children. When this is considered with the results of Hypotheses 11 and 12 there appears to be a contradiction. This could suggest that these women have not thought about the possible problems related to coordinating career and family roles.

For future educational plans a significant difference, $\chi^2(4) = 28.09$, $p < .01$, was found between the two groups of women. This was highlighted by 45.0% of the traditional women planning no further education in comparison to 19.6% of the nontraditional group. This suggests that some women may choose traditional careers

because they are motivated to enter the labour force sooner than are women with nontraditional aspirations. Alternatively, women with traditional aspirations may have made a traditional career choice because they are unwilling to pursue further education. Similar results were found in the three group analysis, $\chi^2(8) = 50.93$, $p < .01$, with only 10.0% of the men planning no further education. It is perhaps more relevant to compare the nontraditional women to the men on this variable since these two groups are presumably planning similar career courses. This comparison approached significance, $\chi^2(4) = 8.32$, $p < .10$, with 42.0% of the men and 19.6% of the nontraditional group aspiring to professional training.

Although some women are aspiring to nontraditional careers they are not aspiring to the same careers as men are. These women are less frequently planning professional training (e.g. law, medicine) and somewhat more frequently planning postgraduate education. These results are presented in Table 28.

Finally, the relative importance of career and family commitments was examined. Item 49 was of interest here (the end points of the scale were 1="family much more important" and 6="career much more important"). It was found that the nontraditional group ($M=2.91$) placed relatively more weight on career than did the traditional group, $M=2.11$; $t(101) = -3.24$, $p < .01$. The three group

comparison also reached significance, $F(2,152) = 5.07$, $p < .01$, with the two groups of women again differing while the men ($M=2.48$) did not differ from either group. This result could indicate that the nontraditional women perceive their careers to be of greater importance in their future than do the traditional women. However, the means indicate that all three groups believe family to be more important than career. For questions 50 and 51, relating to perceived importance of family and employment to parents, the word "job" was substituted for "career" on the scale points. The nontraditional group ($M=2.48$) also perceived that employment was of relatively greater importance to their fathers than did the traditional group, $M=2.39$; $t(98) = -2.56$, $p < .05$. Differences between the three groups were found, $F(2,147) = 3.30$, $p < .05$, with the two groups of women differing significantly while the men's mean ($M=2.92$) did not differ from the other two. The members of the nontraditional group ($M=1.83$) were also found to perceive that employment was relatively more important to their mothers than did the traditional group, $M=1.38$; $t(104) = -2.03$, $p < .05$. No difference was found in the three group analysis. The difference for the two groups of women with respect to their mothers must be interpreted cautiously when one considers that the nontraditional women's mothers generally were more often employed. These results are presented in Table 29.

The finding that the nontraditional group perceived both of their parents to be more concerned with their jobs than did the traditional group may reflect familial concern with employment related achievement. This could also suggest that the nontraditional women were relatively more aware of the demands of employment.

Limitations of research on career aspirations

Research to date on the topic of women's career planning has lacked methodological precision. One line of research has focused on women who have gained entry into nontraditional fields. If the major concern of this research is to examine the process of career socialization, one is faced with the evaluation of retrospective evidence. This may be coloured by incomplete or inaccurate recollections resulting from the passage of time and/or adult achievement experiences. In addition, this evidence is dated. Women are no longer expected to assume primarily domestic orientations in adulthood. More role models are available to contemporary women and changing social roles have created an atmosphere in which career achievement is more likely than it was in the past.

Research examining the career aspirations of young women avoids these limitations but presents different shortcomings. If the goal of this research is to

determine how some women arrive at nontraditional careers it cannot be reached by investigating the aspirational stage alone. Some, perhaps many, young women with nontraditional aspirations will leave their career paths and choose more traditional careers. Also, as Cole (1981) has asserted, even at the stage of completing formal education the career course is only starting.

The present research is restricted by the foregoing considerations. It also limited by the range of participants studied. Choice of university major is an important determinant of the range of available career courses. A broader range of disciplines should be tapped to investigate career aspirations more thoroughly. This research also is limited by the instrument used. Self report data are potentially contaminated by response style and social desirability. It is also possible that some items were not sensitive enough to measure true differences. Questions relating to parental behaviours were of restricted utility because of their partly retrospective nature.

Conclusions based upon longitudinal research could avoid many of these limitations. By examining groups of individuals, beginning in childhood, one could directly observe and measure parental behaviours and attitudes. It would also be possible to investigate abilities, interests, and the educational and extracurricular activities that play a part in the choice of career goals.

By following individuals through the establishment of a career it would be possible to determine which individuals attain success and which alter their career courses. This could permit the investigation of the barriers that discourage or block women's career courses. This type of research would also provide a better examination of men's career development. However, even longitudinal studies are of limited use. Their generalizability is restricted to the historical context in which they were conducted. Obtained results may be of historical value or may generate hypotheses for further research but results are of limited practical significance. It would be difficult, at best, to formulate a theoretical framework explaining women's career choices. Career planning is likely affected by economic trends (availability of funding for education, availability of employment in certain fields) and by social trends (the role of women in the labour force, the modal division of domestic labour). These factors are not static and must be considered as important variables in the process of career development. Thus at present a combination of research strategies seems advisable in investigating women's career choices.

In spite of these considerations, clear cut differences were found between the groups under study on several variables. The final section of this paper deals with the theoretical and practical significance of these differences.

Discussion

It is important to note that over half the women studied aspired to careers that have been male dominated in the past. This may indicate that women no longer view careers as largely masculine endeavours and that the barriers to their access are no longer as formidable as O'Leary (1974) suggested. The possibility also looms that the students investigated have unrealistic notions about the ease with which family and career responsibilities can be combined.

The women studied do not appear to have carefully considered the effects of career disruption on their career courses. They indicate, on one hand, that they desire an equal partnership in marriage but they also indicate that they will stay at home full time when their children are infants. The men in the study (who are likely similar to the men these women will marry) indicated a somewhat more traditional conception of their desired marital roles. The men were somewhat more in favour of their partners assuming the responsibility for housework and child care. Which attitude will prevail in the establishment of marital roles? Other researchers (Meissner et al., 1974; Williams et al., 1980) have found that wives perform the majority of domestic duties even in dual career marriages. The constraints of domestic responsibilities can greatly limit such career related

activities as travel and working long, irregular hours. Curtailed career participation could, in turn, be viewed as reflecting lack of career commitment or lack of ambition.

Women who are single and/or childless may believe that they will be able to cope with the strains of a dual career marriage and preschool children. However, when actually faced with these difficulties they may not be able to sustain their career commitment. Longitudinal research could determine if women with nontraditional career aspirations reach their goals and sustain their career aspirations.

