The impact of mentoring on the educational and occupational aspirations of female elementary school students.

Heather Estelle Metcalfe
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THE IMPACT OF MENTORING ON THE EDUCATIONAL AND
OCCUPATIONAL ASPIRATIONS OF
FEMALE ELEMENTARY SCHOOL STUDENTS

by

Heather Estelle Metcalfe

A Thesis
submitted to the
Faculty of Graduate Studies and Research
through the Department of
Sociology and Anthropology in Partial Fulfillment
of the requirements for the Degree
of Master of Arts at
the University of Windsor

Windsor, Ontario, Canada
1989
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To Alisa and Karen,
my daughters and my friends.
ABSTRACT

THE IMPACT OF MENTORING ON THE EDUCATIONAL
AND OCCUPATIONAL ASPIRATIONS OF FEMALE
ELEMENTARY SCHOOL STUDENTS

by
Heather Estelle Metcalfe

The effects of a two-stage mentoring program on the values, attitudes and behaviours associated with the educational and occupational goals of elementary school females was explored within a symbolic interaction framework. It was proposed that the provision of educational and occupational role expectations, other than the traditional ones, through a variety of mentoring experiences with senior university students and women in the community would expand young elementary school females' awareness, interest and expectations in a non-traditional direction. Thirty-three elementary school students interacted in a one-on-one relationship with a senior university student and with a woman in the community in non-traditional educational and occupational areas respectively, over a four-month period with matching based on interests, hobbies and stated career goals. Females also participated in Awareness workshops dealing with the home/work dichotomy, marketplace exploration and profiles of successful women in non-traditional careers. In order to fully determine the effects of mentoring, comparable measurements were gathered on a control group of 13 and 14-year-old males and females.
who did not participate in the mentoring experience. "Before" and "After" questionnaires were administered to both the experimental and control groups for quantitative analysis while qualitative analysis was based on information contained in the log books kept by all participants. The mentoring program succeeded in establishing a greater awareness of and interest in non-traditional educational and occupational goals than existed before the mentoring experience as well as conveying a philosophy of mentoring as a positive framework for these young females' futures.
I would like to express my sincere gratitude to my Thesis Committee for their interest, assistance and guidance during the entire course of this research project: Dr. Gerald Booth for so generously giving his time and effort on my behalf and especially for being both mentor and friend; Dr. David Booth for his invaluable encouragement, always punctuated with suggested avenues to explore; Dr. Robert Whitehurst, whose wealth of experience kept me ever mindful of purpose and professionalism and Dr. Emily Carasco for her interest and encouragement and for being an excellent role model for myself and others.

A special thank you to Dr. Durhane Wong-Reiger, Department of Psychology and Mrs. Sue Zanin, Affirmative Action - Resource Teacher for the Windsor Board of Education, who contributed their time and expertise during the presentation of workshops in the course of this project. Also my appreciation goes to Marge Holman, University of Windsor Employment Equity Co-ordinator/Sexual Harassment Advisor who participated in the Workshop for Mentors and facilitated the search for student mentors.

To Mr. Zolie Veres, Superintendent of Special Services and the Windsor Board of Education for the City of Windsor, who gave permission for the study and to the principals, teachers, students, parents, University of Windsor students and community women who were involved, I can only say that
without you, there would not have been a mentoring project and your participation was invaluable.

Finally, my love and heartfelt thanks to my family, Alan, Alisa and Karen, for sharing the joy and excitement as well as the frustration and disappointment involved in the research process, for their practical help and ever-present encouragement and also to Stephen, whose invaluable computer knowledge was always generously shared with enthusiasm.
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Although some scholars would suggest that the concept of mentoring can be traced back to Egyptian civilization, most believe that Homer's *Odyssey* captured both poetically and metaphorically, the essence of mentoring in the Bronze Age. Ever since the Greek poet's wise Mentor advised, counselled, coached and taught Telemachus, son of Odysseus, the relationship of mentors to protégés has been a special one. Since those ancient times, there have been mentors and protégés in virtually every discipline and career area whereby a more experienced person shares an expertise with a less experienced person and provides wise counsel and guidance as well as role-modelling and encouragement for the purpose of helping a protégé gain the capabilities and maturity needed to develop his/her talents and function independently. Some other famous examples of mentor-protégé relationships are Fenelon and the grandson of Louis XIV, Professor Barron and Isaac Newton, Professor George Whyte and Thomas Jefferson, as well as Jefferson and James Madison. Perhaps however, the relationship between Ann Sullivan and Helen Keller is the most relevant to this paper since it deals with females.

Education for men, whether for trades or professions has always included periods of apprenticeship in which training was acquired in study and work arrangements with
persons established in the field. These arrangements provided opportunities not only for the acquisition of skills but also for introduction to others in similar trades and professions. Education for women, on the other hand, was limited until the early years of the twentieth century when they gradually gained access to higher education. While they were increasingly able to study in a variety of subject areas, the opportunities to work under apprenticeships or support arrangements with persons already established were limited. Similarly, while males learned at an early age through play and games (Diamond, 1978) those skills related to positions of leadership such as goal setting, team effort, rules, mastery of skills to compete and win, girls were denied these opportunities. Until recently, girls have had little chance to learn these skills and in fact, were actively discouraged from participating in activities which could lead to their development. Athletics provides us with one example from the 1930's, when there was clearly a conflict between the idea of a "feminine woman" and an athletic one as reported by Lenskyj (1982):

Particularly after the reproductive health of active girls came under scrutiny, the pseudo-medical claims that sport jeopardized girls' child-bearing capability were virtual proof of the ancient fear that sport masculinizes females. Traditionalists were alarmed to observe, too, that situations such as sporting contests brought out "masculine" traits in girls, hence, those who preferred to deny that girls enjoyed physical challenge, excitement, the struggle to win and to achieve excellence, took the necessary steps to
repess such traits, by abolishing competition.
(p. 14)

While this was true of the early part of the century, the 1960's and 1970's represented a time of awareness of the struggle by women to gain entry to careers which had been traditionally dominated by or accessible to men only. This emerging consciousness prompted women to take a look at their low representation in such professions as higher education, medicine, law, and business. Supported by the enactment of important legislation, women have found new doors opened for them and continue to struggle to seek entrance into professional, managerial and administrative positions.

While academic credentials are, no doubt, essential and higher educational opportunities give women the self confidence to advance to leadership positions, the current nature of socialization is nonetheless discriminatory. It has been well documented by many researchers including (Bem, 1983; Maccoby & Jacklin, 1974) and many others that children are strongly affected by socializing agents. Both directly and indirectly, as a function of cognitive development, reinforcement and modelling, children are steered toward different modes of behaviour through developing gender schema. Boys are steered towards the agentic--achievement, competition and independence and girls towards the communal--nurturance, sociability, dependence. In order for sexual equity to prevail and in order for society to benefit from
the skills of all its members in all areas of expertise, continuing efforts must be made to create programs that reduce sex role discrimination. Our purpose then, in initiating this project, was to examine the effects of a two-stage mentoring program on the values, attitudes and behaviours associated with the educational and occupational goals of primary school females. This process was intended to provide females in the elementary school system with educational and occupational role expectations, other than the traditional ones, through a variety of mentoring experiences with female university students and community women in non-traditional occupational positions. The following review of literature will document these areas of study and their findings and lead to an effort to discover, within a symbolic interactionist framework, how mentoring programs have the potential to accomplish this goal of sexual equality.
CHAPTER II

Review of Literature and Theoretical Framework

The value of a review of literature on mentoring is two-fold. First, it is to obtain an overview of what has been written in the area and to assess where there may be pathways to new information that will contribute to the overall understanding specifically as it relates to female development. Secondly, it is to illuminate the various theoretical approaches and to adopt or develop one which will further facilitate our understanding of the mentoring process as it applies to females. The subject of mentors has been studied extensively over the past several years from which has come a spate of publications on the subject in the popular press as well as in academic journals. In reviewing the literature on mentoring, we would suggest that it is generally atheoretical and value-biased in favour of the phenomenon. Individual success and creative productivity in a wide range of endeavours has frequently been simply attributed to having had a personal mentor.

Most of the early studies and many of the current ones focus on mentors in management and business. The next largest group of studies is concerned with education: university and college administrators, teachers, graduate students, high school students, as well as the gifted, handicapped and those with social problems. Lately, there is also interest in mentoring from an historical perspective
as well as an examination of methodologies for initiating and evaluating mentoring programs. It has only been recently that researchers have rediscovered the importance of mentors and mentoring in the development of a young adult. Lately, too, there has been an application of the mentor-protégé construct to the more recent concerns for providing equitable opportunities for the career advancement of women and minority groups.

Levinson, Darrow, Klein, Levinson & McKee (1978) suggest that a mentor is the most important relationship. For the protégé:

In the usual course, a young man initially experiences himself as a novice or apprentice to a more advanced, expert, and authoritative adult. As the relationship evolves, he gains a fuller sense of his own authority and his capability for autonomous and responsible action. The young man increasingly has the experience of "I am" as an adult, and the relationship becomes more mutual. (p. 98)

Also for the mentor:

He may act as a teacher to enhance the young man's skills and intellectual development. Serving as a sponsor, he may use his influence to facilitate the young man's entry and advancement. He may be a host and guide, welcoming the initiate into a new occupational and social world and acquainting him with its values, customs, resources, and cast of characters. Through his own virtues, achievements and way of living, the mentor may be an exemplar and the protégé can admire and seek to emulate. He may provide counsel and moral support in times of stress. (p. 99)
Levinson and several others (Clawson, 1980; Dalton, Thompson & Price, 1977) also suggest that this is a reciprocal relationship because of the re-evaluation and re-assessment the mentor does of his own accomplishments. The mentor gains an internal satisfaction seeing in his young protégé a perpetuation of some of himself.

A number of research studies focus on understanding the nature of mentoring in organizational settings and produce a variety of perspectives. Kanter's (1977) idea of the sponsor relationship looks at the instrumental nature of the relationship between a junior and senior manager, suggesting that position and power of the senior manager aids the junior manager to climb the ladder. Dalton et al. (1977), in a study of professional engineers and scientists, emphasizes the need for a stage in career development when an individual expands his or her role to include the development of subordinates by providing the variety of functions outlined by both Kanter and Levinson (1978). DeWine (1983) examines the communication patterns of mentor relationships and their importance and impact on organizational advancement of women while Atcheson (1983) looks at the differences in mentorship for men and women in higher education. Epstein (1971), Edson (1980) and Hall (1966) all comment on the patron system within professions. Epstein looks at overcoming sex-status limits in male dominated professions in general, Edson examines the value
of support relationships in public relations, and Hall's focus is the field of professional medical care.

Relationships between more experienced and less experienced adults that contribute to career development are identified in several ways, each suggesting slight differences. Levinson et al. (1978) and Dalton et al. (1977) refer to mentor relationships while Kanter (1977) talks about relationships between good friends and "rabbis". Shapiro, Haseltine & Rowe (1978) suggest "godfather" relationships or "senior sponsors" while Lembright (1982) uses the concept "sponsorship". While there appears to be agreement about the seniority, power and potential value involved in mentoring relationships, there are differences in perception about the range and intensity of developmental functions provided, and their exclusivity. For example, Josefowitz (1980) distinguishes between sponsor and mentor as follows:

The difference between sponsor and mentor is one of function. A mentor will teach you a skill or provide you with the knowledge necessary to perform an identifiable task. Mentoring is focused in the present. A mentor teaches you what you need to know now. A mentor may or may not be able to influence your career and need not have any particular clout in the organization. A sponsor may have very little to teach you about your job but can help your career by recommending you for special projects, by speaking for you, by taking you along on assignments. A sponsor focuses on your future and must have influence in the organization. (p. 93)
Moore (1982) has attempted to clarify the terminology by narrowing the focus on the term mentor to "a form of adult socialization for professional level roles, especially leadership roles, in an organization" (p. 2). In another work with A. M. Salimbene, Moore (1981) defines mentor as:

an intense, lasting, and professionally centred relationship between two individuals in which the more experienced and powerful individual, the mentor, guides, advises, and assists in any number of ways the career of the less experienced, often younger, upwardly mobile protégé. (p. 52)

In a recent publication by Phillips-Jones (1982) the classification system for mentors is even more definitive, as it operationally defines several possible "roles" for mentors among which are: traditional mentors, older bosses who serve as protectors and parent figures; organization sponsors, people in positions of power in the organization who have a say in deciding who will be among the chosen few promoted to the coveted higher ranks; professional career mentors, people one can hire to improve their career, like certified career counsellors, agents, or personal managers; patrons, people who use their money or other material clout to launch an individual in their career and who may finance or support individuals while they learn their trade.

While it is clear that definitions of the "mentor" vary somewhat among researchers there are several commonalities. First, most allude to the classical beginnings in The Odyssey acknowledging that it is an intense relationship,
developed over time. Several have also concluded that the development tends to occur in distinguishable stages (Carter, 1982; Dalton, et al., 1977). However there are variations in the length of mentor/protégé relationships (Sheehy, 1977) and in their outcomes, as is exemplified by Collins (1982) who suggests that protégé selection may be determined by the protégé's willingness to subscribe to "the rules of the game." There are also notable dichotomies such as who should be mentored by whom. Daniel J. Levinson (1978) states that "a husband cannot remain his wife's mentor" (p. 238) while Sheehy (1977), whose study focuses on women in the arts, finds that several women had mentors who were either husbands or lovers. Attebury (1985) chooses a middle path and summarizes by saying "it was found that--at least among female university administrators--spousal mentoring does occur, with similar attendant risks for catastrophic results...with similar opportunities for positive career development as prevails among corporate female executives" (p. 16).

In attempting to assess the value of the use of mentors, indications are that they have a significant impact on career development. In a 1979 study, Roche suggests that mentorship is growing, as those who had mentors earned more money at a younger age and were happier with their career progress. Moore and Salimbene (1981) surveyed thirty-five male and female subjects who indicated that they had had a mentor relationship at some time during their careers and
that most often the protégé was groomed to take the place of the mentor in the organization.

As previously indicated, there is currently considerable focus on the application of the mentor-protégé construct as it relates to equitable opportunities for the career advancement of women and minorities. Almost all of the applicable literature on women, however, deals with those who have already achieved some degree of success or "made it". In academe, much of the focus is on graduate students, junior faculty members, or occasionally, high school students. For example, Janice Yoder (1984) addresses the potential pitfalls for women pursuing academic careers in psychology in progression from graduate student to assistant professor. Hall and Sandler (1983) examine issues concerning mentoring for women in higher education, and W.I.S.E. (Women Inquire Into Science and Engineering) was a project whose intent was to develop methods to systematically draw women into science professions. There are no studies we could discern which focussed particularly on the normal range of pre-high school females. It seems reasonable to hypothesize that in order for more participation to take place and for society to benefit from all the skills inherent in all its members, it is extremely important that well before young people enter the work force they have opportunities to perceive of the range of possibilities of success. Mentoring, therefore, to be successful may have to begin earlier.
Toward a Theoretical Perspective

Despite general acceptance of equal opportunity, human rights legislation and changes in divorce and family law, the fact remains that the way society actually works in relation to women is distinct from the way the law reads. Judge Rosalie Abella (1986) summed it up neatly when she suggested that "Although the script has changed, the director—our censorious social environment—is not sure he/she likes the new dialogue and has therefore been very slow to change the sets or the props" (p. A6). As human beings, we act freely but within situations that have parameters. Our social world defines these parameters, for example, history, social class, race, gender and so forth, and we are limited in our interaction by our symbols or language (Mackie, 1987). Young women, particularly, have been limited by social definitions and symbols, therefore it is important that they have the opportunity through mentoring programs to increase the symbols available to them for analyzing their situation, for seeing, for thinking things in different ways so they may re-define and focus themselves in new directions.

As a theoretical perspective, symbolic interactionism focuses on the interaction or the dialogue and in doing so de-emphasizes the "sets and props" or social structure. Lack of accessible day care, traditional female job ghettos and dominance of men in politics debating "women's issues"
are structural constraints that are not examined in depth by
this perspective. (Part of the methodology employed in this
research, however, will permit the examination of pre-study
and post-study behaviour and attitudes as are related to
both the mentoring process and various structural
constraints, see Chapter IV). The choice of concentrating
on human interaction is a bias. However, we believe it is
the most useful perspective for understanding human social
life, of which mentoring is an important part. According to
Charon (1985):

> Symbolic interaction is an attempt to break away
from traditional social science and to view the
human as maker, doer, actor, and self-directing.
It is an attempt to locate what Kant and other
philosophers were looking for: a free spirit, a
"soul", individual freedom in humans. (p. 176)

This perspective emphasizes that human beings are
active; that society is a process of individuals
interacting, role-taking and communicating; the action that
takes place between individuals is an important influence on
those individuals and on society. People are constantly
undergoing change in interaction and society is changing
through interaction. Interaction implies human beings in
relation to each other, taking each other into account,
interpreting and acting again. Hence, a more dynamic active
human being emerges, not just one human responding to
another in Skinnerian or structural fashion. This
essentially describes the essence of the mentor/protégé
relationship—that through interaction and communication, mentors will facilitate cognitive, affective and creative growth as well as change, leading ultimately to a better society.