It should be considered that men's and women's conceptions of adult roles are changing. The expected adult roles of the sexes may be approaching equality in terms of both domestic and financial responsibilities. If society is approaching a more androgynous conception of adult roles both men's and women's occupational participation will change. Kanter (1977) has suggested that employment and family traditionally have been viewed as separate domains for men. Changing social roles will demand the acknowledgement of the interrelationship of these domains. This could bring about changes in employment that would facilitate the sharing of financial and domestic responsibilities within marriage. Flexible working hours, job sharing, part time positions in male dominated fields, and on site day care would help reduce

the necessity of different roles for men and women.

These changes, however, have not yet occurred. The women in the present study are probably overly optimistic in their belief that they can achieve status equal to their partner's in marriage.

It is also important to question the realism of the nontraditional women's plans in terms of academic preparation. While an individual may aspire to enter a professional school or graduate programme there are few alternatives for training or employment if academic standing is not sufficiently high. Inadequate academic preparation may prevent an individual from gaining access to a desired field. For example, an individual who seeks a career as a business executive may experience difficulty in reaching this goal with only a background in general Arts. Further, it is likely that women with such a background would encounter more obstacles than men with a similar background. A more stringent investigation of academic preparation is required to take account of the realism of future goals.

A recent survey of the careers of university educated men and women two years after graduation (Statistics Canada, 1981) revealed that many Arts graduates were employed in positions that were unrelated to their field of study and that often did not require a university degree. Given that the majority of women in the present study were in Arts it is likely that some will end up in

jobs that are unrelated to their aspirations.

It is also important to note that fewer women than men attain postgraduate degrees (Statistics Canada, 1978). Although women receive nearly half of the Bachelor's degrees granted, less than one third of Master's degrees and less than one fifth of Doctoral degrees are granted to women. It is clear that women generally terminate their education sooner than men. It is likely that some women with nontraditional aspirations will not complete the educational prerequisites for their chosen career.

Even following the completion of education it is necessary for beginning professionals to persist in order to advance and become established in their fields. One cannot simply complete law school, for example, stay home for five years, and then begin a career. An individual may be well over thirty years of age by the time she or he is firmly established in a career. Many women may believe that this is too old to begin childbearing. As long as women are primarily responsible for child care most will be unable to establish careers the same way men do.

This study has dealt primarily with internal barriers. It should not be thought that these aspects alone are the important determinants of career choice. External barriers can also play a major part in discouraging women. Men's attitudes and behaviours can cause some women to retreat from nontraditional fields. Sexual harassment, discriminatory treatment, formal and

informal exclusion from discussion and decision making are some factors that can potentially discourage or block women. In some cases women's beliefs about how they will be treated on the job (even if these beliefs are unfounded) may serve as a deterrent to nontraditional aspirations. In other cases women may not be aware of external barriers until they enter the labour force. Little is known about the informal aspects of career socialization (Cole, 1981). It is possible that women are not afforded the same opportunities as men for informal discourse or research apprenticeships within academic settings, for example.

Women have much to gain by entering nontraditional fields. They benefit personally through the challenge of a demanding career. They have stable, adequate incomes and benefits that grant financial independence. This prepares them for the possibility of divorce or widowhood (Dowling, 1981). Women will contribute more to fields (politics, law, medicine, scientific research, etc.), as their representation in these fields increases. Greater participation in these fields will give women more of a voice in policy making in both the public and private sector.

Research is needed on factors relating to women's career persistence. The number of women entering university professional programmes (e.g. law and medicine) has risen in recent years. The career courses of these

women are still unknown. Cole (1981) asserts that the career course is only beginning at the completion of formal education. Information is needed to help encourage young women who aspire to nontraditional fields. It is also important to have information that will aid professional women in sustaining their career involvement.

Investigation of women's entry into nontraditional blue collar jobs is needed. The majority of research on women's vocational behaviour has focused on university educated women (Lemkau, 1979), neglecting the large number of women whose formal education does not proceed along this course.

The evidence presented here suggests that women with nontraditional aspirations are different in some ways from those with traditional aspirations, but in many ways the two groups are similar. The women studied showed commitment to employment and they indicated a preference for equality in their marital roles. If these results foreshadow future trends in employment participation and marital roles it will be necessary to reexamine both men's and women's career paths. These results cannot be taken to suggest that sweeping changes have occurred. What they do suggest is that women are considering the possibility of careers in fields that have been traditionally masculine domains. This is a crucial first step toward desegregating employment. These results also suggest that women and, to some extent, men are coming to view marriage

as an equal sharing of responsibilities. This is a necessary step to permit women to invest the time and energy essential for career participation and advancement.

A shift can be seen from the bipolar notion of masculinity and femininity (e.g. Gough, 1964) toward a recognition of these as independent dimensions (Bem, 1974). No longer is a woman who has strong career commitment considered to be a deviant who has rejected her femininity. She exhibits both instrumental and expressive personality dimensions. From this point changes in assumptions about both men and women are in order. Both sexes are showing greater freedom from the apparent constraints of gender roles. In the future both men and women will be freer to adopt a more androgynous orientation. This will allow individuals to choose from a variety of adult lifestyles; regardless of their biological gender. It is now becoming correct to view such activities as employment and childrearing as adult endeavours rather than viewing them as gender appropriate. In the future more changes will likely occur that will diminish the importance of gender as a determinant of adult occupational roles.

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Tables

Table 1

Continuous Background Variables:

Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Father's SES	50.74 16.23 (46)	52.15 14.43 (56)	55.06 14.88 (51)	-0.46	1.04
Mother's SES	48.53 9.13 (30)	45.27 13.66 (40)	48.13 13.32 (35)	1.13	.75
Number of brothers	1.06 .84 (48)	1.28 1.09 (58)	.92 .87 (53)	-1.11	1.94
Number of sisters	1.21 1.03 (48)	1.26 1.09 (58)	1.26 .92 (53)	-0.24	.05
Age	23.00 5.04 (48)	22.48 3.23 (58)	22.06 2.66 (53)	.63	.80

- ¹ 1st row = Means.
 2nd row = Standard Deviations.
 3rd row = Number of Respondents.
 TRAD = Traditional women.
 NTRAD = Nontraditional women.

- ² t-value for comparing traditional
 and nontraditional women.

- ³ F-value for comparing three groups.
 Means sharing a common superscript do not differ.

- * $p < .10$
 ** $p < .05$
 *** $p < .01$

Table 2

Father's Educational Status¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Elementary	3	12	6
Some High School	12	8	12
High School Diploma	10	13	6
Some University	9	9	6
Bachelor's Degree	4	4	9
Postgraduate Degree	9	10	13

Two groups of women: $\chi^2 (5) = 5.90$, n.s.

Three groups: $\chi^2 (10) = 13.08$, n.s.

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

Table 3

Mother's Educational Status¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Elementary	3	6	3
Some High School	12	16	16
High School Diploma	16	15	11
Some University	14	11	12
Bachelor's Degree	3	6	7
Postgraduate Degree	0	3	4

Two groups of women: $\chi^2 (4) = 4.23$, n.s.

Three groups: $\chi^2 (8) = 7.60$, n.s.

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

Table 4

Certainty about Career Plans:

Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Certain will pursue career	4.46 1.08 (48)	4.67 1.08 (58)	4.49 1.21 (51)	-0.88	.48
Certain want to pursue career	4.81 1.41 (48)	5.03 1.14 (58)	4.94 1.10 (51)	-0.90	.44
Length of time since choice made (months)	62.19 48.99 (48)	54.15 38.96 (53)	52.69 36.94 (49)	.92	.73

- ¹ 1st row = Means.
 2nd row = Standard Deviations.
 3rd row = Number of Respondents.
 TRAD = Traditional women.
 NTRAD = Nontraditional women.

- ² t-value for comparing traditional and nontraditional women.

- ³ F-value for comparing three groups.
 Means sharing a common superscript do not differ.

- * $p < .10$
 ** $p < .05$
 *** $p < .01$

Table 5

Numbers having Discussed Career Plans¹
with Someone in the Field

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Have discussed	37	35	28
Have not discussed	11	22	13

Two groups of women: $\chi^2 (1) = 2.97, p < .10$

Three groups: $\chi^2 (2) = 3.66, n.s.$

¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 6

Position of Person with Whom Career Plans were Discussed¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Student	2	1	1
Faculty	3	9	7
Employed	31	25	31

Two groups of women: $\chi^2(1) = 1.50$, n.s.

Three groups: $\chi^2(2) = 2.32$, n.s.

How this Person was Known

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
School	9	12	11
Work	11	6	6
Relative	6	6	10
Socially	8	10	8
Appointment	1	1	2

Two groups of women: $\chi^2(3) = 2.12$, n.s.

Three groups: $\chi^2(6) = 4.36$, n.s.

¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 7

Perceptions of Parents:

Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value²</u>	<u>F-value³</u>
Mother-closeness	5.19 ^a .99 (47)	4.75 ^b 1.34 (57)	5.13 ^a .94 (53)	1.86**	2.43*
Mother-warmth	5.35 ^a .81 (48)	4.88 ^b .95 (57)	5.13 ^{a^b} .94 (53)	2.74***	3.64**
Mother-approving	5.35 .80 (47)	5.14 1.19 (57)	5.02 1.42 (52)	1.20	1.22
Mother-encourage	5.09 .95 (47)	5.14 .85 (57)	4.96 .88 (52)	-0.31	.56
Mother-similarity	4.35 1.31 (48)	4.18 1.26 (57)	3.98 1.23 (53)	.71	1.10

Table 7 continued

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u>	<u>F-value</u>
Father-closeness	4.66 1.42 (47)	4.15 1.62 (55)	4.45 1.39 (51)	1.69**	1.56
Father-warmth	4.78 1.26 (46)	4.31 1.43 (55)	4.27 1.37 (51)	1.75**	2.09
Father-approving	5.39 .75 (44)	4.84 1.25 (51)	5.08 1.20 (49)	2.51***	2.85*
Father-encourage	5.04 .98 (45)	4.85 .98 (54)	4.90 .89 (50)	.98	.54
Father-similarity	4.28 1.52 (46)	4.18 1.54 (56)	3.82 1.38 (51)	.34	1.32
Which parent more like	3.38 1.60 (47)	3.65 1.31 (55)	3.54 1.20 (53)	-0.94	.50

¹ 1st row = Means.

2nd row = Standard Deviations.

3rd row = Number of Respondents.

TRAD = Traditional women.

NTRAD = Nontraditional women.

² t-value for comparing traditional
and nontraditional women.

³ F-value for comparing three groups.
Means sharing a common superscript do not differ.

* $p < .10$

** $p < .05$

*** $p < .01$

Table 8

Perceptions of Parental Endorsement
of Sex Role Related Behaviours:
Standardized Discriminant Function Coefficients for
Traditional and Nontraditional Women

Father-opposite sex	.586
Father-appearance	.193
Father-popularity	-.305
Father-school	-.887
Father-independence	-.264
Father-career	.794
Mother-opposite sex	-.349
Mother-appearance	-.335
Mother-popularity	.544
Mother-school	.494
Mother-independence	-.381
Mother-career	-.029

<u>Actual Group¹</u>	<u>Number of Cases</u>	<u>Predicted Group</u>	
		<u>TRAD</u>	<u>NTRAD</u>
TRAD	43	26	17
NTRAD	53	17	36

$$\chi^2 (12) = 8.38, \text{ n.s.}$$

¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 9

Perceptions of Parental Endorsement

of Sex Role Related Behaviours:

Standardized Discriminant Function Coefficients for

Traditional and Nontraditional Women and Men

	<u>First Function</u>	<u>Second Function</u>
Father-opposite sex	.996	-.126
Father-appearance	-.583	.632
Father-popularity	.158	-.685
Father-school	-.484	-.368
Father-independence	.029	-.722
Father-career	.416	.873
Mother-opposite sex	-.487	.173
Mother-appearance	.251	-.605
Mother-popularity	.300	.626
Mother-school	.168	.004
Mother-independence	-.180	-.120
Mother-career	-.288	.337

Table 9 continued

<u>Actual Group¹</u>	<u>Number of Cases</u>	<u>Predicted Group</u>		
		<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
TRAD	43	14	15	14
NTRAD	53	11	32	10
MEN	50	12	9	29

First discriminant function: $\chi^2 (24) = 33.06$, n.s.

Second discriminant function: $\chi^2 (11) = 5.21$, n.s.

- ¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 10

Perceptions of Parental Endorsement

of Sex Role Related Behaviours:

Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value²</u>	<u>F-value³</u>
Father- opposite sex	4.18 ^a 1.43 (45)	4.57 ^a 1.63 (54)	3.39 ^b 1.55 (51)	-1.27	7.86***
Father- appearance	3.18 1.53 (45)	3.15 1.64 (55)	3.21 1.27 (52)	.10	.97
Father- popularity	4.35 1.48 (43)	4.36 1.47 (55)	3.98 1.33 (51)	-0.05	1.17
Father- school	1.89 1.19 (45)	1.62 .99 (55)	1.94 1.35 (52)	1.24	1.15
Father- independence	2.36 1.26 (45)	2.15 1.46 (55)	2.29 1.29 (52)	.76	.32
Father- career	2.40 1.53 (45)	2.40 1.49 (55)	2.44 1.55 (52)	.00	.99

Table 10 continued

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u>	<u>F-value</u>
Mother- opposite sex	3.67 1.59 (48)	3.73 1.72 (56)	3.52 1.43 (52)	-0.20	.25
Mother- appearance	2.23 1.28 (48)	2.25 1.23 (57)	2.08 .90 (53)	-0.07	.36
Mother- popularity	3.13 1.36 (47)	3.43 1.51 (56)	2.88 1.22 (52)	-1.05	2.13
Mother- school	1.77 1.13 (48)	1.68 .98 (57)	1.72 .95 (53)	.42	.10
Mother- independence	2.50 1.40 (48)	2.14 1.26 (56)	2.55 1.15 (53)	1.37	1.65
Mother- career	2.13 1.20 (48)	2.05 1.20 (56)	2.30 1.15 (53)	.30	.63

- ¹ 1st row = Means.
 2nd row = Standard Deviations.
 3rd row = Number of Respondents.
 TRAD = Traditional women.
 NTRAD = Nontraditional women.
- ² t-value for comparing traditional
 and nontraditional women.
- ³ F-value for comparing three groups.
 Means sharing a common superscript do not differ.
- * $p < .10$
 ** $p < .05$
 *** $p < .01$

Table 11

Factors Influencing Career Choice:
 Number of People Endorsing Each Choice¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>2 gp. χ^2</u>	<u>3 gp. χ^2</u>
Father	18	13	22	2.89*	5.08*
Mother	24	16	19	5.62**	5.71*
Male relative	5	6	7	.00	.87
Female relative	6	8	3	.04	2.15
Male friend	8	11	17	.09	4.12
Female friend	14	10	6	2.13	5.40*
Male counselor	3	4	2	.02	.55
Female counselor	3	2	1	.46	1.35
Male teacher	4	6	5	.12	.12
Female teacher	5	4	2	.42	1.73
Male professor	4	13	7	3.87**	4.28
Female professor	6	7	1	.01	4.74*
Man in field	9	12	17	.06	3.00
Woman in field	20	14	1	3.70*	23.46***

Table 11 continued

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>2 gp. χ^2</u>	<u>3 gp. χ^2</u>
Work	33	23	13	8.92**	20.57***
Hobbies	14	6	13	6.08**	6.35**
Courses	23	25	20	.25	1.07
Books	16	23	14	.45	2.18
Television	6	7	6	.01	.03
Number of people	48	58	53		

¹ TRAD = Traditional women.
 NTRAD = Nontraditional women.

* $p < .10$

** $p < .05$

*** $p < .01$

Table 12

Numbers of Different Types of Influences

on Career Choice:

Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Total number endorsed	4.60 ^a 2.75 (48)	3.62 ^b 2.43 (58)	3.32 ^b 1.99 (53)	1.96*	3.92**
Male influences	1.06 1.06 (48)	1.12 1.09 (58)	1.45 1.19 (53)	-0.28	1.86
Female influences	1.63 ^a 1.28 (48)	1.05 ^b 1.10 (58)	.62 ^c .74 (53)	2.48**	11.35***
Nonpeople influences	1.92 ^a 1.37 (48)	1.45 ^{ab} 1.13 (58)	1.25 ^b 1.24 (53)	1.94*	3.85**
Family influences	1.10 1.21 (48)	.74 .89 (58)	.96 1.07 (53)	1.78*	1.61
Nonfamily influences	1.58 1.51 (48)	1.43 1.39 (58)	1.11 1.01 (53)	.54	1.70

- ¹ 1st row = Means.
 2nd row = Standard Deviations.
 3rd row = Number of Respondents.
 TRAD = Traditional women.
 NTRAD = Nontraditional women.

- ² t-value for comparing traditional and nontraditional women.

- ³ F-value for comparing three groups.
 Means sharing a common superscript do not differ.

- * $p < .10$
 ** $p < .05$
 *** $p < .01$

Table 13

Mother's Employment Status¹

	<u>TRAD</u>	<u>NTRAD</u>	
<u>Preschool period</u>			
No paid job	40	40	$\chi^2(2) = 4.70, p < .10$
Part time job	1	5	
Full time job	3	9	
<u>Grades 1 to 4</u>			
No paid job	35	30	$\chi^2(2) = 6.07, p < .05$
Part time job	5	8	
Full time job	5	16	
<u>Grades 5 to 8</u>			
No paid job	27	28	$\chi^2(2) = 1.98, n.s.$
Part time job	10	11	
Full time job	7	15	
<u>Grades 9 to 12</u>			
No paid job	24	21	$\chi^2(2) = 4.78, p < .10$
Part time job	11	8	
Full time job	12	25	
<u>University years</u>			
No paid job	16	14	$\chi^2(2) = 9.57, p < .01$
Part time job	16	8	
Full time job	13	31	

¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 14

Personality Trait Measures:

Standardized Discriminant Function Coefficients for
Traditional and Nontraditional Women

Abasement	.319
Achievement	.443
Affiliation	.063
Autonomy	.090
Dominance	.335
Endurance	-0.123
Nurturance	-1.013
Succorance	-0.037

<u>Actual Group¹</u>	<u>Number of Cases</u>	<u>Predicted Group</u>	
		<u>TRAD</u>	<u>NTRAD</u>
TRAD	46	33	13
NTRAD	57	18	39

$$\chi^2(8) = 30.35, p < .01$$

¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 15

Personality Trait Measures:

Standardized Discriminant Function Coefficients for
Traditional and Nontraditional Women and Men

	<u>First Function</u>	<u>Second Function</u>
Abasement	-.502	-.345
Achievement	-.026	.754
Affiliation	.073	-.172
Autonomy	-.054	-.056
Dominance	-.454	.058
Endurance	.041	-.165
Nurturance	.864	-.260
Succorance	.343	.653

<u>Actual Group¹</u>	<u>Number of Cases</u>	<u>Predicted Group</u>		
		<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
TRAD	46	32	8	6
NTRAD	57	16	16	25
MEN	53	11	12	30

First discriminant function: $\chi^2(16) = 53.09, p < .01$

Second discriminant function: $\chi^2(7) = 4.29, n.s.$

¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 16

Personality Trait Measures:

Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Abasement	6.08 2.69 (46)	6.06 2.46 (57)	6.53 3.29 (53)	.03	.47
Achievement	9.85 2.55 (46)	10.13 2.71 (57)	10.57 3.08 (53)	-1.38	.88
Affiliation	10.47 ^a 3.79 (46)	9.10 ^{ab} 3.42 (57)	8.52 ^b 4.14 (53)	1.93**	3.41**
Autonomy	6.24 ^a 3.13 (46)	7.32 ^{ab} 3.38 (57)	8.32 ^b 3.27 (53)	-1.52	4.99***
Dominance	7.75 3.69 (46)	9.01 4.12 (57)	9.34 3.97 (53)	-1.62	2.21
Endurance	9.50 3.28 (46)	9.61 3.21 (57)	9.58 3.30 (53)	-0.16	.01

Table 16 continued

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u>	<u>F-value</u>
Nurturance	12.46 ^a 2.11 (46)	10.23 ^b 2.46 (57)	9.42 ^b 3.34 (53)	4.85***	16.41***
Succorance	8.45 ^a 3.53 (46)	7.63 ^a 4.11 (57)	6.01 ^b 3.23 (53)	1.08	5.82***

- ¹ 1st row = Means.
 2nd row = Standard Deviations.
 3rd row = Number of Respondents.
 TRAD = Traditional women.
 NTRAD = Nontraditional women.

- ² t-value for comparing traditional
 and nontraditional women.

- ³ F-value for comparing three groups.
 Means sharing a common superscript do not differ.

* $p < .10$

** $p < .05$

*** $p < .01$

Table 17

Career Related Values:

Number of People Endorsing Each Choice¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>2 gp. χ^2</u>	<u>3 gp. χ^2</u>
Salary potential	13	24	34	2.93*	14.14***
Responsibility	14	25	20	2.19	2.20
Prestige	11	21	18	2.20	2.39
Challenge	38	45	42	.04	.06
Supervision	13	25	23	2.93*	3.70
Fin. security	21	30	28	.67	.98
Help people	46	40	29	12.39***	21.79***
Work environment	33	32	35	2.04	2.41
Co-workers	24	20	24	2.60	2.79
Good hours	23	27	24	.02	.07
Security	15	19	21	.03	.92
Availability	14	26	15	2.74*	4.24
Number of people	48	58	53		

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

* $p < .10$ ** $p < .05$ *** $p < .01$

Table 18

Marriage Related Variables

Current Marital Status

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Married	22	25	21
Unmarried	26	31	31

Two groups of women: $\chi^2(1) = .01$, n.s.

Three groups: $\chi^2(2) = .34$, n.s.

Desired Marital Status for Unmarried

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Married	24	28	29
Unmarried	1	2	1

Table 18 continued

Continuous VariablesMeans, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Age married	20.23 3.24 (22)	19.92 2.31 (25)	20.00 2.45 (21)	.38	.08
Age marriage desired	25.61 2.74 (23)	25.50 3.01 (26)	26.50 4.58 (26)	.13	.61
Importance of marriage	5.06 1.12 (48)	4.98 .95 (58)	5.08 1.03 (53)	.69	.13
Number of children	2.39 ^a 1.19 (44)	1.83 ^b 1.23 (58)	1.84 ^b 1.02 (50)	2.28**	3.54**

- ¹ 1st row = Means.
 2nd row = Standard Deviations.
 3rd row = Number of Respondents.
 TRAD = Traditional women.
 NTRAD = Nontraditional women.

- ² t-value for comparing traditional
and nontraditional women.

- ³ F-value for comparing three groups.
Means sharing a common superscript do not differ.

- * $p < .10$
 ** $p < .05$
 *** $p < .01$

Table 19

Desired Employment Status at Six
Child Age Periods¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
<u>Less than 6 mos.</u>			
No paid job	37	47	1
Part time job	7	5	11
Full time job	0	3	38

Two groups of women: $\chi^2(1) = .02$, n.s.

Three groups: $\chi^2(4) = 107.37$, $p < .01$

6 months to 1 yr.

No paid job	34	41	1
Part time job	9	10	6
Full time job	0	4	43

Two groups of women: $\chi^2(1) = .28$, n.s.

Three groups: $\chi^2(4) = 107.45$, $p < .01$

1 year to 2 years

No paid job	29	29	0
Part time job	14	19	8
Full time job	0	7	42

Two groups of women: $\chi^2(1) = 6.38$, $p < .05$

Three groups: $\chi^2(4) = 94.94$, $p < .01$

Table 19 continued

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
<u>Aged 2 to 5 years</u>			
No paid job	18	19	0
Part time job	18	21	6
Full time job	7	15	44

Two groups of women: $\chi^2(2) = 1.72$, n.s.

Three groups: $\chi^2(4) = 60.47$, $p < .01$

Elementary school

No paid job	4	4	0
Part time job	29	27	4
Full time job	12	24	46

Two groups of women: $\chi^2(2) = 3.10$, n.s.

Three groups: $\chi^2(4) = 45.21$, $p < .01$

Secondary school

No paid job	3	2	0
Part time job	14	10	4
Full time job	28	43	46

Two groups of women: $\chi^2(2) = 3.07$, n.s.

Three groups: $\chi^2(4) = 12.96$, $p < .05$

¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 20

Family Related Responsibilities:

Standardized Discriminant Function Coefficients for

Traditional and Nontraditional Women

Both partners financial	-.130
Employed all adult life	.465
Not expect do all household	.198
Expect partner help work	.509
Partner do 50% housework	.206
Partner do most housework	-.024
Not expect do all rearing	-.330
Expect partner help rearing	-.120
Partner do 50% childrearing	-.603
Partner do most childrearing	-.002
Woman's career equal	.160
Important-wife and mother	.121
Important-husband and father	.085
Important-woman paid career	-.294
Important-man paid career	.007
Marry not interfere-career	-.261
Forego children if interfere	.804

Table 20 continued

<u>Actual Group¹</u>	<u>Number of Cases</u>	<u>Predicted Group</u>	
		<u>TRAD</u>	<u>NTRAD</u>
TRAD	45	28	17
NTRAD	55	18	37

$$\chi^2(17) = 21.30, \text{ n.s.}$$

- ¹ TRAD = Traditional women.
NTRAD = Nontraditional women.