**Theoretical Framework**

Merriam (1983), in a critical review of the mentoring literature suggests that from a research design perspective, the literature is relatively unsophisticated. As has been stated previously, it is as well, relatively atheoretical although we would suggest that much of it implicitly belongs within a symbolic interactionist framework, a perspective which focuses explicitly on the nature of human interaction—the dynamic social activities taking place between persons. Our particular theoretical framework will be developed through an identification of important symbolic interactional and mentoring concepts and their fit with some of the mentoring literature.

Literature on socialization is rife with examples of consistent gender stereotypes perpetuated through symbols. The society at large holds different expectations for males and females which are reinforced both directly and indirectly by social objects and symbols as they serve to represent and communicate these differences on a continuous basis. Through the structure of the English language itself, through play activities, media depiction, the school environment, and career role models, to name a few, males
and females are depicted as differing widely in behaviour and status. Females are typically characterized as being of lesser importance than males, less competent, more passive and are frequently cast in the role of nurturant homemakers. Males, on the other hand, are the active, competent, aggressive wage earners and athletes. It is, therefore, important that language which excludes or patronizes women be eliminated. Repeated use of "he", "his" and words formed with "man" when referring to groups of people effectively exclude women from their sense of place in a society where they are not just equal but make up approximately 52% of the population. Demeaning and sexist language is associated with negative imagery and inequality, for example "the weaker sex", "chicks" and "man and wife." Images of Women, (1982) which was a report of the task force on sex-role stereotyping in the broadcast media concluded that

constant repetition of these images tends to reinforce their perceived reality, thus influencing the attitudes of women, men and children, and encourages both women and girls to limit their horizons both socially and professionally to those roles which they see portrayed. (p.6)

On the other hand, a female who is successful in a non-traditional role can, in herself, be a symbol to other women in the field, and to those who have aspirations. It is therefore extremely important that well before young women enter the work force that they be exposed to active, successful, non-traditional role models so that they may
perceive of the possibility of their own success. This idea is supported by Levinson et al. (1978) when he provides a description of the mentor as one "who supports and facilitates the realization of the dream" (p. 64). Berry (1983) concludes that women managers need mentors to help them learn the formal and informal rules of corporate politics because they have not broken into the "old boy network." There is a wealth of studies which indicate the availability and various methods of providing mentoring experiences for those who, by one means or another, have been designated as among the gifted, either academically or in a special field such as art or music (Shamanoff, 1985; Shaughnessy, 1986; Szekely, 1981). For the general female populace, however, few female role models and a lack of female mentors, make it probable that many women will have lower expectations for their careers than men; some will experience difficulty in obtaining advancement, recognition and research funding; some will not realize their dreams; and some will not even have the opportunity to dream at all.

It is quite apparent that it is through the meaning derived from symbols that one is socialized into a group. Through symbolic communication we come to share culture and provide community continuity. Community depends on shared meanings and experiences which are dependent upon our use of language or communication. The use of language is a uniquely human trait--a symbolic reality that opens for us
social interaction that other species do not enjoy. Communication through language is a central concept of the symbolic interaction perspective. The *Story of My Life* by Helen Keller (1954) is almost always included in reviews of mentoring literature. The exciting awareness, the mystery of language, is perhaps the central theme of this book as illustrated in the following passage:

Suddenly I felt a misty consciousness as of something forgotten—a thrill of returning thought; and somehow the mystery of language was revealed to me. I knew then that "w-a-t-e-r" meant the wonderful cool something that was flowing over my hand. That living word awakened my soul, gave it light, hope, joy, set it free. (p. 36-37)

In the mentoring literature, there is a focus on developing communication skills (Nelson, 1986; Webster-Worthy, 1983). A Report on the Maryland Summer Centre for gifted secondary school students stresses the importance of helping gifted students communicate with each other (Wiegand & Brown, 1986). A paper by Rupnow (1986) suggests that communication is the vital factor in the mentor-charge relationship and stresses the quality and effectiveness of communication. He indicates that it should include clear content, be consistent, be credible and committed to the acquisition of understood goals in an atmosphere of mutual responsibility. Language then, not only allows us to interpret and define, but to communicate with self and others.
Symbolic interaction describes socialization as a lifelong process that operates whenever one person interacts with another (Lauer & Handel, 1977). In this view, each person learns the rules and social roles of society through the socialization process. By interacting with others, the person learns the social meaning of behaviours, objects and ideas. The ability to manipulate abstract symbols in the form of language, enables humans to develop their social self. Only when the person has a sense of self—when he or she can refer to the self as an object in the same way others can be referred to, can the individual engage in meaningful social interaction.

The concept of the "significant other" is an important one for symbolic interaction. It is the foundation of mentoring. This concept represents the recognition that, in a fragmented and differentiated world, all persons one interacts with will have different perspectives, therefore given others will be designated as more important for particular individuals. Significant others are usually role models who "provide patterns of behaviour and conduct on which he patterns himself. It is through interaction with these role models that the child develops the ability to regulate his own behaviour" (Elkins & Handel, 1972, p. 50). Significant others are also responsible for the emergence of self. Mentoring has traditionally and historically been an informal process, happening mainly by chance. It is described by most of the articles and research studies since
the mid-70’s as "the type that lucky protégés experience when they happen to be chosen by or happen to find a person of greater experience and expertise who takes a special interest in them and in helping to promote their personal or career development" (Gray, 1986, p. 15). This is often described by protégés as being in the right place at the right time to be noticed by the right person. Some researchers (Clawson, 1985; Levinson et al., 1978) claim that formal mentoring cannot be established because the essential ingredient of mutual attraction and desire to work together cannot be imposed. Gray (1986) suggests a major problem with informal mentoring is that women and members of minorities—the two groups who need mentors most—are the least likely to get an informal mentor. Thus, human potential often goes unrecognized and uncultivated. Gray (1986) as well as others (Alleman & Huggins, 1986; Phillips-Jones, 1983) believe that formalized mentoring programs are one way to benefit minorities and women.

Similarly, the literature also suggests that the role of mentor is of considerable importance particularly during early adulthood (Levinson et al., 1978). His study suggests that the relationship will provide a learning experience which can be drawn upon throughout life, even though the relationship is likely to have lapsed by mid-life. Without a mentor, humans have to take what they need for self-awareness, self-confidence and self esteem from wherever they can.
The concept of human beings viewing themselves from the perspective of other people was referred to as "looking glass self" by Charles H. Cooley (1902). In order to see ourselves from another's viewpoint, we must view the world through his or her eyes. We must learn to take the positions of others which in Mead's terminology means taking the role of the other. Role taking becomes a necessary ability for the development of self. In order to take a role, we need language in order to communicate about self, others and objects. Just as neutral objects acquire meaning through interaction and communication, so, too, may the self acquire meaning. The expectations of parents and additional "significant others", social stereotypes and our own behaviour combine to determine what is appropriate. There are many contemporary studies that leave little doubt that boys and girls, men and women, are socially defined as different from birth. (Best, et al., 1977; Gurwitz & Dodge, 1975; Maccoby & Jacklin, 1974).

The following mentoring studies testify to these differentiated definitions. A study by Koblenzsky and Sugawara (1984), suggests that there is a decrease in stereotypic knowledge and preferences by children when nonsexist curriculae are presented by a same-sex teacher. This seems to indicate that same-sex modelling may in fact be more important than specific material in the acquisition of gender stereotypes. In relation to career counselling, Thomas and Stewart (1971) find that high school counsellors
rate female students who express an interest in traditionally masculine occupations as being more in need of counselling than women with more traditional interests. An investigation of counsellor training (Harway & Astin, 1977) reveals that 85% of the materials employed are stereotypical in nature and there is a paucity of courses on counselling for girls as a group with special needs. Related to this, Lacher (1978) notes that at the college level, academic advisers traditionally have been insensitive to the special concerns of female undergraduates. In a study by Hite (1985) findings suggest that regardless of the field of study, female students experience less role congruence and receive less support from professors than males. Her conclusion is that a lack of mentors may result in premature termination of their education which would reinforce the myth that women lack dedication and intelligence for graduate work. Findings indicate that female college teachers may be particularly important role models for female students in their choice of careers and productivity (Basow & Howe, 1980; Gilbert & Evans, 1985; Gilbert, Gallessich & Evans, 1983; Goldstein, 1979). Since there are few females in higher educational roles and therefore small numbers of female career models, female students may be further limited in their recognition of career alternatives open to them. Such programs as described by Bean (1980), whereby one-on-one relationships with mentors from the community have, as their goal, the exploration of abilities
and individual stimulation to expand opportunities and explore other academic areas of interest, would help alleviate this problem. Marsicano (1981) suggests that one of the greatest barriers to the advancement of women in academia is lack of sufficient mentors. Where professionals aspire to advance, having a mentor has been found to be important (Josefowitz, 1980; Pressler & Blanchard, 1984; Young et al., 1980). Yet here too, there are few women in elevated ranks and men are often reluctant to assume the mentor role for females. In traditionally male occupations (most professions), women have been excluded from "socialization into a profession" by not having a mentor (Epstein, 1970; Missirian, 1982; Thompson, 1976; Warichay, 1980; Zey, 1985). While most studies support this notion, one study (Kates, 1985) concludes that mentors play a minor role and states, "All those without mentors may now relax. You don't need a stand-in daddy to hold your hand" (p. 40).

Another area where mentoring has been particularly effective is with regard to integrating work and family life—a particularly female concern (Basow & Howe, 1980; Erkut & Mokros, 1984; Gilbert, et al., 1983).

The concepts of socialization, role making, role taking, communication and interaction skills as well as shared meaning are most relevant to our understanding of the mentoring process and quite clearly can be best articulated within a symbolic interactionist framework. Figure 1 is a diagrammatic summary of the mentoring process developed for
this project within a symbolic interaction framework and is elaborated as follows. A group of Grade 7 and 8 females will be involved in a mentoring program where they share a variety of interactions and experiences with female university students and community women in non-traditional areas over a four-month period as well as experiencing traditional socialization through family, the school system, peers and others. As this ongoing relationship with their mentors is developed, these young females will share with a new group of significant others socialization, significant symbols and shared meanings, acting, re-acting and re-defining self in terms of their own values, goals and plans for the future. The results of this expansion of role-taking concepts will allow for the making of new, different and more creative roles and ultimately, an adjusted sense of self (See Figure 1).
Figure 1. Mentoring Model Within a Symbolic Interaction Framework.
CHAPTER III
Methodology

Historical Generation of the Project

There have been at the University of Windsor over the past three years several efforts to address the question of young females' perception of their successful handling of non-traditional educational and occupational goals. Project Mentor, a mentorship program under the executive direction of Lisa Matheson-Burns which was partially funded by the Ontario Women's Directorate took place in the Fall of 1985. Under this program, young women in Grades 7-13 interacted with community women over a one or two day period. Also, an "Expanding Your Horizons" program, directed by Mary Plantus and sponsored jointly by the Windsor Board of Education and the University of Windsor was held for two consecutive years. Various addresses and workshops were presented by females both from the University and from the community, with the goal of changing female expectations and breaking down the psychological and social barriers to female entrance into non-traditional educational and occupational areas. Thirdly, each year from May, 1985 to the present, under the co-ordination of Dr. Gerald Booth, University of Windsor’s Department of Continuing Education has offered one-week courses for males and females in the local Boards with educational enrichment goals in mind. All these programs are contributing in a meaningful way to the
mentoring process and have established an opening—a beginning. While the mini-courses and "Expanding Your Horizons" experience may be continued, Project Mentor and the evaluation in progress, are "one-time" efforts. The 1987 C.O.U. Status of Women Committee Report, documents the lack of continuity within programs of this type in our educational system and suggests that there is no linkage between the various levels of the educational process. Our particular project, therefore, is a possible way of dealing with these problems of continuity and linkage.

Our experience with the "Expanding Your Horizons" program has shown that the audience, and particularly the younger participants, are more responsive and find it easier to relate to the younger presenters—students in the post-secondary area. In addition, as much as the successful women in our community are extremely important as role models and may wish to contribute to programs involving changing role expectations, the time they are able to commit to young protégées or to a training program is strictly limited by dual role responsibilities of career and family. Young university and college students can provide meaningful linkage while benefitting greatly from the reciprocal arrangement.

Introduction to the Purpose

According to the U.S. Census Bureau, of the 500 occupations listed in 1985, women primarily are concentrated
in the 22 lowest paid job classifications (Basow, 1986). In higher education, there are few female faculty members to act as role models and advisors for female students. In the United States for example, there were only 10% in 1983/1984 (Basow, 1986). In Canada, at the University of Windsor, as of July, 1988 women represented approximately 13% of the professoriate, and these were primarily in traditional female faculties such as nursing and social work. In the professions and business, a number of factors appear to serve as barriers to women, particularly the lack of female role models with regard to integrating work and family life (Basow & Howe, 1980; Erkut & Mokros, 1983; Gilbert et al., 1983). In sex-typed male occupations which include most professions such as science, engineering, medicine, mathematics and law, women are frequently excluded from "socialization" into the profession by not having a sponsor. Despite the fact that we have been interested in seeing a shift in this arrangement for many years, parents, teachers, textual materials and the media very often present to young women stereotypical views of appropriate expectations and behaviour.

**Purpose**

Our purpose in initiating this project was to determine whether participation by 13 and 14-year old females in a mentoring program would lend itself to a shift in values, attitudes and behaviours associated with their own
educational and occupational goals. This mentoring experience involved extended interaction with senior university students who had non-traditional educational goals and successful community women in non-traditional occupations. Our expectation was that mentoring, as opposed to traditional socialization experiences, would expand the young females’ awareness, interest and expectations in a non-traditional direction. Mentoring was operationally defined as: a one-on-one, ongoing relationship in which an older, more experienced female guides, advises and assists a younger one in the exploration of her abilities, stimulates her to expand her areas of interest and makes her aware of and eager to explore occupational opportunities. In order to fully determine the effects of mentoring, comparable measurements were gathered on a control group of 13 and 14-year-old males and females who did not participate in the mentoring experience.

Subjects
The Experimental Group, Females at School A.

In this two-stage mentoring process, 33 girls in Grades 7, 8, and Intermediate General Learning Disabilities (G.L.D) from one school, School A, were each linked with a young woman at the University of Windsor who had non-traditional educational goals as well as with a successful female in the community in a non-traditional occupation. They were matched on the basis of information concerning their
interests, hobbies and favourite subjects as well as their stated career goals. Before actually participating in the program, a "before" questionnaire (see Appendix A) was administered for analysis at the end of the experimental period. This questionnaire was completed in the presence of two researchers, one male and one female, with questions being read aloud and carefully explained to maximize understanding and student response. Information requested included demographic data, information on educational, career, marriage, family, and leisure goals, sources of present role definitions and life expectations 10 and 20 years from the present time. Initially, the University female student attended a workshop session to learn how to be a good mentor, how to keep the relationship intact and ongoing, and how to provide an appropriate role model (see Appendix B). The women in the community received written guidelines to assist them where necessary, suggesting such areas of interaction as their particular career choice and related fields, home/career balancing, exposure to other careers and networking (see Appendix C).

Sources of Data

During the experimental period, January through May, weekly interaction (one hour minimum) with the elementary school female and her University mentor was encouraged and monthly interaction (one full day or two half days) with the elementary school female and her community mentor was
arranged. This mentoring experience was defined by a specified set of guidelines which were then incorporated into the interaction process. Both the university and community mentors were cognizant of these underlying principles. The first was to provide female access to mentors as role models which would benefit protégées, mentors and the organizations of which they are or will become a part. Secondly, was to provide on-going, continuous interactions from an early age through to university and college before access to academe or an occupation is achieved. Thirdly, this process was expected to provide input and practice in how to be become a good and valuable mentor. Lastly, an effort was made to convey a philosophy of mentoring as a framework for the future.

All participants were requested to keep a log book of the interactions and include the following observations:

1. perceptions of their mentors/protégées.
2. topics discussed.
3. activities participated in.
4. reactions to the interactions.
5. things learned.
6. problems encountered.

Also during this time, three awareness workshops were held, in February, March and April. (See Appendixes D, E, & F) The subjects of these workshops were:

I) Career and Family:—The change in historical patterns of education and employment; Workplace constraints to
success; Other constraints; Methods to deal successfully with possible career and family conflicts.

II) What does the current occupational marketplace look like with respect to employment?; Current availability of entrance jobs in the various sectors and some future projections as to job distribution; Educational commitments associated with entry into these occupations; Gender stereotypes: where they come from and how they impact upon educational and occupational selections for females; Methods of combatting these stereotypical expectations.

III) Girls Can. An exploration by video, discussion, research through information guides and making posters, later presented to the group, to investigate various non-traditional careers for women under the following headings:

1. Working Conditions
2. Requirements
3. Salary
4. Personal Qualities and Interest
5. Job Prospects

At the end of the four-month interaction, the elementary school females were given "after" questionnaires and a post-questionnaire was also completed by all participants.