Table 21

Family Related Responsibilities:

Standardized Discriminant Function Coefficients for
Traditional and Nontraditional Women and Men

	<u>First Function</u>	<u>Second Function</u>
Both partners financial	-.200	-.035
Employed all adult life	.433	.283
Not expect do all household	.049	.058
Expect partner help work	.089	.489
Partner do 50% housework	.296	.217
Partner do most housework	.428	-.048
Not expect do all rearing	-.325	-.113
Expect partner help rearing	.257	-.338
Partner do 50% childrearing	-.212	-.597
Partner do most childrearing	.472	-.445
Woman's career equal	.058	.126
Important-wife and mother	.165	.130
Important-husband and father	.146	-.141
Important-woman paid career	-.467	-.129
Important-man paid career	.194	.014
Marry not interfere-career	-.613	.174
Forego children if interfere	.703	.450

Table 21 continued

<u>Actual Group¹</u>	<u>Number of Cases</u>	<u>Predicted Group</u>		
		<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
TRAD	45	26	16	3
NTRAD	55	16	32	7
MEN	45	2	8	35

First discriminant function: $\chi^2 (34) = 96.74, p < .01$
 Second discriminant function: $\chi^2 (16) = 20.22, n.s.$

- ¹ TRAD = Traditional women.
 NTRAD = Nontraditional women.

Table 22

Family Related Responsibilities:

Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Both partners financial support	4.67 1.12 (48)	4.86 1.30 (58)	4.58 1.23 (52)	-0.82	.79
Employed all adult life	3.42 ^a 1.60 (48)	4.16 ^b 1.60 (58)	4.56 ^b 1.54 (52)	-2.37***	6.68***
Do not expect do all household tasks	5.13 1.17 (47)	5.52 .86 (58)	5.17 1.05 (53)	-1.96**	2.37*
Expect partner help with housework	5.17 ^a 1.10 (48)	5.62 ^b .64 (58)	5.43 ^{ab} .89 (53)	-2.65***	3.49**
Expect partner to do 50% of housework	3.73 ^a 1.53 (48)	4.45 ^b 1.45 (58)	4.24 ^{ab} 1.41 (50)	-2.48***	3.29**
Expect partner to do most of housework	1.62 ^a .80 (47)	1.60 ^a .79 (58)	2.67 ^b 1.52 (51)	.09	16.28***
Do not expect do all childrearing	5.60 .92 (48)	5.60 .73 (57)	5.32 .94 (50)	.05	1.80

Table 22 continued

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u>	<u>F-value</u>
Expect partner help with childrearing	5.79 .46 (48)	5.74 .55 (57)	5.74 .49 (50)	.55	.19
Expect partner to do 50% of childrearing	4.69 1.20 (48)	4.46 1.35 (57)	4.31 1.42 (49)	.91	1.00
Expect partner to do most of childrearing	1.53 ^a .86 (47)	1.51 ^a .78 (57)	2.90 ^b 1.55 (48)	.14	25.70***
Woman's career equal to partner's	5.29 1.05 (48)	5.47 .75 (58)	5.23 .87 (53)	-0.99	1.07
Most important good wife and mother	2.77 ^a 1.51 (48)	2.72 ^a 1.69 (58)	3.40 ^b 1.75 (52)	.15	2.76**
Most important good husband and father	3.29 ^a 1.65 (48)	3.17 ^a 1.79 (58)	4.13 ^b 1.56 (52)	.35	5.20**

Table 22 continued

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u>	<u>F-value</u>
Most important woman paid career	2.56 1.37 (48)	2.62 1.32 (58)	2.54 1.11 (52)	-0.22	.06
Most important man paid career	3.13 1.55 (48)	3.09 1.64 (58)	3.40 1.62 (53)	.12	.59
Marry if not interfere with career	2.33 1.17 (48)	2.84 1.70 (56)	2.43 1.39 (51)	-1.73**	1.81
Forego children if interfere with career	1.94 ^a 1.15 (47)	2.73 ^b 1.77 (56)	2.60 ^b 1.39 (50)	-2.64***	4.12**

¹ 1st row = Means.
 2nd row = Standard Deviations.
 3rd row = Number of Respondents.
 TRAD = Traditional women.
 NTRAD = Nontraditional women.

² t-value for comparing traditional
 and nontraditional women.

³ F-value for comparing three groups.
 Means sharing a common superscript do not differ.

* $p < .10$
 ** $p < .05$
 *** $p < .01$

Table 23

Mathematics and Science Courses and University Average:
Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Mathematics-	.90	.81	1.06	.68	2.02
number of courses	.66	.63	.66		
	(48)	(58)	(53)		
Mathematics-	2.35 ^a	2.27 ^a	1.83 ^b	.34	3.88**
average	.96	.98	.78		
	(35)	(39)	(44)		
Science-	1.04	1.16	1.42	-0.32	1.75
number of courses	.78	.85	1.06		
	(48)	(58)	(53)		
Science-	2.04	2.08	1.96	-0.22	.24
average	.75	.70	.75		
	(38)	(40)	(40)		
University-	1.79	1.80	1.86	-0.09	.23
average	.50	.62	.50		
	(48)	(56)	(50)		

¹ 1st row = Means.
2nd row = Standard Deviations.
3rd row = Number of Respondents.
TRAD = Traditional women.
NTRAD = Nontraditional women.

² t-value for comparing traditional and nontraditional women.

³ F-value for comparing three groups.
Means sharing a common superscript do not differ.

* $p < .10$
** $p < .05$
*** $p < .01$

Table 24

Plans Following Degree Completion¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Employment	25	22	23
Education	10	21	20
Travel	5	8	6
Other	0	1	1
Unknown	8	5	3

Two groups of women: $\chi^2 (2) = 3.39$, n.s.

Three groups: $\chi^2 (4) = 4.67$, n.s.

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

Table 25

Plans for 5 Years after Degree Completion¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Employed full time	29	40	36
Employed part time	4	4	1
Staying with children	2	1	0
Education	2	5	7
Travel	1	1	1
Other	0	1	2
Unknown	10	6	6

Two groups of women: $\chi^2(1) = .67$, n.s.

Three groups: $\chi^2(2) = .79$, n.s.

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

Table 26

Plans for 10 Years after Degree Completion¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Employed full time	17	33	39
Employed part time	8	10	0
Staying with children	6	6	0
Education	1	1	1
Travel	1	1	0
Other	1	1	5
Unknown	14	6	8

Two groups of women: $\chi^2(1) = 5.55, p < .05$

Three groups: $\chi^2(2) = 7.33, p < .05$

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

Table 27

Plans for 20 Years after Degree Completion¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
Employed full time	18	26	30
Employed part time	7	11	2
Staying with children	1	2	0
Education	2	1	1
Travel	1	3	0
Other	1	1	6
Unknown	18	14	13

Two groups of women: $\chi^2(1) = 1.48$, n.s.