Control Group. Females at School B and School C and Comparable Males at Schools A, B, and C.

In the research design, it was taken into consideration that factors other than the mentoring experience may well
influence the participating female students. The normal maturation process would have an effect on attitudes and values, as would the educational materials that were presented in the normal course of teaching. Therefore, in order to better evaluate this mentoring process, female students in two other elementary schools, whose socio-economic makeup was similar to School A were incorporated into the design. The female students at School C at comparable grade levels also received both the "before" and "after" questionnaires, but did not receive the mentoring experience, nor did they attend the awareness workshops. The female students at School B, again in comparable grades, received both the "before" and "after" questionnaires, and they, while not participating in the mentoring experience, did attend the awareness workshops. This provided a basis for comparison to see if, in fact, the mentoring experience provided for a shift in attitudes and behaviours of girls towards educational and occupational choices. Also, the males in comparable grades in all three schools filled in "before" and "after" questionnaires in order that the females not be alerted initially to the focus of the research and to provide a male/female base comparison with which to begin our analysis.

Data Collection

Of the original thirty-three matched sets of protégées and mentors, every one continued their interaction to the
end of the project. The degree of interaction, however, ranged from mentoring through friendly interaction to a purely role modelling experience. There was a full return of the log books for the protégées with only one exception, while four of the thirty-three university mentors did not return their logs and three of the thirty-three community mentors failed to do so as well. In no case did both mentors fail to respond in written form, therefore comment on interaction was available from at least two sources out of the three potentially available.

Setting and Agenda

Although the interactions were initiated in a "dating service" mode, which means pairs were purposefully matched, rather than in the more traditional "courtship/marriage" framework, where pairings occurred by choice, each one evolved in its own unique way. It was obvious from the log books that the interaction of the protégées and mentors from both the university and the community was extensive and varied but most importantly provided a framework within which they could share information including educational and occupational plans, opportunities, goals and expectations for the future.
CHAPTER IV
Males and Females--A Comparison

Introduction

The main emphasis of this study is the examination of the impact of mentoring on the values, attitudes, knowledge, present behaviour and future behavioural plans of a group of Grade 7 and 8 females. Much of the effort in mentoring and in the workshops in which two of the three schools participated was aimed at shifting female perceptions about traditional roles played by men and women in society, and enhancing their educational and occupational plans. Quite simply, it was felt that mentoring and exposure to adequate role models would enable young females to picture their futures differently, different from the views provided by a society which still stereotypes male and female behaviour and the possible roles which they might play.

The analysis of this mentoring project will be divided, with occasional overlapping, into three distinct sections. The first is a quantitative analysis of differences between male and female attitudes, values and expectations with regards to educational and occupational goals with numerical data gleaned from the "before" and "after" questionnaires. The second examines, qualitatively, the actual interaction process from the perspective of the experimental group; how the actors perceived the interaction and the meaning they derive from it as recorded in the participants' log books.
The third section is a statistical analysis of the results of the mentoring process also measured by the data contained in the "before" and "after" questionnaires gathered at the beginning and at the end of the experimental period.

**Males and Females--A Comparison**

Although the major pre-occupation of this study involved an examination of the impact of mentoring on values, attitudes and behaviours of females, data were also collected on a similar group of males in the three schools. These data not only provided us with a methodological control, but it also provided a foundation or base-point measurement of differences between males and females in Grade 7 and 8. Given that the mentoring program was at least partly based on the notion that the socialization of females disadvantages them with respect to their educational and occupational futures we anticipate finding significant differences between males and females in values and attitudes regarding female roles in society.

From numerical data gathered from "before" and "after" questionnaires, we were able to ascertain several differences beginning with the fact that females (\( \bar{X} = .12, p \leq .10 \)) were more likely than males to know women in non-traditional jobs in the "before" situation (See Table 1). After mentoring and workshops for females however, there was a significant increase (\( \bar{X} = .24, p \leq .01 \)) (See Table 2). The
Table 1

Total Number of Male and Female Students Knowing Women in Non-Traditional Occupations - Before

<table>
<thead>
<tr>
<th>Non-Traditional Occupations</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>64 (56.1)</td>
<td>75 (67.6)</td>
<td>139 (61.8)</td>
</tr>
<tr>
<td>No</td>
<td>50 (43.9)</td>
<td>36 (32.4)</td>
<td>86 (38.2)</td>
</tr>
<tr>
<td>Non-Traditional Occupations</td>
<td>Male</td>
<td>Female</td>
<td>Combined</td>
</tr>
<tr>
<td>-----------------------------</td>
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<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>Yes</td>
<td>51 (48.1)</td>
<td>82 (71.3)</td>
<td>133 (60.2)</td>
</tr>
<tr>
<td>No</td>
<td>55 (51.9)</td>
<td>33 (28.7)</td>
<td>88 (39.8)</td>
</tr>
</tbody>
</table>
vast majority of this shift was accounted for in the mentored school where there was a 20% increase in knowledge about women in non-traditional jobs. Additionally, of those individuals who reported knowing women in a non-traditional area, males were more likely to know fewer than females. In both the "before" and "after" measurements this was the case ($\tau_c = .15, p \leq .05$) ($\tau_c = .17, p \leq .04$), respectively.

When the students were asked to indicate where they came to know of these women in non-traditional occupational areas, 16% indicated the school system as a source with no real differences between males and females. In the "after" situation however, 15.7% of the boys reported the school system as did fully 30.5% of the girls. It is distinctly possible that the mentoring program and the workshops could have accounted for this substantial shift for females. In fact, when school was controlled for, the increase at School A was significant ($\phi = .47, p \leq .02$) while the changes at Schools B and C were much smaller and not significant.

The majority of the students' knowledge of non-traditional women, however, came from their family and friends. Approximately 50% of them reported both family and friends with boys slightly higher in reporting family ($\phi = .15, p \leq .10$) (See Table 3) and girls slightly higher in reporting friends ($\phi = .19, p \leq .04$) (See Table 4) in the "before" situation. These differences disappeared in the "after" period, due probably to the large shift of females that now reported their knowledge through the school system.
Forthcoming analysis of differences between females at the three schools will demonstrate an even larger impact by the mentoring program where many of the mentored females specifically reported the mentoring program as the source of their knowledge in a category labeled "other". Few students, male or female, identified part-time job or church as places they have met women in non-traditional occupations.

While knowledge of females in non-traditional occupations and sources of this knowledge are interesting bits of information in themselves, much more important is the possible impact of that knowledge upon future choices made by young men and women in the occupational/career area. Students were presented with the opportunity to identify as many as three women in non-traditional occupations and were then asked whether each one had influenced their own choices of career. Males and females were not different from one another with about 40% suggesting that the first person identified did have an influence. And, for both males and females, the majority of that influence was negative in nature where they suggested that the job characteristics were such as to discourage them from seeking occupational fulfillment in that area. For the second and third choices, boys saw more influence than girls but again, it was more negative than positive. In the after period, however, we saw a substantial change for females, an increase in influence of the first occupation identified of 46%. For
<table>
<thead>
<tr>
<th>Family Member</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40 (62.5)</td>
<td>35 (47.3)</td>
<td>75 (54.3)</td>
</tr>
<tr>
<td>No</td>
<td>24 (37.5)</td>
<td>39 (52.7)</td>
<td>63 (45.7)</td>
</tr>
</tbody>
</table>
Table 4

Total Number of Women in Non-Traditional Occupations Who are Friends of the Students - Before

<table>
<thead>
<tr>
<th>Friend</th>
<th>Sex</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Combined</td>
</tr>
<tr>
<td>Yes</td>
<td>25 (39.1)</td>
<td>43 (58.1)</td>
<td>68 (49.3)</td>
</tr>
<tr>
<td>No</td>
<td>39 (60.9)</td>
<td>31 (41.9)</td>
<td>70 (50.7)</td>
</tr>
</tbody>
</table>
the second occupation, the increase was 73% and for the third, 337%. (In all cases the influence for males actually declined). As will be reported more substantially in the comparisons of females only, the largest changes took place in the experimental school, School A.

An area in which one would expect major differences between young males and females is their perception of discrimination against women in the workforce. The data quite clearly supported this expectation with more than double the number of females reporting that they were aware of such discrimination. In the "before" period ($\bar{Q} = .38, p\le .01$) (See Table 5), and in the "after" period ($\bar{Q} = .27, p\le .01$) (See Table 6). The decline in the size of the relationship in the "after" period was accounted for by changes at the non-mentored schools; only at the mentored school did we see a marked increase in the perception of discrimination by the girls, an increase of 39%.

For many years in Canada males and females had quite different expectations with regard to the amount of education that was necessary in order to reach their occupational goals. Traditionally many more men than women were concerned with completing additional education beyond high school but we have been aware of the changing mix of post-secondary students with a rapid increase in the proportion of young women who go on to college and university. This expectation is reflected in the data collected regarding student educational plans after
Table 5

Male and Female Students' Responses to the Question of Whether
There is Discrimination in the Workforce - Before

<table>
<thead>
<tr>
<th>Discrimination</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>32 (28.6)</td>
<td>74 (66.1)</td>
<td>106 (47.3)</td>
</tr>
<tr>
<td>No</td>
<td>80 (71.4)</td>
<td>38 (33.9)</td>
<td>118 (52.7)</td>
</tr>
</tbody>
</table>
Table 6

Male and Female Students' Responses to the Question of Whether There is Discrimination in the Workforce - After

<table>
<thead>
<tr>
<th>Discrimination</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34 (32.7)</td>
<td>69 (60.0)</td>
<td>103 (47.0)</td>
</tr>
<tr>
<td>No</td>
<td>70 (67.3)</td>
<td>46 (40.0)</td>
<td>116 (53.0)</td>
</tr>
</tbody>
</table>
completion of high school. In fact more females than males are planning for higher levels of education ($\tau_u = 0.30$, $p < 0.01$) (See Table 7). In the "before" period fully 36.3% of the girls as opposed to 22.6% of the boys planned to complete Ph.D.'s. One might readily conclude from such data that grade 7 and 8 students, boys and girls, have an unrealistic view of the educational system. In the "after" situation, four months later, the difference between males and females had declined ($\tau_u = 0.21$, $p < 0.01$) (See Table 8) and both were more realistic about levels of education (20.4% girls and 12.0% boys expecting to obtain Ph.D.'s).

For those who chose not to go beyond high school in both the "before" and "after" periods, the majority of boys cited "wanting to work" as the major reason, while half the girls suggested "not liking school" as the major reason.

For those who do choose to continue in school after receiving a high school diploma, some interesting differences between males and females appeared as they listed their first, second, and third reasons for doing so. Slightly more than half of both the males and females identified "to get a good job" as their first reason. The only category that the sexes differed from one another was the "enjoyment/interest" category where 24% of the females and 12% of the males indicated it as their primary reason. These reasons were maintained in the "after" as well as "before" periods (See Tables 9 and 10).
Table 7

Anticipated Number of Years in Post High School Education - Before

<table>
<thead>
<tr>
<th>Number of Years</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>19 (16.5)</td>
<td>08 (7.1)</td>
<td>27 (11.8)</td>
</tr>
<tr>
<td>1-3 Yrs Community College</td>
<td>30 (26.1)</td>
<td>11 (9.7)</td>
<td>41 (18.0)</td>
</tr>
<tr>
<td>3 Yrs University</td>
<td>15 (13.0)</td>
<td>12 (10.6)</td>
<td>27 (11.8)</td>
</tr>
<tr>
<td>4 Yrs University</td>
<td>17 (14.8)</td>
<td>27 (23.9)</td>
<td>44 (19.3)</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>08 (7.0)</td>
<td>14 (12.4)</td>
<td>22 (9.6)</td>
</tr>
<tr>
<td>Ph.D or Equivalent</td>
<td>26 (22.6)</td>
<td>41 (36.3)</td>
<td>67 (29.4)</td>
</tr>
</tbody>
</table>
Table 8

Anticipated Number of Years in Post High School Education - After

<table>
<thead>
<tr>
<th>Number of Years</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>19 (17.6)</td>
<td>10 (8.8)</td>
<td>29 (13.1)</td>
</tr>
<tr>
<td>1-3 Yrs Community College</td>
<td>24 (22.2)</td>
<td>15 (13.3)</td>
<td>39 (17.6)</td>
</tr>
<tr>
<td>3 Yrs University</td>
<td>11 (10.2)</td>
<td>12 (10.6)</td>
<td>23 (10.4)</td>
</tr>
<tr>
<td>4 Yrs University</td>
<td>20 (18.5)</td>
<td>29 (25.7)</td>
<td>49 (22.2)</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>21 (19.4)</td>
<td>24 (21.2)</td>
<td>45 (20.4)</td>
</tr>
<tr>
<td>Ph.D or Equivalent</td>
<td>13 (12.0)</td>
<td>23 (20.4)</td>
<td>36 (16.3)</td>
</tr>
</tbody>
</table>
### Table 9

**First Reason Given by Male and Female Students for Continuing in School - Before**

<table>
<thead>
<tr>
<th>Primary Reason</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make Others Happy</td>
<td>09 (09.5)</td>
<td>07 (06.7)</td>
<td>16 (08.0)</td>
</tr>
<tr>
<td>Enjoyment-Interest</td>
<td>12 (12.6)</td>
<td>25 (23.8)</td>
<td>37 (18.5)</td>
</tr>
<tr>
<td>Get a Good Job</td>
<td>53 (55.8)</td>
<td>54 (51.4)</td>
<td>107 (53.5)</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>0 (0   )</td>
<td>04 (03.8)</td>
<td>04 (02.0)</td>
</tr>
<tr>
<td>Economic Benefits</td>
<td>09 (09.5)</td>
<td>04 (03.8)</td>
<td>13 (06.5)</td>
</tr>
<tr>
<td>Prestige-Power</td>
<td>02 (02.1)</td>
<td>0 (0   )</td>
<td>02 (01.0)</td>
</tr>
<tr>
<td>Best Use Abilities</td>
<td>06 (06.3)</td>
<td>06 (05.7)</td>
<td>12 (06.0)</td>
</tr>
<tr>
<td>Get to the Top</td>
<td>03 (03.2)</td>
<td>05 (04.8)</td>
<td>08 (04.0)</td>
</tr>
<tr>
<td>No Jobs Now</td>
<td>01 (01.1)</td>
<td>0 (0   )</td>
<td>01 (00.5)</td>
</tr>
</tbody>
</table>
Table 10

First Reason Given by Male and Female Students for Continuing in School - After

<table>
<thead>
<tr>
<th>Primary Reason</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make Others Happy</td>
<td>07 (08.2)</td>
<td>03 (02.9)</td>
<td>10 (05.3)</td>
</tr>
<tr>
<td>Enjoyment-Interest</td>
<td>10 (11.8)</td>
<td>23 (22.3)</td>
<td>33 (17.6)</td>
</tr>
<tr>
<td>Get a Good Job</td>
<td>44 (51.8)</td>
<td>53 (51.5)</td>
<td>97 (51.6)</td>
</tr>
<tr>
<td>Economic Benefits</td>
<td>14 (16.5)</td>
<td>06 (05.8)</td>
<td>20 (10.6)</td>
</tr>
<tr>
<td>Prestige-Power</td>
<td>02 (02.4)</td>
<td>03 (02.9)</td>
<td>05 (02.7)</td>
</tr>
<tr>
<td>Best Use Abilities</td>
<td>04 (04.7)</td>
<td>08 (07.8)</td>
<td>12 (06.4)</td>
</tr>
<tr>
<td>Get to the Top</td>
<td>01 (01.2)</td>
<td>06 (05.8)</td>
<td>07 (03.7)</td>
</tr>
<tr>
<td>No Jobs Now</td>
<td>03 (03.5)</td>
<td>01 (01.0)</td>
<td>04 (02.1)</td>
</tr>
</tbody>
</table>
The second reason given found the highest proportion again in "to get a good job" with one-third of both males and females falling in the category. They really differed from one another only in the category "to best use my abilities" where in the "before" period we found 13.3% females to 3.8% males and in the after period 16.7% females to 5.1% males. There was a slight decline in the "to get a good job" category for females in the "after" period (See Tables 11 and 12).

Again, for the third reason given, the males and females were approximately equal in their choices of "economic benefits" (24%) and "to get a good job" (17%) in the "before" period with the only real differences showing up again in the "to best use my abilities" category, where we found 29% females and 13.5% males, (these differences were attenuated somewhat in the "after" period but still remained) and the "prestige/power" category where 14.7% of the males as opposed to 5% of the females fell (See Tables 13 and 14).