Three groups: $\chi^2(2) = 1.63$, n.s.

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

Table 28

Plans for Further Education¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>
None	18	11	5
Undergraduate degree	16	7	6
Graduate work- present field	4	13	12
Graduate work- another field	2	14	6
Professional school	0	11	21

Two groups of women: $\chi^2(4) = 28.09, p < .01$

Three groups: $\chi^2(8) = 50.93, p < .01$

Nontraditional women and men: $\chi^2(4) = 8.32, p < .10$

¹ TRAD = Traditional women.

NTRAD = Nontraditional women.

Table 29

Importance of Career versus Family Responsibilities:
Means, Standard Deviations, and Number of Respondents¹

	<u>TRAD</u>	<u>NTRAD</u>	<u>MEN</u>	<u>t-value</u> ²	<u>F-value</u> ³
Self	2.11 ^a 1.09 (47)	2.91 ^b 1.38 (56)	2.48 ^{ab} 1.34 (52)	-3.24***	5.07***
Father	2.39 ^a 1.33 (44)	3.21 ^b 1.79 (56)	2.92 ^{ab} 1.61 (50)	-2.56**	3.30**
Mother	1.38 .73 (48)	1.83 1.39 (58)	1.71 1.11 (52)	-2.03**	2.21

- ¹ 1st row = Means.
2nd row = Standard Deviations.
3rd row = Number of Respondents.
TRAD = Traditional women.
NTRAD = Nontraditional women.

- ² t-value for comparing traditional and nontraditional women.

- ³ F-value for comparing three groups.
Means sharing a common superscript do not differ.

- * $p < .10$
** $p < .05$
*** $p < .01$

Appendix A

IDENTIFICATION NUMBER _____

AGE _____

SEX _____

UNIVERSITY MAJOR _____ YEAR _____

DEGREE NOW BEING SOUGHT _____

DEGREE(S) OBTAINED PREVIOUSLY _____

Note: When asked to state an occupation try to clarify the nature of the job. For example, if you indicate 'sales' also include what is being sold (e.g. clothing, life insurance, medical supplies, etc.). Similarly, if you are planning a career in life insurance, state the position you are aspiring to (e.g. actuary, underwriter, or clerk).

1. Are you planning further education or training beyond the degree which you are now pursuing? (Check the appropriate spot)

- ☐ No further training
- ☐ Another undergraduate degree
- ☐ Graduate work in your current major
- ☐ Graduate work in another field
- ☐ Professional school (e.g. law, medicine, architecture, etc.)
(specify) _____
- ☐ Other (specify) _____

2. What do you plan to do immediately after completing the degree you are now pursuing?

☐ Work or seek employment (specify what you expect to be doing)

☐ Pursue further education or training (specify the course or field) _____

☐ Travel

☐ Other (please specify) _____

☐ Do not know at present

3. What do you think you'll be doing 5 years after completing your current degree?

☐ Employed full time (specify position) _____

☐ Employed part time (specify position) _____

☐ Staying home with children

☐ Pursuing further education or training (specify) _____

☐ Travelling

☐ Other (specify) _____

☐ Do not know

4. What do you think you'll be doing 10 years after completing your current degree?

☐ Employed full time (specify position) _____

☐ Employed part time (specify position) _____

☐ Staying home with children

☐ Pursuing further education or training (specify) _____

☐ Travelling

☐ Other (specify) _____

☐ Do not know

5. What do you think you'll be doing 20 years after completing your current degree?

- ☐ Employed full time (specify position) _____
☐ Employed part time (specify position) _____
☐ Staying home with children
☐ Pursuing further education or training (specify) _____
☐ Travelling
☐ Other (specify) _____
☐ Do not know

A number of items in this questionnaire ask you to indicate your response on a scale. Circle the number on the response scale that best reflects your attitude toward the item.

For example, consider the item "I think that a university education is very worthwhile".

1	2	3	4	5	6
agree	agree	agree	disagree	disagree	disagree
strongly	moderately	slightly	slightly	moderately	strongly

If you agree moderately with this statement, circle 2.

If you disagree strongly, circle 6.

Always circle the number on the scale which reflects how you feel about the item.

6. Overall, what is your occupational goal? That is, in what field do you plan to spend the majority of your working life. If you have not decided, please say so but if you have some idea of what you would like to do please state this.

7. How certain are you that this is what you will be doing for the majority of your working life?

1	2	3	4	5	6
very	somewhat	slightly	slightly	somewhat	very
uncertain	uncertain	uncertain	certain	certain	certain

8. How certain are you that this is what you want to work at?

1	2	3	4	5	6
very	somewhat	slightly	slightly	somewhat	very
uncertain	uncertain	uncertain	certain	certain	certain

9. How long have you wanted to pursue this occupation?

(in months and/or years) _____

10. Have you discussed your career plans with someone working in this field?

No ____ Yes ____ If yes, what is their position

How do you know them?

11. Which of the following people and experiences influenced you in choosing your career goal? Place a check mark beside the ones you think were influential and then assign a rank to each of the ones you checked. Give a 1 to the item that was most influential, a 2 to the next most influential, etc.

___ My father	___ Female guidance counsellor	___ Woman working in my chosen field
___ My mother	___ Male high school teacher	___ Work or volunteer experience
___ Another male relative	___ Female high school teacher	___ Hobbies
___ Another female relative	___ Male professor	___ School courses
___ A male friend	___ Female professor	___ Books, articles or pamphlets on the field
___ A female friend	___ Man working in my chosen field	___ Television or movies
___ Male guidance counsellor		___ No one or nothing I recall
___ Other (specify) _____		

12. Which of the following appeal to you with respect to your chosen career?

Place a check mark beside those which are important to you and then rank these in order of importance (1=most important).

- ☐ ☐ High salary potential
- ☐ ☐ Having a lot of responsibility
- ☐ ☐ Having a position of prestige and influence
- ☐ ☐ Intellectual or creative challenge
- ☐ ☐ Freedom from supervision
- ☐ ☐ Financial security
- ☐ ☐ Being able to help people
- ☐ ☐ Having a pleasant work environment
- ☐ ☐ Having congenial co-workers
- ☐ ☐ Good working hours
- ☐ ☐ Job security
- ☐ ☐ Job availability
- ☐ ☐ Other (please specify) _____

13. What is (or was) your father's occupation (Be specific)

14. What was your father's highest level of educational attainment?

- ☐ Elementary school
- ☐ Some high school
- ☐ High school graduation
- ☐ Some university
- ☐ University undergraduate degree
- ☐ Graduate or professional degree
- ☐ Other (specify) _____

15. What is (or was) your mother's occupation?

16. What was your mother's highest level of educational attainment?

- ☐ Elementary school
☐ Some high school
☐ High school graduation
☐ Some university
☐ University undergraduate degree
☐ Graduate or professional degree
☐ Other (please specify) _____

17. Was your mother employed outside the home during the following periods of your life? (Check the appropriate spots)

	No	Part time	Full time
up to age 5 years	_____	_____	_____
from grade 1 to grade 4	_____	_____	_____
from grade 5 to grade 8	_____	_____	_____
from grade 9 to grade 12	_____	_____	_____
during your university years	_____	_____	_____

18. How many brothers do you have? _____

19. How many sisters do you have? _____

20. How close are you to your mother? (Circle the one that best describes your situation.)

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
close	close	close	distant	distant	distant

21. How warm and expressive is your mother toward you?

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
warm	warm	warm	cold	cold	cold

22. How approving of your career plans and goals is your mother?

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
disapproving	disapproving	disapproving	approving	approving	approving

23. To what extent does your mother encourage you and offer advice regarding your career plans?

1	2	3	4
frequently	sometimes	seldom	never
encourages	encourages	encourages	encourages

24. How close are you to your father?

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
close	close	close	distant	distant	distant

25. How warm and expressive is your father toward you?

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
warm	warm	warm	cold	cold	cold

26. How approving of your career plans and goals is your father?

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
disapproving	disapproving	disapproving	approving	approving	approving

27. To what extent does your father encourage you and offer advice regarding your career plans?

1	2	3	4
frequently	sometimes	seldom	never
encourages	encourages	encourages	encourages

28. Considering your personalities, interests, values, etc. how much would you say that you and your father are alike?

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
dissimilar	dissimilar	dissimilar	similar	similar	similar

29. Considering your personalities, interests, values, etc. how much would you say that you and your mother are alike

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
dissimilar	dissimilar	dissimilar	similar	similar	similar

30. Considering yourself and both of your parents which are you more like (with respect to interests, personality, etc.)?

1	2	3	4	5	6
much	moderately	slightly	slightly	moderately	much
more	more	more	more	more	more
like mother	like mother	like mother	like father	like father	like father

31. My father discouraged behaviours that are more typical of the opposite sex.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

32. My father encouraged me to be concerned about my dress and appearance.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

33. My father was concerned about how popular I was with people my own age.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

34. My father encouraged me to do my very best in school.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

35. My father encouraged me to be independent and self reliant.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

36. My father encouraged me to think about and plan a career.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

37. My mother discouraged behaviours that are more typical of the opposite sex.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

38. My mother encouraged me to be concerned about my dress and appearance.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

39. My mother was concerned about how popular I was with people my own age.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

40. My mother encouraged me to do my very best in school.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

41. My mother encouraged me to be independent and self reliant.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

42. My mother encouraged me to think about and plan a career.

1	2	3	4	5	6
very	moderately	slightly	slightly	moderately	very
true	true	true	false	false	false

43. Do you currently consider yourself to be involved in a permanent relationship with another person?

Yes ____ No ____

44. If yes, at what age did you enter this relationship? _____

45. If you are not presently in a permanent relationship do you think you will enter such a relationship in the future?

Yes ____ No ____

If yes, by what age would you, ideally, like to be involved in a permanent relationship? _____

(note: partner = spouse or person with whom you have a permanent relationship)

46. In general, how important is having a partner in your future plans?

1	2	3	4	5	6
not at all	moderately	slightly	slightly	moderately	extremely
important	unimportant	unimportant	important	important	important

47. How many children would you, ideally, like to have? _____

48. Assuming that you have children and are financially secure, what would your employment status be during each of the following periods? (Check the appropriate spots)

	no paid job	part time job	full time job
Have child less than 6 months old	_____	_____	_____
Have child aged 6 months to 1 year	_____	_____	_____
Have child aged 1 to 2 years	_____	_____	_____
Have children aged 2 to 5 years	_____	_____	_____
Have children in elementary school	_____	_____	_____
Have children in secondary school	_____	_____	_____

49. Considering your future plans, which of career and family (partner and/or children) obligations is more important to you?

1	2	3	4	5	6
family	family	family	career	career	career
much	moderately	slightly	slightly	moderately	much
more	more	more	more	more	more
important	important	important	important	important	important

50. For your father, which of his obligations do you think was more important to him while you were growing up?

1	2	3	4	5	6
family	family	family	job	job	job
much	moderately	slightly	slightly	moderately	much
more	more	more	more	more	more
important	important	important	important	important	important

51. For your mother, which of her obligations do you think was more important to her while you were growing up?

1	2	3	4	5	6
family	family	family	job	job	job
much	moderately	slightly	slightly	moderately	much
more	more	more	more	more	more
important	important	important	important	important	important

Please indicate your agreement with the following statements.

52. Both partners should contribute to the financial support of the family.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

53. I intend to be employed all of my adult life.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

54. I do not expect to do all household tasks myself.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

55. I expect my partner to help with the housework.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

56. I expect my partner to do 50% of the housework.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

57. I expect my partner to do most of the housework.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

58. I do not expect to do all childrearing tasks myself.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

59. I expect my partner to help with the childrearing.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

60. I expect my partner to do 50% of all childrearing tasks.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

61. I expect my partner to do most of the childrearing tasks.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

62. A woman's career is of equal importance to her partner's.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

63. I think the most important thing for a woman is to be a good wife and mother.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

64. I think the most important thing for a man is to be a good husband and father.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

65. I think the most important thing for a woman is to have a successful paid career.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

66. I think the most important thing for a man is to have a successful paid career.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

67. I would marry only if it did not interfere with my career.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

68. I would forego children if they would interfere with my career.

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
strongly	moderately	slightly	slightly	moderately	strongly

69.. Did you take grade twelve mathematics courses?

___ Yes

___ No

70. If yes, which course(s) did you take and what were your final grades?

71. Did you take grade twelve science courses?

___ Yes

___ No

72. If yes, which course(s) did you take and what were your final grades?

73. For the previous academic year, what was your final academic average?

Please feel free to add any comments below. THANK YOU

Appendix B

Traditional Career Choices

Elementary school teacher

Nurse

Social worker

Counsellor (no postgraduate training)

Home economics

Flight attendant

Recreation worker

Support health care worker (rehabilitation medicine,
laboratory technician)

Secretary

Nontraditional Career Choices

Lawyer

Physician

Accountant

Business executive

Secondary school teacher

University professor

Clinical psychologist

Architect

Systems analyst

Pharmacist

Research scientist

Sports administrator

Journalist

Performing artist