Overall, it was quite clear that for both males and females, "getting a good job" and "economic benefits" were primary reasons for going on to post-secondary education. There were some small declines in those choices for females after the mentoring and workshops experiences but not very substantial ones. The major area of difference as a first choice was "enjoyment and interest" where twice as many females as males indicate that was the primary reason for
Table 11

**Second Reason Given by Male and Female Students for Continuing in School - Before**

<table>
<thead>
<tr>
<th>Second Reason</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make Others Happy</td>
<td>08 (10.3)</td>
<td>03 (03.1)</td>
<td>11 (06.3)</td>
</tr>
<tr>
<td>Enjoyment-Interest</td>
<td>06 (07.7)</td>
<td>09 (09.2)</td>
<td>15 (08.5)</td>
</tr>
<tr>
<td>Get a Good Job</td>
<td>26 (33.3)</td>
<td>34 (34.7)</td>
<td>60 (34.1)</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>03 (03.8)</td>
<td>05 (05.1)</td>
<td>08 (04.5)</td>
</tr>
<tr>
<td>Economic Benefits</td>
<td>19 (24.4)</td>
<td>21 (21.4)</td>
<td>40 (22.7)</td>
</tr>
<tr>
<td>Prestige-Power</td>
<td>08 (10.3)</td>
<td>07 (07.1)</td>
<td>15 (08.5)</td>
</tr>
<tr>
<td>Best Use Abilities</td>
<td>03 (03.8)</td>
<td>13 (13.3)</td>
<td>16 (09.1)</td>
</tr>
<tr>
<td>Get to the Top</td>
<td>03 (03.8)</td>
<td>05 (05.1)</td>
<td>08 (04.5)</td>
</tr>
<tr>
<td>No Jobs Now</td>
<td>02 (02.6)</td>
<td>01 (01.0)</td>
<td>03 (01.7)</td>
</tr>
</tbody>
</table>
Table 12

**Second Reason Given by Male and Female Students for Continuing in School - After**

<table>
<thead>
<tr>
<th>Second Reason</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make Others Happy</td>
<td>04 (05.1)</td>
<td>06 (05.9)</td>
<td>10 (05.5)</td>
</tr>
<tr>
<td>Enjoyment-Interest</td>
<td>10 (12.7)</td>
<td>15 (14.7)</td>
<td>25 (13.8)</td>
</tr>
<tr>
<td>Get a Good Job</td>
<td>26 (32.9)</td>
<td>22 (21.6)</td>
<td>48 (26.5)</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>01 (01.3)</td>
<td>09 (08.8)</td>
<td>10 (05.5)</td>
</tr>
<tr>
<td>Economic Benefits</td>
<td>21 (26.6)</td>
<td>23 (22.5)</td>
<td>44 (24.3)</td>
</tr>
<tr>
<td>Prestige-Power</td>
<td>11 (13.9)</td>
<td>03 (02.9)</td>
<td>14 (07.7)</td>
</tr>
<tr>
<td>Best Use Abilities</td>
<td>04 (05.1)</td>
<td>17 (16.7)</td>
<td>21 (11.6)</td>
</tr>
<tr>
<td>Get to the Top</td>
<td>01 (01.3)</td>
<td>07 (06.9)</td>
<td>08 (04.4)</td>
</tr>
<tr>
<td>No Jobs Now</td>
<td>01 (01.3)</td>
<td>0 (0)</td>
<td>01 (01.6)</td>
</tr>
<tr>
<td>Third Reason</td>
<td>Male</td>
<td>Female</td>
<td>Combined</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>Make Others Happy</td>
<td>05 (08.1)</td>
<td>01 (01.1)</td>
<td>07 (04.2)</td>
</tr>
<tr>
<td>Enjoyment-Interest</td>
<td>05 (06.8)</td>
<td>07 (07.5)</td>
<td>12 (07.2)</td>
</tr>
<tr>
<td>Get a Good Job</td>
<td>13 (17.6)</td>
<td>16 (17.2)</td>
<td>29 (17.4)</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>03 (04.1)</td>
<td>02 (02.2)</td>
<td>05 (03.0)</td>
</tr>
<tr>
<td>Economic Benefits</td>
<td>19 (25.7)</td>
<td>22 (23.7)</td>
<td>41 (24.6)</td>
</tr>
<tr>
<td>Prestige-Power</td>
<td>07 (09.5)</td>
<td>05 (05.4)</td>
<td>12 (07.2)</td>
</tr>
<tr>
<td>Best Use Abilities</td>
<td>10 (13.5)</td>
<td>27 (29.0)</td>
<td>37 (22.2)</td>
</tr>
<tr>
<td>Get to the Top</td>
<td>10 (13.5)</td>
<td>12 (12.9)</td>
<td>22 (13.2)</td>
</tr>
<tr>
<td>No Jobs Now</td>
<td>01 (01.4)</td>
<td>01 (01.1)</td>
<td>02 (01.2)</td>
</tr>
</tbody>
</table>
Table 14

Third Reason Given by Male and Female Students for Continuing in School - After

<table>
<thead>
<tr>
<th>Third Reason</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make Others Happy</td>
<td>06 (28.0)</td>
<td>08 (08.0)</td>
<td>14 (08.0)</td>
</tr>
<tr>
<td>Enjoyment-Interest</td>
<td>12 (16.0)</td>
<td>08 (08.0)</td>
<td>20 (11.4)</td>
</tr>
<tr>
<td>Get a Good Job</td>
<td>11 (14.7)</td>
<td>11 (11.0)</td>
<td>22 (12.6)</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>05 (06.7)</td>
<td>13 (13.0)</td>
<td>18 (10.3)</td>
</tr>
<tr>
<td>Economic Benefits</td>
<td>15 (20.0)</td>
<td>24 (24.0)</td>
<td>39 (22.3)</td>
</tr>
<tr>
<td>Prestige-Power</td>
<td>11 (14.7)</td>
<td>05 (05.0)</td>
<td>16 (09.1)</td>
</tr>
<tr>
<td>Best Use Abilities</td>
<td>09 (12.0)</td>
<td>19 (19.0)</td>
<td>28 (16.0)</td>
</tr>
<tr>
<td>Get to the Top</td>
<td>05 (06.7)</td>
<td>12 (12.0)</td>
<td>17 (09.7)</td>
</tr>
<tr>
<td>No Jobs Now</td>
<td>01 (01.3)</td>
<td>0 (0)</td>
<td>01 (00.6)</td>
</tr>
</tbody>
</table>
going on to college or university, but they also differed most substantially at the second and third choice level where females showed much more concern than males for "making best use of my abilities", and males showed more concern than females for acquiring "prestige and power".

Students were also asked what they would like to study after high school and their responses were categorized as "traditional", "non-traditional" or "both". These decisions were made on the basis of whether one was more likely to see a majority of men or women in the program of study. Where students identified more than one program of study, for example one traditional and one non-traditional program, they were placed in the "both" category. The differences in response to this question by males and females were immense. Males overwhelmingly chose "traditional" areas of study for men while women substantially selected "non-traditional" or "both" in the "before" period (Cramers $V = .72$, $p \leq .01$) and in the "after" period (Cramers $V = .76$, $p \leq .01$) (See Tables 15 and 16). After the mentoring and workshops, however, we saw a shift in females away from the traditional and non-traditional areas into both, and this was especially the case at the mentored and workshop schools. While the boys remained unaffected, many girls would appear to have provided themselves with more options (This will be covered more fully in Chapter VI).

Students were also asked to list three occupations they had recently thought about entering. The males and females
<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>96 (97.0)</td>
<td>26 (25.5)</td>
<td>122 (60.7)</td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>03 (03.0)</td>
<td>52 (51.0)</td>
<td>55 (27.4)</td>
</tr>
<tr>
<td>Both</td>
<td>0 (0)</td>
<td>24 (23.5)</td>
<td>24 (11.9)</td>
</tr>
</tbody>
</table>
Table 16

Areas of Study Male and Female Students Anticipate Entering - After

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Sex</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Traditional</td>
<td>86 (97.7)</td>
<td>23 (22.1)</td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>01 (01.1)</td>
<td>40 (38.5)</td>
</tr>
<tr>
<td>Both</td>
<td>01 (01.1)</td>
<td>41 (39.4)</td>
</tr>
</tbody>
</table>
identified approximately the same numbers of occupations. However, the males did not, in any instance, select a non-traditional occupational area. There were even very few examples of selection of what one might term androgynous occupations such as "artist" or "dancer". The females chose a wide variety of traditional occupations but a substantial number of their selections were non-traditional in nature. The most popular categories were physician, high school teacher, lawyer and veterinarian. Students were then asked to identify the reasons for their selections of these particular occupations and there were some male/female differences which were similar to the answers for the question on why they chose to continue in school. Their answers with respect to their first job choice were similar in most categories except two: "economic benefits" and "enjoyment/interest". While "enjoyment/interest" was the most popular category overall, it was selected by 42.2% of the males and 51.4% of females while 24.5% males identified "economic benefits" and 12.6% of the females did likewise. In the "after" situation, these differences were even more substantial. 32.3% males chose "enjoyment/interest" as did 62% of the females, while males selected "economic benefits" 25.8% of the time and females only 12%. For the second and third choices, the females shifted somewhat to a concern for "personal growth" while the males essentially ignored that category and finally, in the third job choice, the females selected "economic benefits" 23.7% to only 9.5% for males.
The female over-representation in "enjoyment/interest" and "personal growth" fits with the notion that women wish to enjoy their job more than men and that they are concerned with the kind and quality of interaction that occurs in the workplace.

Given that females have traditionally regarded family and child-rearing as important components of their future life activities, it would not be unreasonable to expect that, even today, females would identify with a shorter work or career experience span than males. When they were asked how many years they planned to work however, males and females were not different from one another. About 70% of both sexes expected to work from at least 31 years up to traditional retirement age (See Table 17). Apparently the traditional differences in expectation have disappeared, at least as far as these Grade 7 and 8 students were concerned.

One of the differences between males and females in this study was their selection of who to talk to about future course choices. On the face of it, one might readily expect that the best source of information about educational choices would be the educational system itself. What we find, however, in the "before" situation is boys selecting the school system at only a 13.2% rate and the girls at 3.5% (This reduces to boys, 4.7% and girls, 3.5% in the "after" situation). The source selected most often by both sexes is mother, boys at 23.7% and girls at 44.2%. By the very nature of the discriminatory socialization practices they
<table>
<thead>
<tr>
<th>Number of Years</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-15 Years</td>
<td>12 (11.2)</td>
<td>09 (08.5)</td>
<td>21 (09.9)</td>
</tr>
<tr>
<td>16-30 Years</td>
<td>21 (19.6)</td>
<td>20 (18.9)</td>
<td>41 (19.2)</td>
</tr>
<tr>
<td>31 Plus Years</td>
<td>74 (69.2)</td>
<td>77 (72.6)</td>
<td>151 (70.9)</td>
</tr>
</tbody>
</table>
have endured during times of even less enlightenment than exists today, mothers may very well be one of the poorest choices available to acquire useful information about course choices, and females select mother almost twice as often as do boys. It should also be noted that the sources used by boys are much wider than those used by girls who are more limited to mother, friends, father and siblings in that order. Boys are more likely to also use aunts, uncles, grandparents, and other individuals in the community (See Table 18).

An examination of the differences between the "before" and "after" data for course selection information showed no reduction in the influence of mother, in fact at the mentored school there was an increase in the choice of mother as the person to talk to about course choices. It would appear that the family is a very influential source of information, even about issues educational, and a stirring of interest in educational courses resulted not in greater use of the educational system for information, but even greater use of mother.

Before accepting any of these suggestive findings, however, family type (nuclear, single parent, blended, other) and whether a father was present or not in the home was controlled for. It was possible that mother was being selected to talk to about course information simply because she was the only one available and that the findings would be entirely different in intact families. In fact, however,
Table 18

**Source of Course Selection Guidance - Before**

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Sex</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td>No One</td>
<td>12 (10.5)</td>
<td>07 (06.2)</td>
<td>19 (08.4)</td>
<td></td>
</tr>
<tr>
<td>School System</td>
<td>15 (13.2)</td>
<td>04 (03.5)</td>
<td>19 (08.4)</td>
<td></td>
</tr>
<tr>
<td>Grandparents</td>
<td>01 (00.9)</td>
<td>03 (02.7)</td>
<td>04 (01.8)</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>27 (23.7)</td>
<td>50 (44.2)</td>
<td>77 (33.9)</td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>06 (05.3)</td>
<td>11 (09.7)</td>
<td>17 (07.5)</td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>12 (10.5)</td>
<td>10 (08.8)</td>
<td>22 (09.7)</td>
<td></td>
</tr>
<tr>
<td>Friend</td>
<td>12 (10.5)</td>
<td>16 (14.2)</td>
<td>23 (12.3)</td>
<td></td>
</tr>
<tr>
<td>Aunt-Uncle</td>
<td>07 (06.1)</td>
<td>0 (0)</td>
<td>07 (03.1)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>22 (19.3)</td>
<td>12 (10.6)</td>
<td>34 (15.0)</td>
<td></td>
</tr>
</tbody>
</table>
when family type was used as a control, the data were not very different from what was found in the original table. In the nuclear family type, boys selected mother at a rate of 22.2% (compared to 23.7% in the original), and girls selected her at a rate of 36.9% (down slightly from 44.2%) in the "before" situation (See Table 19). In the "after" period boys were at 26.0% and girls at 42.6%, the increase reflecting the mentored girls' greater use of mother for this information. For the single parent family type, the percentages of use of mother were indeed higher—boys at 40.0% and girls at 62.1% but the nature of the overall finding was not changed (See Table 20). In the blended family type, the selection of mother was still high for females at 38.9% and an interesting occurrence for males was a substantial increase in the percentage who selected "no-one" from whom to obtain course information (See Table 21). For example, in the "before" period for blended families, 21.4% of the males talked to "no-one" about course information and in the "after" period for single parent families, fully 24.0% of the males selected "no-one". The only significant person for them was mother. So, while we were able to point out that overall males seemed to have a more balanced, broader source of information providers than females, the same was not the case in single parent and blended families. Although it was not the purpose of this particular piece of research to investigate the impact of separation, divorce and reconstituted families on children,
Table 19

Source of Course Selection Guidance By Nuclear Family - Before.

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>No One</td>
<td>06 (08.3)</td>
<td>03 (04.6)</td>
<td>09 (06.6)</td>
</tr>
<tr>
<td>School System</td>
<td>10 (13.9)</td>
<td>04 (06.2)</td>
<td>14 (10.2)</td>
</tr>
<tr>
<td>Grandparents</td>
<td>0 (0)</td>
<td>01 (01.5)</td>
<td>01 (00.7)</td>
</tr>
<tr>
<td>Mother</td>
<td>16 (22.2)</td>
<td>24 (36.9)</td>
<td>40 (29.2)</td>
</tr>
<tr>
<td>Father</td>
<td>04 (05.6)</td>
<td>08 (12.3)</td>
<td>12 (08.8)</td>
</tr>
<tr>
<td>Siblings</td>
<td>07 (09.7)</td>
<td>06 (09.2)</td>
<td>13 (09.5)</td>
</tr>
<tr>
<td>Friend</td>
<td>07 (09.7)</td>
<td>09 (03.8)</td>
<td>16 (11.7)</td>
</tr>
<tr>
<td>Aunt-Uncle</td>
<td>04 (05.6)</td>
<td>0 (0)</td>
<td>04 (02.9)</td>
</tr>
<tr>
<td>Other</td>
<td>18 (25.0)</td>
<td>10 (15.4)</td>
<td>28 (20.4)</td>
</tr>
</tbody>
</table>
Table 20

Source of Course Selection Guidance By Single Parent Family - Before.

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>No One</td>
<td>03 (12.0)</td>
<td>01 (03.4)</td>
<td>04 (07.4)</td>
</tr>
<tr>
<td>School System</td>
<td>03 (12.0)</td>
<td>0 ( 0 )</td>
<td>03 (05.6)</td>
</tr>
<tr>
<td>Grandparents</td>
<td>0 ( 0 )</td>
<td>02 (06.9)</td>
<td>02 (03.7)</td>
</tr>
<tr>
<td>Mother</td>
<td>10 (40.0)</td>
<td>18 (62.1)</td>
<td>28 (51.9)</td>
</tr>
<tr>
<td>Father</td>
<td>0 ( 0 )</td>
<td>01 (03.4)</td>
<td>01 (01.9)</td>
</tr>
<tr>
<td>Siblings</td>
<td>03 (12.0)</td>
<td>02 (06.9)</td>
<td>05 (09.3)</td>
</tr>
<tr>
<td>Friend</td>
<td>05 (20.0)</td>
<td>04 (13.8)</td>
<td>09 (16.7)</td>
</tr>
<tr>
<td>Aunt-Uncle</td>
<td>01 (04.0)</td>
<td>0 ( 0 )</td>
<td>01 (01.9)</td>
</tr>
<tr>
<td>Other</td>
<td>0 ( 0 )</td>
<td>01 (03.4)</td>
<td>01 (01.9)</td>
</tr>
</tbody>
</table>
Table 21

**Source of Course Selection Guidance By Blended Family**

- Before.

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>No One</td>
<td>03 (21.4)</td>
<td>03 (16.7)</td>
<td>06 (18.8)</td>
</tr>
<tr>
<td>School System</td>
<td>02 (14.3)</td>
<td>0 ( 0 )</td>
<td>02 (06.3)</td>
</tr>
<tr>
<td>Grandparents</td>
<td>01 (07.1)</td>
<td>0 ( 0 )</td>
<td>01 (03.1)</td>
</tr>
<tr>
<td>Mother</td>
<td>01 (07.1)</td>
<td>07 (38.9)</td>
<td>08 (25.0)</td>
</tr>
<tr>
<td>Father</td>
<td>02 (14.3)</td>
<td>02 (11.1)</td>
<td>04 (12.5)</td>
</tr>
<tr>
<td>Siblings</td>
<td>01 (07.1)</td>
<td>02 (11.1)</td>
<td>03 (09.4)</td>
</tr>
<tr>
<td>Friend</td>
<td>0 ( 0 )</td>
<td>03 (16.7)</td>
<td>03 (09.4)</td>
</tr>
<tr>
<td>Aunt-Uncle</td>
<td>01 (07.1)</td>
<td>0 ( 0 )</td>
<td>01 (03.1)</td>
</tr>
<tr>
<td>Other</td>
<td>03 (21.4)</td>
<td>01 (05.6)</td>
<td>04 (12.5)</td>
</tr>
</tbody>
</table>
these data are suggestive that such circumstances may play more havoc with the world of male children than female children.

It should be noted that when the variable of "father living in the home" was used as a control, the data configurations were very similar to the findings when family type was used as a control. Mother was still the preferred source of information whether father was present or not and males increasingly selected "no-one" for information when father was not present.

It might be expected that, given the traditional courses of study selected by females and males in high school and post-secondary education that there would be substantial differences between males and females with respect to courses of study most enjoyed. For these Grade 7 and 8 students, however, there were no real differences between the sexes in their reports on subjects they most enjoyed; and, surprisingly, math and science were at the top of the list for both boys and girls. The only substantial difference between the sexes occurred in preferences for physical education (gym) where boys outnumbered the girls by a wide margin. Another small anomaly occurred at one school where the popularity of a particular history teacher put history at or near the top of the selection list for both males and females.

With respect to those subjects which students suggested they least liked in school, fewer instances and subjects
were reported in this negative fashion than were reported positively. From those instances where there was reporting, it would appear that students are likely to enjoy science and math a great deal or not at all, since math and science topped the list of subjects both liked and disliked. There were no differences, however, between males and females in this respect. The one subject which appeared to be disliked much more than it was liked by both sexes is French.

In relationship to the foregoing, the data on those things students most like to do in their spare time fit well with their reports on subjects most enjoyed. While males enjoyed physical education classes, sports topped the list for spare time activities, followed by watching television. For the most part, the girls were dissimilar in their spare time selections, although at the mentored school, sports was the activity of choice for the females as well. Females did, however, read a great deal; in fact, at Schools B and C it was the most often identified spare time activity and it was second at the mentored school. Females, as well, saw television as an enjoyable activity, but not nearly as often as boys.

There is no question that the educational system has become very concerned with linking school studies with possible careers. Career days and weeks are a regular feature in school board planning and every school carries information about the relationship between courses of study and available careers. When students were asked to identify
those they sought out for guidance about future careers, however, we saw a data distribution remarkably similar to that just discussed regarding information sources for course selection. Mother, again, was the preferred choice overall with 25.4% of the males and 39.8% of the females choosing her. Only 5.3% of the males and females selected the school system (See Table 22). Father is selected slightly more often in the area of careers than he was concerning course selection, in fact at a rate of approximately 19% for both males and females at the end of this project. The distribution of data with respect to family type and whether father was present or not was substantially the same as it was for course selection. All the relationships hold with a slightly higher selection of mother in single parent homes and when father was not present and again a rather alarming increase in the selection of "no-one" for males when father was not available.

In keeping with traditional role and course allocations in the school system, one might still expect some differences between males and females with respect to the number of math courses that students expected to take in high school. There were, in fact, no differences between males and females, almost 50% of both sexes expected to take five or more math courses in high school; the mentoring/workshop experiences did not change those findings very much. There is a significant difference between the sexes with respect to the level of math anticipated for high
Table 22

Source of Career Selection Guidance - Before

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Sex</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td>No One</td>
<td>15 (13.2)</td>
<td>09 (08.0)</td>
<td>24 (10.6)</td>
<td></td>
</tr>
<tr>
<td>School System</td>
<td>06 (05.3)</td>
<td>06 (05.3)</td>
<td>12 (05.3)</td>
<td></td>
</tr>
<tr>
<td>Grandparents</td>
<td>03 (02.6)</td>
<td>04 (03.5)</td>
<td>07 (03.1)</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>29 (25.4)</td>
<td>45 (39.8)</td>
<td>74 (32.6)</td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>14 (12.3)</td>
<td>15 (13.3)</td>
<td>29 (12.8)</td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>13 (11.4)</td>
<td>05 (04.4)</td>
<td>18 (07.9)</td>
<td></td>
</tr>
<tr>
<td>Friend</td>
<td>10 (08.8)</td>
<td>09 (08.0)</td>
<td>19 (08.4)</td>
<td></td>
</tr>
<tr>
<td>Aunt-Uncle</td>
<td>08 (07.0)</td>
<td>05 (04.4)</td>
<td>13 (05.7)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>16 (14.0)</td>
<td>15 (13.3)</td>
<td>31 (13.7)</td>
<td></td>
</tr>
</tbody>
</table>
school with girls much more than boys selecting higher levels of math (\(\tau_c = .27, p \leq .01\)) (See Table 23). It may very well be that girls are receiving the message about the importance of math very clearly and that the difference is explained in this way.

With science courses, as well, there was very little difference between males and females as 30% of the males and 23% of the females expected to take six or more courses in high school. This "before" period measurement shifted slightly at the end of the program to 30% boys and 29% girls but does not represent a statistically significant change. The school which received only the workshops saw a shift in percentage for females from 28% to 43% from the "before" to the "after" periods. As well, the mentored school saw females move from 10% of the girls taking a full eight science courses to 24.2% after mentoring had taken place. The overall differences between the sexes, however, are not very high with respect to expectations about taking science courses in high school.

The males and females differed significantly from one another, however, with respect to the level of science courses they expected to take in high school, very similar in fact to the differences observed in math. In the "before" period (\(\tau_c = .22, p \leq .01\)) and in the after period (\(\tau_c = .28, p \leq .01\)) fully 62.6% of the females expected to take advanced level science compared to 34.3% of the males (See Tables 24 and 25). Clearly, the old
<table>
<thead>
<tr>
<th>Subject Level</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>15 (13.0)</td>
<td>5 (04.4)</td>
<td>20 (08.8)</td>
</tr>
<tr>
<td>General</td>
<td>49 (42.6)</td>
<td>29 (25.7)</td>
<td>78 (34.2)</td>
</tr>
<tr>
<td>Advanced</td>
<td>51 (44.3)</td>
<td>79 (69.9)</td>
<td>130 (57.0)</td>
</tr>
</tbody>
</table>
Table 24

**Level of Science Male and Female Students Anticipate Enrolling In - Before**

<table>
<thead>
<tr>
<th>Subject Level</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>16 (14.0)</td>
<td>11 (09.7)</td>
<td>27 (11.9)</td>
</tr>
<tr>
<td>General</td>
<td>50 (43.9)</td>
<td>29 (25.7)</td>
<td>79 (34.8)</td>
</tr>
<tr>
<td>Advanced</td>
<td>48 (42.1)</td>
<td>73 (64.6)</td>
<td>121 (53.3)</td>
</tr>
</tbody>
</table>
Table 25

Level of Science Male and Female Students Anticipate Enrolling In - After

<table>
<thead>
<tr>
<th>Subject Level</th>
<th>Male</th>
<th>Female</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>18 (17.1)</td>
<td>12 (10.4)</td>
<td>30 (13.6)</td>
</tr>
<tr>
<td>General</td>
<td>51 (48.6)</td>
<td>31 (27.0)</td>
<td>82 (37.3)</td>
</tr>
<tr>
<td>Advanced</td>
<td>36 (34.3)</td>
<td>72 (62.6)</td>
<td>108 (49.1)</td>
</tr>
</tbody>
</table>
stereotypes about not being able to handle math and science are not internalized by this group of female students in Grades 7 and 8. Time will tell whether this perception of manageability and the reality of no differences between the sexes will translate into equality of performance and completion in the high school years and beyond.

When students were asked if anyone has specifically encouraged them to continue their studies in math and science, about two-thirds of both males and females reported that someone had. There are again no real differences between males and females. With respect to who provided the encouragement to continue studies in math and science there were also no significant differences between the sexes, however the importance of the family was compellingly identified in the data where about two-thirds of the support was identified as coming from family members. The school system, by comparison, was identified in only about 12% of the cases.

Students were also asked if they had been pressured by anyone not to take further courses in math or science. Very few identified this kind of pressure, only eight males and four females and most of those felt the pressure from themselves, not others. The vast majority of students then, both male and female, received either encouragement to continue math and science studies or those around them were neutral.
With respect to general encouragement to continue their education after completing high school, both boys and girls received considerable encouragement but there were small differences, 68.7% for males and 80.4% for females, ($\bar{p} = .13, p \leq .05$). When they were asked who provides this encouragement, about three-quarters of the males and females reported that it came from their families. Almost no-one identified the school system as the source. The 6% of males and females who report pressures not to continue after high school suggested the pressures were self-induced, very similar to the answers with respect to pressures not to continue in math and science courses.

The students were asked to project themselves 10 and 20 years into the future to imagine what they would be doing at those times with respect to school, work, marriage, children, etc. Such projections for 13 and 14 year olds may be rather tenuous but do provide some sense of their perceptions of where they expect to fit in society in the long run. In the "before" period, 44.6% of the males and 58.9% of the females expected to be in school in ten years. Four months later, those figures have shifted to 35.8% and 47.8% respectively and the shift downward in two of the schools was more dramatic even than that. Either some level of reality attached to maturation was becoming dominant or 10 years is perceived to be an incredibly long period of projection for a Grade 7 or 8 student and therefore unstable. Their perceptions about whether they would be
married were a little more stable with 39.5% and 29.5% of the boys and girls, respectively, answering in the affirmative in the "before" period shifting to 40.6% and 35.7% in the "after" period, but even this stability masked some erratic shifts in the various schools. Whether they will be parents or not was subject to the least change with figures varying between 13% and 17% responding positively within 10 years for both sexes.

Approximately 30% of the males and females expected to be single in 10 years. This, of course, leaves between 30% and 35% neither single nor married at 23 or 24 years of age. Approximately 37% of boys and girls expected to be working in 10 years which means 10% of the boys were unaccounted for, who were neither working nor going to school. What they actually selected was the category "other" in which they indicated an expectation that they will play professional sports--the level of unreality continues.

Only one male and four females anticipated being homemakers in 10 years, figures which represent 1% and 3.5% of the sample totals. By the "after" period, only two females expected to be homemakers. The concept of "happy homemaker" indeed appears to have been rejected by this particular sample which is consistent with the findings in a recent study of Canadian adolescents, What Will Tomorrow Bring? (Baker, 1985).

In 20 years, most of those presently in Grade 7 and 8 did not anticipate being in school, while 40% of the males
and 60% of the females expected to be parents. Approximately 70% of both males and females planned to be married at the ages of 33 or 34 while 10% of the males and 14% of the females planned to be single. The percentage of those who expected neither to be married nor single had at least declined in the 20-year period from the 10-year period. The figures for those who would "have a job" in 20 years were, in some senses, inexplicable. In the "before" period, 62% of the boys and 70% of the girls expected to have a job in 20 years. In the "after" period, 76% of the girls and only 50% of the boys expected to have a job. The male figure is inconsistent with their previous response to the question "How many years do you plan to work". This further suggests that the long-term projections by these students must be very cautiously interpreted. Consistency is maintained in one area, however, only 8% of the females planned to be homemakers in 20 years time.

A question which attempted to elicit information on projected lifestyle in 20 years provided feedback which identified an exceedingly materialistic cohort of young people. Recognizing that these long-term projections may be haphazard wish lists rather than rational expectations, they may, in reality, reflect the expectations of youngsters consistently exposed to a society which suggests, "If you want it you can have it." Ten percent of males and females expected to own an apartment; 82.1% of males and 88.5% of females, a house and 52.7% males and 46% females, a cottage.
In addition, 83.9% of the boys and 91.2% of the girls will have a car and 51.8% and 31.9%, respectively, a boat. Almost half of both sexes expect to travel and many of the students listed a wide variety of additional possessions such as horses, ranches, trailers, etc. Some simply suggested that they expected to be "rich". While males and females appeared to be equally materialistic, there were some traditional differences between them with respect to whose money was going to pay for all these items. Approximately 55% of the males and 34% of the females expected their own earnings would pay for the purchases, while 40% of the boys and 60% of the girls suggested joint earnings (spouse and self) would be used. Females were still more attached to the notion of a partner's responsibilities than were males.

A final question attempted to determine how they expected to maintain both work and family life. The male and female response categories (in an open-ended question) were very similar with about 15% of both sexes remaining single and 3% getting married but having no children. For those who were planning to marry and have children, some real differences appeared between the sexes. Six percent of the boys and 20% of the girls mentioned child care/day care, none of the boys and 18% of the girls suggested they will interrupt their work careers, and 30% of the girls and 67% of the boys did not even mention how they will deal with the duality of work and family responsibilities with regards to
caring for children. The boys continue to be a reflection of a society which focuses upon the importance of a career for men, familial responsibilities being a very remote concern.
CHAPTER V

A Qualitative Analysis of the Interaction Process

Upon examining the log books from the university mentors and protégées, it was learned that all of the protégée/university mentor interactions included visits to the University of Windsor campus, which, as might have been expected, was the place of first contact. All students were exposed to the campus generally with many protégées spending time in classrooms during lectures and attending labs, while others had the additional experience of seeing their university mentors in the role of teaching or lab assistant. Other campus experiences included the university libraries, the used book sale, student election campaigns and voting, secondary school liaison, Human Kinetics facilities as well as many other buildings, depending upon where their particular university mentor happened to have classes and offices. The elementary school students were often seen having lunch at the Grand Marketplace, sharing conversation and meeting other students who were friends and classmates of their university mentors.

Much of the protégée/university mentor interaction also took place off campus during leisure hours. Several university mentors took their protégées with them to their dorms, apartments or family homes where they met a variety of significant others. They also shared aerobics classes, roller and ice skating, movies and trips to Devonshire Mall.
The restaurants in the immediate area as well as those downtown afforded them an opportunity to have lunch or dinner together, talk and share friends. Several protégées invited their university mentors to their homes to see their rooms and meet their families as well as to their school for special events such as the science fair and sports events (this occurred only when the elementary school student was playing on a team). Other outings included the Art Gallery, Ice Capades, University sporting events, Full Circle Theatre at the Faculty of Education, canoeing and a picnic at Point Pelee. Some went swimming at the University pool, participated in the Cardiac Exercise Program and played wheelchair basketball with a disabled team, the Windsor Bulldogs. Others went to the market or spent an afternoon at Art in the Park.

The setting for the interaction with the protégées and their community mentors however was primarily within the workplace, though many of the community mentors did expand the setting to include meeting significant others such as boyfriends or spouses and children and welcoming the elementary school student to their homes. There was a great deal of networking, both within the particular occupation, and also related jobs, as well as with friends, both male and female, who were involved in other non-traditional pursuits. Several community mentors took their protégées out for lunch and dinner and some went shopping with colleagues and friends. Many went to formal occasions which
included the Woman of the Year Banquet, the Women’s Economic Forum Dinner Meeting and a dinner for new Canadians at Lambton College, Sarnia.

The students involved in the program had unique first hand experiences of the workplace as well as establishing a relationship within which they were comfortable asking questions and receiving information. Some of the typical interactions experienced included attending actual court trials and being asked to evaluate and discuss the outcome; being involved in television and radio broadcasts and being televised themselves; picking up stray or injured animals, learning to care for them and helping with surgical procedures; accompanying a police officer on night shift and exploring the workings of the police station; learning about running a business both as a manager and an entrepreneur; using a computer, both in the factory setting with robots and in office work, and one student, with much trepidation, flew a small plane—and wanted to do it again!

Within these settings, the community mentor made herself and her workplace accessible and visible so that the student became aware that women can, in fact, be successful in a non-traditional occupation. Many succeeded in expanding the relationship even more fully whereby a friendly, personal interaction evolved within which the protégée found stimulation, interest in her abilities and encouragement to talk about and explore opportunities for her future.
The most compelling, detailed data in the log books were provided by the university mentors. It was obvious from the first report to the last that much of the information for this project as to the "meaning" of the interactions for the actors would be gleaned from the university mentors. The community mentors also provided insights but they were, for the most part, much more factual and succinct, possibly a reflection of their busy schedules and the lack of available time for this type of reporting. Many of the elementary school students were not able to articulate well and suggested that "writing it down did not really capture what happens" or "I can't describe in words what it was like" even "By the time I go to write down all that we talked about and what we did, I can't remember". Students at this age are basically oral and thereby the reporting in their log books was more factual than an expression of meaningfulness. Expressions such as "I loved it", "It was neat", "I would participate in another program like this in a minute if I had the chance", or "I don't want this to end," were very typical responses in terms of what the experience meant to them. Therefore, many of the perceptions and much of the meaning from the elementary students themselves came from verbal feedback during visits to the school and during transport to and from their community mentor's workplace.

While most of the ideas expressed in this chapter are gleaned from qualitative material, some use is made of the
numerical data from the "before" and "after" questionnaires to supplement this information. What, then, do the data from the log books and the quantitative material initially reflect about the realities, perceptions, ideas and influences pertaining to educational and occupational goals of these 13 and 14-year-old girls in the experimental group?

First, it is apparent that most of the women with whom they ordinarily came in contact were employed in traditional occupations. In the experimental group, only 19 of the girls actually knew any women in non-traditional areas, and of these 19, just eight knew three or more. Of those girls who indicate that they knew women in non-traditional occupations over 50% had come to know them through their own families while the remainder knew them through friends. Very few felt that they had come to know any through their school and the data indicates that the school bus driver probably accounts for most of these. None chose church, or their part-time job as a place where they had met women in non-traditional occupations. In addition, most 13 and 14-year-old girls felt that in terms of their own future career choices, these women had a negative influence. For example, when the 19 girls who knew women in non-traditional occupations were asked to indicate what kind of influence these women had on their own career aspirations, five indicated that the influence had been positive while 14 suggested a negative influence. The positive influences included statements such as "I would like to be a _______
like her" or "She showed me how interesting a job like that could be". The negative responses suggested: "Her job is noisy", "I wouldn’t like a job like hers", "Her job seems boring and repetitious to me."

Just under two-thirds of the girls in the experimental group indicate that they thought that there was discrimination against women in the work force. When asked to elaborate, they suggested that women are disadvantaged because they receive less money, different benefits, lower rank, fewer promotions. However, the majority response was that "most men think they are better than women" and "men think women can’t do the job so they won’t give them a chance." It appears that young females in Grade 7 and 8 are generally very well aware of the discriminatory nature of the workplace for women.

Examination of the logbooks shows a continuous thread of enthusiasm for post secondary education from the beginning to the end of the mentoring study. Many of them expressed an "I can’t wait to go to University" attitude because they were "bored" with their present school situation while others saw it as a continuation of the process in which they were presently involved. It became evident, as the study progressed, that many of the experimental group were ill informed and, in fact, some knew almost nothing about available programs of study or the post secondary educational process. However, they clearly knew
that whatever it entailed it was important for their futures, particularly in terms of getting a good job.

Information from the logs suggested that of the 33 13 and 14-year-old females in the experimental group, only five had ever been exposed in any meaningful way to the university campus. Data from the questionnaires also suggested that 36.3% of the girls expected to obtain Ph.D.'s and 12.4% expected to reach the Masters level. It appears, therefore, reflecting on the actual percentage of high school students who attend university and the smaller number of those that become Ph.D.'s, that the expectations of these girls are based on an "education = job = $" type of formula and similarly "more education = better job = more$$", rather than any real understanding of post-secondary education. This was true, according to the data, in varying degrees. Some students were totally uninformed as to the relationship between some jobs and the level of education required as was realized by one university mentor who suggested, "I had to tell _ that you don't go to University to be a day care worker or a hairdresser--I never realized that girls her age wouldn't know that." Also, another of the grade school students "thought that enjoying working with children was enough of a pre-requisite for being a social worker. She said she thought you just had to be kind, want to help people and like kids." Others thought that if you wanted to be a teacher and teach physical education, for example, then you just studied that particular subject or similarly, if
you wanted to be a lawyer, you took subjects pertaining to law. This was commented on by a university mentor:

I took ___ to my class in children’s literature and she asked if this was what you learned in a university class. I tried to explain that you don’t always go to university just to learn things that enable you to get a job. That you are there to learn how to think things through and increase your knowledge of a variety of subjects. She commented that she thought that you took classes in university that teach practical things that would help with a future career.

Some students had no concept of education and where it fit on life’s continuum. For example, one university mentor wrote about her protégée’s understanding: "___ has no conception of age and being in school. She thinks that once you are 22, everything is in place and life is great!"

Logbook data indicate that many of the students carry around misinformation about careers and the workplace. They suggest that the information they have comes from parents, television, books and from their own ideas. It should be remembered that the primary impetus for participating in this program was to find out what being a university student and having a job in a non-traditional area was really like. Many suggested that they knew they carried around erroneous information, for example, "This will help me see what being a university student and having a job like being a lawyer is really like because what I know I got from T.V. and I know that isn’t true." Others did not, such as one elementary school student who said, "I’m interested in being a
kindergarten teacher or a secretary so that I can work in a
nice place and wear nice clothes and suits." Others were
limited by their own expectations, such as one elementary
school participant who said she was interested in being a
secretary, a nurse or a hairdresser "because those are the
only jobz I know about." A similar observation was made by
a community mentor regarding her young protégée:

___ has mixed feelings about her own potential
(personal and as a female). She thinks it might
be interesting to be a scientist but suggested
that women should not be doctors or mechanics.

Still other elementary females articulated that the fault
lay with the professional women themselves,

We talked about the role some females play--the
ones that are in high [statuses] or uncommon roles
for females. I don't think that they come across
as they should to the public so the public can't
learn about them. That's the reason why I think
it is neat to be involved in this program so that
I have a chance to actually meet someone.

One of the community mentors reiterated this idea and
acknowledged that this problem exists and needs to be
continuously addressed:

It always surprises me that despite the media,
open houses, and changes in education, most young
people still imagine industrial environments to be
something from Oliver Twist! Clearly we do need
to keep our efforts going.

Pertinent to this was the pervasive influence of the
family, regardless of its form, (nuclear, single-parent,
blended, other) or whether it was consistent with or alienated from the values, ideas and attitudes regarding education and careers held by the young females in the experimental group. Even more interesting was the fact that mother as role model and advisor was seen to be most important of all. For example, in terms of role models generally, the following were typical: "__ told me she wants to be a secretary and follow in the "footsteps of her mother"; "__ said she considers her mother a role model, would like to be like her and confides in her. She didn't go to college or university but she has a good job in an office"; "__ aspires to be a secretary like her Mom but might like to go to university sometime"; "__ is a nice child but has a poor view of her abilities.....We talked about what she is good at and what she likes but she expects to be a waitress--like her Mom"; "__ said she was interested in being a secretary, a nurse or a hairdresser because 'those are the only jobs I know about.'"

Some protégées had particularly positive career role models, within their family, for example a community mentor commented on her elementary school student:

I learned from __ that she had a person in her family, an aunt, that is a doctor, and this is very important to her to see someone who has advanced themselves because it builds her confidence. Even if she never has to go to her for advice, she always knows someone is there for her.
Meanwhile, other family role models reflected a particularly negative flavour. The following was recorded by a university mentor:

by virtue of her home environment, single parent, mother a hairdresser (and yells in front of "company" at the children) does not receive any stimulation, encouragement and resulting motivating behaviour to do well in school--to improve on her life. The whole situation is discouraging and perhaps __, in grade 7 is already doomed to follow in her mother's footsteps.

Educational goals, as well, seem to take root and either flourish or wither depending on whether or not they were nourished within the family unit. Many students' experiences were typical of the following, recording by a university mentor:

__ parent's seem very supportive and loving. Her mother thinks she should go into the most advanced level at high school and her Dad told her she should go to Assumption because he thinks it's the best academically.....Her mom grounded her for going somewhere else when she said she was going to the show.... her Dad lets her help him fix the car.

Others have a different experience, also described by a university mentor:

Her parents seem to be hard working people but it is very obvious that they are struggling to get by both financially and emotionally. They do encourage the children to stay in school but not with the reasons of self gratification but rather "As long as you live under my roof there will be no dropping out of school".
or, as described by a protégée, "No-one in my family finished high school so there is no one to ask 'is this normal', 'how do I do this?'"

While the influence of family members was continually evident, this particular group of students never mentioned their school programs or teachers as a source of information or guidance for future educational or career choices throughout the entire study period. This does not mean that guidance programs and career awareness were not part of the curriculum but that students did not perceive them as being influential. It would seem, also, that ideas pertaining to male/female relationships were based predominantly on their own familial experiences rather than the school system's efforts in the area of equity or on their own personal convictions. Several of the girls were quite equalitarian in their views based on what they saw happening with their own parents. For example, one university mentor commented: "... is sensitive to the issue of the multiple responsibilities of a woman with a career and with a family because both of her parents work," while another stated "... comes from a single parent family where her mother has a career and I believe she could identify with the fact that females could hold responsible positions as well as manage a family." On the other hand, there were those who had firmly entrenched the idea of the traditional role of the female, such as a student described by her community mentor:
___, who I found very mature for her age holds very stereotypical views. She really thinks that a wife should stay home and have children because that is the way her family does it and it is best that way.

Also, another young female who expressed enjoyment and interest in the first workshop which dealt primarily with home/work management, was quite adamant that her future would not include having to find a balance because she would definitely not work until her children were in school and only then if it was "okay" with her husband. There were also those whose familial experience had closed their minds to ideas of sharing and equality, such as

___, who has a boyfriend which appears to be a contradiction of her earlier statement that there were going to be no special men in her life as they 'expect everything to be done for them.' We discussed the idea that there were men who did equal shares of the work and accepted equal share of the responsibility, however she said she didn't believe this because her dad was denying his own children so as not to have to pay child support and he let his girlfriend dictate that she [his daughter] is not allowed to talk to him.

It was very apparent from these data that the family, once again, was the dominant influence on how these young females perceived the pattern of their future relationships with significant males.

On a day to day basis, we are all bombarded with advertising messages from the media on things--things to make the quality of our life somehow better. It is very obvious that this message is coming through to these young females--they expect to have, in the future, not only a
house and car, but the majority also expect to have a boat, summer cottage, travel and own horses, trailers, and just "be rich"! There is a disquieting theme running through much of the commentary that seems to equate both relationships with others and one's self image to the quest for things. This is illustrated by one mentor's observation that "-- talks about people in terms of their generosity to her. She commented that she was successful in manipulating her brothers for material gain and that a positive relationship with them involved what they gave her." Others see family members as having a job that is important for the "things" it provides such as an expensive car. As one university mentor recorded:

Her aunts and her mother, to whom she is close, do not have university educations, but both have good jobs in the clerical/secretarial line. This interests __ because they "have good jobs and make plenty of money to spend on their wardrobes."

More oriented towards the future, some girls are like

__ who doesn't want a husband or marriage, doesn't want to spend much time at career preparation, on the other hand she likes the things they can buy and likes people who give her things. She plans a lifestyle for herself, which will include a large house and a nice car but has no clear plans on how to achieve all this.

Another young female with similar goals, talked with her community mentor about her family and three of her future goals:
"definitely a Camaro, a husband and a big house". I found this interesting since both her parents are not working—"you know how hard it is to find a job"—and her older brother and sister (17 and 18) who are not in school are working to support the family.

It appeared in some of the commentary that there existed a dominant value system based on an abundance of material goods that some students accepted as a given with no association of good or bad, right or wrong. Such was the case following, described by a university mentor:

During our interaction, I noticed _always had money for activities, treats and lunch (I’m a brown bagger) and we had a conversation about where the money came from—-it seems that it came from her Mom. We then discussed the fact that she gets birthday money from her grandmother and at Christmas she got over 50 presents. I told her that there were eight of us in our family and I don’t think there were 50 presents altogether under our tree. It seems like we are both trying to make a statement—-just that our values are different from each other.

Alternately, some students associate the having of material things with their own self esteem:

_ appears to have a problem with comparing herself to others in her peer group who she considers "rich" and who have nice things and go to expensive places. The importance of money seems to overshadow the importance of a positive self-image and interpersonal interactions—-it is frustrating for her and we discussed the reality of the difference in economic backgrounds.

It was interesting to note that one of the community mentors commented on the materialistic attitude in reference to her willingness to participate in the program, "I enjoy
young people and their dreams in these difficult social times. I believe they need our time rather than materialistic items to get ahead."

Now that we have examined, through the eyes of the participants, the existing values and attitudes that influence their future educational and career choices and those individuals and structures that impact upon them, we need to determine if the mentoring program in which they were involved did, in fact, effect change and if so, how and why did this occur.

Primarily, this program increased the participants' knowledge of women in non-traditional occupations, and altered perceptions of their influence from negative to positive ones. It kindled interest and provided information as to the variety and availability of non-traditional careers and expanded the mentored students' own educational and occupational goals. Also, it widened their awareness of the educational process involved in preparation for non-traditional careers and as well appeared to help them understand more definitively the discrimination that exists for women in the workforce. Finally, the experience appears to have conveyed a philosophy of mentoring as a framework for their own future.

As suggested previously, to be able to interact with females in non-traditional educational fields as well as non-traditional occupations in the community was the original impetus for the young female to participate in the
mentoring program and it was expected that this experience would increase knowledge of such women. However, through the process of networking initiated by the community women involved, many students had the opportunity to interact with a greater number than originally anticipated. As a result of this increased exposure, there was a corresponding awareness of the variety and types of non-traditional jobs available. For example, one protégée who was mentored by a community legal worker had the opportunity to participate in taping a show for Cable T.V. and therefore met technicians, a camerawoman, other Cable T.V. personnel as well as a computer operator and her mentor’s colleagues. Another young female was paired with a flight service specialist for Transport Canada and also interacted with a pilot, air traffic controllers, firefighters and several other Flight Service Personnel. Still another student was mentored by a Material Systems Manager at Chrysler who introduced her to several female employees in other managerial positions. In fact, they also took the time to write a separate log as to the interaction they had individually with the student. These included a plant manager at the Pillette Rd. Plant, a Communication Analyst at the Windsor Assembly Plant, and an Environmental Analyst. The community mentor commented that "she had wanted to give __ a heightened awareness that there are pleasant and possible work experiences to attain." The "Woman of the Year" banquet, held in April gave several of the community mentors the opportunity to introduce their
protégées to many successful career women. One student reported this highly successful evening as follows:

I met Dr. Olga Crocker who advised me that business was a good area to go into. Carol Libby advised me to take math and computers and keep my options open. Dr. Pam Milne and Dr. Ed Crowley said I should stay in school and so did Janet Green-Potomski. I enjoyed having the opportunity to meet these people because they talked to me and asked me questions. Even the Hon. Herb Gray sat with us and asked me about the program I was in.

Not only were the young females exposed to a variety of career options, but the experience gave them a more realistic view of what particular jobs entailed. For example, one student explained: "T.V. makes the job of being a police woman always exciting but I found out that there is a lot of boring stuff that they have to do." Another had a similar perspective about law.

[her community mentor, a lawyer] was G.R.E.A.T!! I'm not so sure if I still want to be a lawyer because there is a lot more to it than I expected. Maybe I'll be a cop [student toured the police station on her second day with her community mentor]. A lawyer is still a possibility but not as strong a possibility as before.

Still another said:

The most important thing about being with her and learning about her career was the value of a career like this to society. You can tell that she enjoys her work helping people but the fact is that she cares about them as well.

When asked to explain in what way meeting particular women in non-traditional areas had influenced them regarding
their own career choices, we found in the "before" situation that of the 19 reporting being influenced, 14 suggested that this influence was negative. When we looked at the responses in the "after" situation, we found that there was a tremendous change. Of the 23 now reporting being influenced, only 5 reported the influence to be negative and 18 thought the influence to be of a positive nature. Among the negative responses, were "I wouldn't like that job" or "I would rather choose something different." The positive responses included: "She makes me feel I can do what I want with my life", "I'd love to do a job like that", "She taught me to know what my limits are and go beyond them", and "She showed me a lot about what it is like to work in the real world." In comparison, School B reported the influence of women they knew in non-traditional areas as being four of 11 positive and seven, negative. In the "after" situation, the results were similar with three of nine positive and six negative. School C showed little change in the "before" and "after" situation with 14 of 29 positives in the "before" and 16 of 29 in the "after". There is quite clearly a relationship between the mentoring program at School A and the increase in the positive influence that the women in non-traditional occupations had on the individuals in the program.

In initiating this study, it was hoped that one of the results would be to expand generally the career goals of these young females by exposing them to a variety of
options. The mentoring program appears to have successfully accomplished this. One student, for example, suggested that "I always wanted to be a secretary but I found out how many kinds of secretaries there are and that there are ways to work your way up to the top jobs if you learn about computers too." Another, who initially wanted "just to work with animals", maintained that interest over the study period but learned so much from her community mentor, a veterinarian, that her university mentor, a biology major, expressed her own envy at the variety of experiences her protégée had had and wished she could have been included:

____ told me about the facilities there and how she was able to handle and care for the animals. She was taken to a downtown vet's office where she observed two dog spayings while the surgeon told her what he was doing. I think it was an excellent opportunity for a young girl with aspirations such as hers. I must say, I would love to have experienced that myself at her age— even now for that matter!

Yet another protégée who initially had aspirations toward being a bank teller had decided at the end of the mentoring program that: "I might want to still be a teller but I also might work towards being a manager." There were several students who were quite committed to a particular career goal at the outset but were prepared to reconsider their options after an in-depth interaction with their particular community mentor. For example, one young female wanted very much to be a veterinarian but had not realized she would be exposed to abuse and neglect of animals by the
public and, therefore, thought she might consider pursuing a career in law. Another appeared to be committed to a particular vocation to such a degree that the community mentor commented in her logbook:

It seems to me that ____'s mind is all made up about being in ballet. It's like talking to someone who's already in that field. She's single minded about it. I got the feeling that she's really not even considering that she might end up doing something else....But here's an observation: I was the same way when I was thirteen. I knew exactly what I was going to be, and was already picking out correct high school courses in order to be what I wanted to be. In university I changed my goal!

Approximately six months after the end of the mentoring program, on January 31, 1989, this particular student was featured in a local publication, Neighborhood News Magazine, in an article regarding an in-school radio station she was touted as one of the "budding broadcasters, acting as a disc jockey, introducing songs, talking about current events and promoting school events." Interestingly, her community mentor had been an announcer with the Canadian Broadcasting Corporation.

Additionally, there was an increased awareness of the educational process for preparation for non-traditional careers, and also of the wholistic nature of the university experience noted in the examination of the logbooks. This was quite succinctly recounted by one student who wrote:

I got to see the university from not just the academic point of view but also the social and
getting along with parents and going into the real world to find a place to live, handling roommates you may not get along with and juggling bills and taxes.

In addition, many of the students were surprised at the variety of courses one takes for a particular degree and the flexibility of the programs. For example, one student "asked one of the men who was a friend of _ at the law school what classes he liked best and he said that his favourite was ballroom dancing!" Another common misconception was that getting a degree in teaching was learning how to teach and several girls had not thought through just what they thought they would like to teach. One commented, "I thought I had better see what things I liked and what I got good grades in--it makes doing well in school seem more important now." They commented on the variety of countries represented on campus and most commonly on the fact that the students were friendly, talked about the same things and had similar concerns to themselves: "_ was surprised that people who go to university are just like herself--only older!" Needless to say, some of the negative traits of university life were recognized and commented on as well, i.e. the 'language', smoking and untidiness in the eating area.

One of the areas in which we saw a marked increase in the experimental group only was in the perception of discrimination against women in the workforce. Not only did we see an increase in awareness, but we also saw a more
refined definition of exactly what discrimination entails. For example as previously discussed, the girls were initially aware of discrimination against women, however their knowledge was of a very general nature. After the mentoring experience types of discrimination recorded at School A doubled. Common illustrations were: "men are hired just because they are men--the old boy network", "men think women are not as qualified as men for "men's jobs", "women get paid 67 cents for every dollar that a man earns", "women get hired to do the lower, rotten jobs and don't get any respect." Several comments by the students indicated that this increased awareness was likely due to the exposure the students had received while interacting with their community mentors. For example,

___ was very nice and very straightforward about her career and some of the ups and downs of being a female lawyer. She told me about the good and the bad things, for example about a judge who didn't like her because she was a female so she felt that whenever she had a case in front of him that she didn't have a great chance.

Another student articulated a common feeling,

One of the good things about being with a professional woman for a few times is that you get a chance to talk about what it is like. You can't see her doing a good job, you just see stacks of boring paper work, and you can't see discrimination but after a while, you can tell that people think she is doing a good job by how they interact with her and that she likes her work and you can feel the way men object to women being there sometimes.
It was obvious by the particular nature of the types of discrimination recorded by the students that many of them had discussed male/female relationships in the workplace with their protégées. However, this appeared not to have been done in a negative fashion since networking often included male colleagues. One student recorded a comment by her community mentor which sums up this common happening: "...said that women have to operate in a world that is half full of men—we might as well work along with them to achieve our own goals."

Finally, but one of the most important changes affected by the mentoring program was providing a philosophy of mentoring as a framework for the future. Of the 33 elementary school students who participated in the study, 31 of them indicated that they would be interested in participating in a similar program as a mentor when they achieved university student status or established themselves in a career. The only two that suggested that they would not had already defined themselves out of post-high school education. The students who responded positively felt it would be fun, rewarding and a chance to provide for others what they had experienced themselves.
CHAPTER VI
Quantitative Change Related to Mentoring

The analysis of the process of mentoring through the log books presented in Chapter V provided us with a clear picture of change in some areas. An increase in knowledge of women in non-traditional occupations, expanded interest in and information about the variety and availability of non-traditional careers and an expansion of the students' own educational and occupational goals was apparent as a result of the mentoring interaction. In addition, a more ready understanding of what is required in educational preparation for non-traditional careers and a more definitive understanding of the discrimination barriers which confront women in the workforce resulted. As well, the experience of mentoring left most of the students with a feeling that it was loaded with positive outcomes and was something they would like to do for others in the future.

The task of this chapter is to examine closely the "before" and "after" questionnaire data to see how it fits with the findings generated by the log book expressions of the various participants and to add to the findings whenever appropriate. When students were asked to identify whether they knew women in non-traditional occupations or not, at School A there was a 20% increase compared to a 17% decline at School B and a 7% increase at School C in the "after" situation. Further, School A also reported an increase of
24% in those females who knew three or more women in non-traditional occupations while there was no change at Schools B and C. When a variety of controls were evaluated, although not many significant differences were discovered, the increases at the mentored school were larger for intact nuclear family units and for those where parents were married rather than divorced, widowed or single. Whether or not the parents were born in Canada, occupational level of father and mother, and educational level of father and mother did not impact upon the relationship between knowledge of women in non-traditional jobs and the "before"/"after" period. There is some small evidence here to indicate that the increase in this knowledge of the mentored females was greater where the relationship between parents was at least structurally stable, for example, nuclear family, parents married and father living in the home.

When students were asked to list how many women in non-traditional jobs they knew and to indicate their occupations, there were no statistically significant differences in the "before" and "after" periods with respect to the number identified at the experimental and control schools. However, the differences were in the expected direction with an increase in numbers of persons and occupational categories at the mentored school as compared with the others as follows:
<table>
<thead>
<tr>
<th>School</th>
<th>A Before</th>
<th>A After</th>
<th>B Before</th>
<th>B After</th>
<th>C Before</th>
<th>C After</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of persons</td>
<td>38</td>
<td>59</td>
<td>26</td>
<td>22</td>
<td>79</td>
<td>87</td>
</tr>
<tr>
<td>Categories of Occupation</td>
<td>14</td>
<td>19</td>
<td>9</td>
<td>9</td>
<td>14</td>
<td>13</td>
</tr>
</tbody>
</table>

The students were also asked where they met or came to know the women they identified in non-traditional jobs. As was suggested in Chapter IV, approximately 50% of both boys and girls report the source of knowledge as family or friends. When the girls were examined in the "before" and "after" periods, we discovered very little difference between the schools with respect to family as the source of information with only slight declines at school A and school B. With respect to "friends" being reported as the source, there is a large difference between the "before" and "after" periods (Ω = .36, p ≤ .04) (See Table 26). This represents a 53% reduction in the reporting of "friends" as a source of information at School A while the shifts at the other schools were negligible. The only category of response which changed in the same direction at all three schools was "school" as a source of information. The increase at the mentored school was more than double, School B was 132% and School C was 46%. Only at the mentored school were the "before"/"after" differences statistically significant (Ω = .37, p ≤ .03) (See Table 27). Quite clearly, those females who received mentoring have shifted away from primarily
Table 26

Women in Non-Traditional Occupations Who Are Friends of the Student - School A.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>13 (68.4)</td>
<td>08 (31.6)</td>
<td>21 (47.7)</td>
</tr>
<tr>
<td>No</td>
<td>06 (31.6)</td>
<td>17 (68.0)</td>
<td>23 (52.3)</td>
</tr>
</tbody>
</table>
Table 27

Women in Non-Traditional Occupations Who Are Known Through School - School A.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>03 (15.8)</td>
<td>13 (52.0)</td>
<td>16 (36.4)</td>
</tr>
<tr>
<td>No</td>
<td>16 (84.2)</td>
<td>12 (48.0)</td>
<td>28 (63.6)</td>
</tr>
</tbody>
</table>
family and friends to the school system as a source of information about women in non-traditional occupations. In addition, the category "other", where respondents specified the nature of this additional source, there was a specific identification of the mentoring program at school A. Only at School A was there a large increase in the use of the category "other", where an increase of 167% occurs. It would appear that the mentoring program had a large impact upon the sources of information used by students to acquire knowledge about women in non-traditional occupations.

Knowledge of women in non-traditional occupations is not as important as the influence this knowledge might have on choice of career. When the "before" and "after" responses for the females were compared in each school, the most pronounced change quite clearly took place at School A even though the differences were only statistically significant for the third choice ($\bar{X} = .53$, $p \leq .04$). In the first non-traditional occupation selected by the females the change was much more substantial at School A where the "before" and "after" differences were of the order of 49%. In the second choice, the change was 359% ($\bar{X} = .32$, $p \leq .15$) which can be accounted for by the relatively small numbers in the cells of the table. In neither of the other schools do we see the consistency of change found in the mentored school. As well, previous analysis has clearly demonstrated that only in the mentored school do we see the major change from a negative evaluation of the influence to a very
positive one. To briefly reiterate, summary comparisons are presented as follows:

<table>
<thead>
<tr>
<th></th>
<th>School A Before/After</th>
<th>School B Before/After</th>
<th>School C Before/After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive influence</td>
<td>5</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Negative influence</td>
<td>14</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Total reporting</td>
<td>19</td>
<td>23</td>
<td>11</td>
</tr>
</tbody>
</table>

As suggested in Chapter V, there was clearly an increase in the positive influence of women in non-traditional occupations at School A, where the mentoring program had taken place.

As indicated previously, mentoring seemed to lead to a marked change in the students' recognition of discrimination against women in the work force. The "before"/"after" analysis shows quite clearly that only at school A do we see a significant increase in the identification of discrimination, \((\tau_{ab} = .24, p \leq .03)\) with a 39% increase in recognition (See Table 28). At School B there was practically no change, while at School C, a 35% reduction in recognition occurred. Additionally the relationship was strongest at the mentored school where the current family structural situation was nuclear \((\tau_{ab} = .37, p \leq .02)\) (See Table 29), where the parents were married \((\tau_{ab} = .39, p \leq .01)\)
Table 28

**Before and After Perceptions as to Whether There is Discrimination in the Workforce - School A.**

<table>
<thead>
<tr>
<th>Discrimination</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>17 (56.7)</td>
<td>25 (78.8)</td>
<td>43 (68.3)</td>
</tr>
<tr>
<td>No</td>
<td>13 (43.3)</td>
<td>07 (21.2)</td>
<td>20 (31.7)</td>
</tr>
</tbody>
</table>
### Table 29

**Before and After Perceptions as to Whether There is Discrimination in the Workforce By Nuclear Family - School A.**

<table>
<thead>
<tr>
<th>Discrimination</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>07 (46.7)</td>
<td>14 (82.4)</td>
<td>21 (65.6)</td>
</tr>
<tr>
<td>No</td>
<td>08 (53.3)</td>
<td>03 (17.6)</td>
<td>11 (34.4)</td>
</tr>
</tbody>
</table>
Table 30

Perceptions of Whether There is Discrimination in the Workforce, By Parents Married - School A.

<table>
<thead>
<tr>
<th>Discrimination</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>08 (47.1)</td>
<td>16 (84.2)</td>
<td>24 (66.7)</td>
</tr>
<tr>
<td>No</td>
<td>09 (52.9)</td>
<td>03 (15.8)</td>
<td>12 (33.3)</td>
</tr>
</tbody>
</table>
.01) (See Table 30), where the father’s occupation was middle or upper working (values not significant and not a strong relationship), where mother’s education was high school or less (τ_{ub} = .43, p ≤ .01) (See Table 31), and where father’s education was high school or less (τ_{ub} = .48, p ≤ .01) (See Table 32). Mother’s occupation as a control variable produced no consistent results.

One might readily anticipate that educational plans would be affected by the mentoring and workshop programs since a major concern in both was to emphasize the importance of education in general and the particular kinds of programs available. Previously it was noted that girls, more so than boys, had high educational expectations. This may partly account for the fact that the "before" and "after" scores were so similar with only a decline in Ph.D. expectations to the Masters level. Girls have already clearly received the message that education is important and the program had little, if any, effect on that message. For those females who do choose to go beyond high school there were very few differences in the "before" and "after" periods worth identifying. In the first reason chosen, both School A and School B experienced a decline in the "to get a good job" category" (although in both periods it remained the highest category) and an increase in the category "to best use my abilities". In the second or next strongest reason for continuing in school, there were, compared to School C, some small but consistent differences in Schools A
Table 31

**Perceptions of Whether There is Discrimination in the Workforce by Mother's Education at High School or Less - School A.**

<table>
<thead>
<tr>
<th>Discrimination</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>05 (38.5%)</td>
<td>17 (81.0%)</td>
<td>22 (64.7%)</td>
</tr>
<tr>
<td>No</td>
<td>08 (61.5%)</td>
<td>04 (19.0%)</td>
<td>12 (35.3%)</td>
</tr>
</tbody>
</table>
Table 32

Perceptions of Whether There is Discrimination in the Workforce By Father’s Education at High School or Less — School A.

<table>
<thead>
<tr>
<th>Discrimination</th>
<th>Time Period</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Combined</td>
</tr>
<tr>
<td>Yes</td>
<td>02 (22.2)</td>
<td>10 (71.4)</td>
<td>12 (52.2)</td>
</tr>
<tr>
<td>No</td>
<td>07 (77.8)</td>
<td>04 (28.6)</td>
<td>11 (47.8)</td>
</tr>
</tbody>
</table>
and B. In both, there was a substantial increase in the use of the "enjoyment/interest" category, an occurrence that didn't take place at School C. None of the other differences was consistent. To some extent both the mentoring and workshop experiences appear to have influenced the students to be concerned about courses of study that they will enjoy and allow them to use their abilities, rather than provide them with a good job with strong economic benefits.

When students were asked what they would like to study after high school and the responses were categorized as traditional, non-traditional or both, we observed some large changes in Schools A and B in the "before" and "after" periods. A movement away from both traditional and non-traditional occupations occurred for the mentored females ($\tau c = .25, p \leq .04$) (See Table 33), with a percentage increase of 245% in the "both" category. In school B, which received the workshops only, the same kind of change occurred ($\tau c = .28, p \leq .04$) (See Table 34). No real change was evident at School C (See Table 35).

An examination of the impact of the control variables yields little but there is some evidence, especially in the mentored school, that students from lower income homes were more likely to change to the "both" category in the "after" period. This change was more likely to take place at that level since female students from higher class backgrounds already make selections in both traditional and non-
<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Time Period</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>06 (25.0)</td>
<td>04 (14.3)</td>
<td>10 (19.2)</td>
<td></td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>16 (66.7)</td>
<td>16 (57.1)</td>
<td>32 (61.5)</td>
<td></td>
</tr>
<tr>
<td>Both</td>
<td>02 (08.3)</td>
<td>08 (28.6)</td>
<td>10 (19.2)</td>
<td></td>
</tr>
</tbody>
</table>
## Table 34

What Students Would Like to Study After High School - School B.

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Time Period</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>05 (21.7)</td>
<td>04 (18.2)</td>
<td>09 (20.0)</td>
<td></td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>15 (65.2)</td>
<td>08 (36.4)</td>
<td>23 (51.1)</td>
<td></td>
</tr>
<tr>
<td>Both</td>
<td>03 (13.0)</td>
<td>10 (45.5)</td>
<td>13 (28.9)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 35

**What Students Would Like to Study After High School - School C.**

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Time Period</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>15 (27.3)</td>
<td>15 (27.8)</td>
<td>30 (27.5)</td>
<td></td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>21 (38.2)</td>
<td>16 (29.6)</td>
<td>37 (33.9)</td>
<td></td>
</tr>
<tr>
<td>Both</td>
<td>19 (34.5)</td>
<td>23 (42.6)</td>
<td>42 (38.5)</td>
<td></td>
</tr>
</tbody>
</table>
traditional categories in substantial numbers, probably because of the more sophisticated information base which exists in their homes.

When students went on to identify the reasons for selecting these occupations with first, second and third choices of reasons, the first choice of "enjoyment/interest" increased slightly at all schools, perhaps indicating a maturation effect. The second choice at the mentored school was essentially unchanged except, again, in the "enjoyment/interest" category, a change which does not occur at the other schools. (It is worth noting, however, that "economic benefits" was the category selected most often.) In the third choice, "economic benefits" was no longer the highest selected category in school A and "personal growth" was the category of biggest change, as it was at School B. Overall, these changes were not substantial, and not statistically significant, but a trend towards "enjoyment/interest" and "personal growth" was noted at the expense of the items "to make people happy" and "economic benefits". These kinds of changes did not occur at School C.

One of the findings discussed in Chapter IV was related to the students' choice of who to turn to for guidance about future course selections. Mother was the overwhelming choice, especially for girls and this was the case even after mentoring. In fact, the increase in use of mother for guidance about future course selections was larger at the
mentored school than at the other two schools where School B was essentially unchanged and School C declined (See Tables 36, 37 and 38). The percentage change in the "before" to "after" period at School A was 41%. The relationship was even stronger at School A when the student was from a nuclear family (150%) (See Table 39), where the parents were married (184%) (See Table 40), and where both parents were born in Canada (49%) (See Table 41). None of the other control variables elaborated any differences in School A and none of the control variables had any effect at all with respect to source of guidance for course choices at Schools B and C.

The findings with respect to increased use of mother as a source of information about future course selections are interesting in that they only take place in young females who have experienced mentoring. Despite the fact that mentoring was a "school located" experience and was somewhat related to educational futures, we still find the increases in discussion located in the person of mother. It may be that mentoring has enlightened them with respect to female roles and mother is now seen in an even more positive light. It may also be that a stable family environment leads to a discussion of issues and information that emanate elsewhere. The male/female comparisons also identified mother as the most important source of information with respect to choosing a career, with father being a closer second choice than was the case with future courses. For females alone,
Table 36

Source of Course Selection Guidance - School A.

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Time Period</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td>No One</td>
<td>03 (10.0)</td>
<td>01 (03.1)</td>
<td>04 (06.5)</td>
<td></td>
</tr>
<tr>
<td>School System</td>
<td>0 ( 0 )</td>
<td>02 (06.3)</td>
<td>02 (03.2)</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>12 (40.0)</td>
<td>18 (56.3)</td>
<td>30 (48.4)</td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>03 (10.0)</td>
<td>02 (06.3)</td>
<td>05 (08.1)</td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>02 (06.7)</td>
<td>01 (03.1)</td>
<td>03 (04.8)</td>
<td></td>
</tr>
<tr>
<td>Friend</td>
<td>05 (16.7)</td>
<td>03 (09.4)</td>
<td>08 (12.9)</td>
<td></td>
</tr>
<tr>
<td>Aunt-Uncle</td>
<td>0 ( 0 )</td>
<td>01 (03.1)</td>
<td>01 (01.6)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>05 (16.7)</td>
<td>04 (12.5)</td>
<td>09 (14.5)</td>
<td></td>
</tr>
</tbody>
</table>
Table 37

Source of Course Selection Guidance - School B.

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>No One</td>
<td>02 (08.7)</td>
<td>02 (04.2)</td>
<td></td>
</tr>
<tr>
<td>School System</td>
<td>01 (04.3)</td>
<td>01 (02.1)</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>10 (40.0)</td>
<td>10 (43.5)</td>
<td>20 (41.7)</td>
</tr>
<tr>
<td>Father</td>
<td>03 (12.0)</td>
<td>03 (13.0)</td>
<td>06 (12.5)</td>
</tr>
<tr>
<td>Siblings</td>
<td>04 (16.0)</td>
<td>04 (17.4)</td>
<td>08 (16.7)</td>
</tr>
<tr>
<td>Friend</td>
<td>05 (24.0)</td>
<td>02 (08.7)</td>
<td>08 (16.7)</td>
</tr>
<tr>
<td>Other</td>
<td>02 (08.2)</td>
<td>01 (04.3)</td>
<td>03 (06.3)</td>
</tr>
</tbody>
</table>
Table 38

**Source of Course Selection Guidance - School C.**

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Time Period</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Before</td>
<td>After</td>
<td>Combined</td>
</tr>
<tr>
<td>No One</td>
<td></td>
<td>04 (06.9)</td>
<td>04 (06.8)</td>
<td>08 (06.8)</td>
</tr>
<tr>
<td>School System</td>
<td></td>
<td>04 (06.9)</td>
<td>01 (01.7)</td>
<td>05 (04.3)</td>
</tr>
<tr>
<td>Grandparents</td>
<td></td>
<td>03 (05.2)</td>
<td>03 (05.1)</td>
<td>06 (05.1)</td>
</tr>
<tr>
<td>Mother</td>
<td></td>
<td>28 (48.3)</td>
<td>23 (39.0)</td>
<td>51 (43.6)</td>
</tr>
<tr>
<td>Father</td>
<td></td>
<td>05 (08.6)</td>
<td>11 (18.6)</td>
<td>16 (13.7)</td>
</tr>
<tr>
<td>Siblings</td>
<td></td>
<td>04 (06.9)</td>
<td>04 (06.8)</td>
<td>08 (06.8)</td>
</tr>
<tr>
<td>Friend</td>
<td></td>
<td>05 (08.6)</td>
<td>07 (11.7)</td>
<td>12 (10.3)</td>
</tr>
<tr>
<td>Aunt-Uncle</td>
<td></td>
<td></td>
<td>02 (03.4)</td>
<td>02 (01.7)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>05 (08.6)</td>
<td>04 (06.8)</td>
<td>09 (07.7)</td>
</tr>
</tbody>
</table>
Table 39

Source of Course Selection Guidance By Nuclear Family
- School A.

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
</tr>
<tr>
<td>No One</td>
<td>01 (06.7)</td>
</tr>
<tr>
<td>School System</td>
<td>0 ( 0 )</td>
</tr>
<tr>
<td>Mother</td>
<td>03 (20.0)</td>
</tr>
<tr>
<td>Father</td>
<td>03 (20.0)</td>
</tr>
<tr>
<td>Siblings</td>
<td>01 (06.7)</td>
</tr>
<tr>
<td>Friend</td>
<td>03 (20.0)</td>
</tr>
<tr>
<td>Other</td>
<td>04 (26.7)</td>
</tr>
</tbody>
</table>
Table 40

**Source of Course Selection Guidance By Parents Married - School A.**

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Time Period</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td>No One</td>
<td>02 (11.8)</td>
<td>01 (05.6)</td>
<td>03 (08.6)</td>
<td></td>
</tr>
<tr>
<td>School System</td>
<td>0 (0)</td>
<td>02 (11.1)</td>
<td>02 (05.7)</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>03 (17.6)</td>
<td>09 (50.0)</td>
<td>12 (34.3)</td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>03 (17.6)</td>
<td>02 (11.1)</td>
<td>05 (14.3)</td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>02 (11.8)</td>
<td>01 (05.6)</td>
<td>03 (08.6)</td>
<td></td>
</tr>
<tr>
<td>Friend</td>
<td>03 (17.6)</td>
<td>02 (11.1)</td>
<td>05 (14.3)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>04 (23.5)</td>
<td>01 (05.6)</td>
<td>05 (14.3)</td>
<td></td>
</tr>
</tbody>
</table>
Table 41

Source of Course Selection Guidance By Canadian Born Parents - School A.

<table>
<thead>
<tr>
<th>Who Assists</th>
<th>Time Period</th>
<th>Before</th>
<th>After</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>No One</td>
<td></td>
<td>01 (05.9)</td>
<td>01 (05.0)</td>
<td>02 (05.4)</td>
</tr>
<tr>
<td>Mother</td>
<td></td>
<td>08 (47.1)</td>
<td>14 (70.0)</td>
<td>22 (59.5)</td>
</tr>
<tr>
<td>Father</td>
<td></td>
<td>02 (11.8)</td>
<td>01 (05.0)</td>
<td>03 (08.1)</td>
</tr>
<tr>
<td>Friend</td>
<td></td>
<td>03 (17.6)</td>
<td>03 (15.0)</td>
<td>06 (16.2)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>03 (17.6)</td>
<td>01 (05.0)</td>
<td>04 (10.8)</td>
</tr>
</tbody>
</table>
the differences between the "before" and "after" periods were not as substantial for careers as they were for courses. They remained essentially unchanged while there was an increase in the use of father for career information but the small numbers do not encourage substantial discussion. None of the control variables changed the nature of the findings in the original tables for the three schools.

Just as there were no differences between males and females with respect to the number of math courses they anticipated taking in high school there were also no real differences between the females at the three schools in the "before"/"after" periods. Mentoring and workshops apparently had no impact upon perception of selection of math courses in high school. Additionally, although there were major differences between males and females with respect to the level of math they planned to take in high school with most females planning to take advanced level courses, the "before"/"after" differences for females were negligible with none of the controls elucidating any elaborated differences. Again, mentoring and workshops appeared to have little effect upon an already high level of anticipation of not only taking many math courses but those at a higher level.

As indicated in Chapter IV, some changes did occur in schools A and B with respect to the number of science courses expected to be taken in high school. School B saw a
change from 28% to 43% of the females taking six or more science courses in high school and School A experienced a shift from 10% to 24% of the females taking fully eight courses in science. No change occurred at School C. Girls also expected to take more advanced courses in science than boys but the differences between females in the "before"/"after" periods were almost nil. The only control variables which made any difference were parents' occupation and education with the differences as we might expect; higher occupational levels and educational levels predicting a higher anticipation of taking advanced science courses; but even here there were no "before"/"after" differences.

We already know that about two-thirds of both males and females reported that someone had specifically encouraged them to continue their studies in math and science and that the family accounts for the majority of that support. There were no real differences "before" and "after" but it is worth identifying that at neither School A nor B did one single female student report the school system as the source of that support. As well, the school system appears irrelevant with respect to the provision of encouragement to continue education after high school. No female student at any of the schools reported the school system as providing encouragement. Again, the family was the dominant source of support and only at the mentored school was there a significant change where the family was even more dominant after mentoring with a percentage change of 51%.
The question of where students expect themselves to be in 10 and 20 years was covered in Chapter IV, but we will here identify whether mentoring and the workshops had any impact on the females, recognizing that their capacity to project meaningfully that far into the future may be limited. It is certainly fair to say that mentoring and workshops had remarkably little, if any, impact upon female student conceptions of their personal lives in 10 or 20 years with respect to school participation, marital state, parenthood, whether they will be working or homemaking. The "before"/"after" measurements, in all schools for these items, were very similar except for a slight decline in those who see themselves in school in 10 years and a slight increase in those who see themselves as married. However, the same changes occurred in School C as occurred in School A. In all other cases, the differences were minimal.

We indicated previously that this group of students projected a materialistic lifestyle, not substantially different for males and females. When the females alone were examined many obvious spending areas such as place of residence and car had not changed but the four month period of the project led to an increase in reporting of owning a cottage and travel at all schools. The mentoring was irrelevant to this change, but perhaps our consumer messages in this society are not. Mentoring also had no effect on the perception of who would pay for these items as there were no "before"/"after" differences in any of the schools
where approximately 60% of the females expected joint (spousal) earnings to pay the way. Finally, with respect to how they expect to balance work and family life, no real differences between the two time periods was observed.

One can never ignore the possibility of a halo effect on the mentored sample, that is, the attention that is focussed upon them rather than the specific elements of the mentoring process may, in itself, lead to behavioural change. Although there is no way in this study to effectively measure this possibility, the evidence of specific change in some areas, such as perception of discrimination and increased interest in science courses and lack of change in other areas, for example, higher educational plans and life style projections would indicate the desireability effect was not uniform. In addition, the increase in the choice of mother as source of educational and career guidance after mentoring was a highly specific articulation of knowledge gained in mentoring but applied to a traditional socialization area. Such specific application would appear to indicate more than the operation of the halo effect.
CHAPTER VII

Summary and Conclusions

Summary of Major Findings

The focus of this section will be aimed at summarizing the quantitative data analyzed in Chapter IV and Chapter VI. The first of these two chapters provided a baseline comparison by examining the differences between male and female attitudes, values and expectations with regards to educational and occupational goals of Grade 7 and 8 elementary students. The second looked at the effect of the mentoring process and workshops on the participating elementary school females in comparison with the control group.

To begin with male/female comparisons, one of the primary findings was that females were more likely than their male counterparts to report that they knew women in non-traditional occupations and were also likely to know a greater number. While males and females both indicated the major sources of this knowledge to be family and friends, girls selected friends slightly more often than family while boys chose family as the primary source. Both sexes suggested that, in terms of influencing their own career choices, they found the input to be of a negative nature.
Females were far more likely than males to be aware of discrimination against women in the workforce however there was no difference between the sexes as to the number of years they, themselves, expected to be employed.

With regards to future educational plans and quite contrary to traditional expectations, more females than males planned higher education for themselves. Males and females both cited "getting a good job" and "economic benefits" as primary reasons for continuing in school, however females were likely to include "to best use my abilities' while boys chose "prestige and power". Areas of study anticipated were exclusively traditional for boys; girls, however, were likely to choose non-traditional areas or the category "both" which included both a traditional and a non-traditional option. Similarly, when reporting occupations they were considering for themselves, boys and girls were interested in an equal number of occupations however males never selected a non-traditional area or even an androgynous one. The main reason given for their choices for both males and females was "enjoyment/interest" however the secondary reason for males was "economic benefits" while females indicated that "personal growth" was next in importance.

The two questions soliciting information from the students regarding their major advisors for high school course selection and future career guidance, indicated that mother was the overwhelming first choice for course
selection guidance with girls selecting her twice as often as boys. Generally speaking, boys selected from a much wider variety of sources with the exception of those from single parent homes where the father was absent. In these cases, the boys restricted their choice to "mother" or "no-one". For career guidance, once again both males and females chose "mother" first however father was selected a little more often than in the previous question regarding course selection. Again, males from single parent homes where father was absent indicated "mother" or "no-one" and, surprisingly, very few students, either male or female, indicated the school system as a primary source of advice for either course selection or career guidance.

Both boys and girls alike reported that math and science were the most enjoyed subjects in Grade 7 and 8 and also were the least enjoyed. Boys were more likely to list gym or physical education among their favourite subjects than were girls. Other than math or science, both sexes listed French as the subject they enjoyed least of all. It is not surprising, therefore, to find that the favourite spare time activities for boys were sports and television watching. Girls preferred reading with television watching second, although there was less time involvement in television watching for girls.

No differences were found in the number of math courses students anticipated taking in high school although girls expected they would take more advanced levels than boys.
Similarly, there was little difference between the sexes as to the number of science courses they would take but, once again, females anticipated taking more advanced levels. Both boys and girls reported the same level of encouragement to continue their math and science options and two-thirds of both males and females suggested that support came from their families. Only a few students reported negative pressure and that came exclusively from self. Females considered themselves more likely to receive encouragement to continue their education after high school and for three-quarters of them their families provided this support. Almost no-one suggested they were not encouraged to continue post secondary education of some kind and as well, almost no-one suggested that they received support from the school system.

Students in Grade 7 and 8 appeared to have some difficulty with projecting their lifestyle 10 or 20 years ahead, however there were some findings of relevance. Very few students saw themselves as homemakers in the future and there was a level of unrealistic expectations in that 10% of the males felt they would successfully achieve professional sport status. It was quite obvious that all students have expectations of an extremely high standard of living with an abundance of material possessions. More females than males however, expected these things to be paid for with joint earnings. While there was not much difference in expectations of marriage and having children between the
boys and girls, twice as many boys as girls did not even consider child care as a factor when elaborating on the incorporation of their home life with occupational aspirations. None of the boys reported considering interrupting his career for this task compared to 20% of the females who suggested that they would interrupt their occupational career for familial responsibility. We now proceed to an examination of the effect of the mentoring process and workshops on the females at Schools A and B in comparison with the control group at School C.

Only at School A was there a significant increase in knowledge of women in non-traditional occupations and this appeared to be larger where the family was nuclear, parents were married and father was present in the home. The number of women identified per student also increased as did the variety of occupational categories from which they were drawn. At School A, the girls reported knowing fewer of these women through "friends" and more of them through "school" and "other" categories, specifically indicating the mentoring program. More important was the very large shift only at School A in the reporting of these women in non-traditional occupations as having a positive rather than negative influence on the students' own career aspirations. The students at School A also reported an increased awareness of an already high perception of discrimination against women in the workforce which was made even more significant by the sophisticated and definitive nature of
the response. The relationship was stronger at School A where the family was nuclear, parents were married and both the mother and father’s educational level was high school or less.

Neither the mentoring program nor the workshops had any apparent effects on the educational plans of the females in the study. It appears that girls have acknowledged and accepted the message concerning the importance to them of the educational process. However, at both Schools A and B there was an increase in "to best use my abilities" and "enjoyment/interest" and a decrease in "to get a good job" and "economic benefits" as reasons for continuing their schooling. Similarly there was a movement away from choosing specifically "traditional" or "non-traditional" areas of study towards the "both" category in Schools A and B only and this trend towards selections of "both" was more marked where father and mother’s educational and occupational level was in the lowest category.

The increase at the mentored school only in the use of mother as the primary source of guidance for high school course selection should be noted. Where there was a nuclear family, married parents and where parents were Canadian born, the selection of mother increased even more. While there was no increase in the number choosing mother for guidance regarding career choices, she remained the first choice at all three schools.
When selecting possible careers for their own futures, the girls at Schools A and B showed increased reporting of "enjoyment/interest" and "personal growth" as their first and second reasons, moving away from "economic benefits" and "to make people happy". None of the females at any of the schools changed her reporting of selection of high school math courses, either the number they were anticipating taking or the level. The girls at School B, however, increased the number of high school science courses they would take but the greatest difference was at School A where there was a larger number of girls anticipating taking the total complement of eight science courses available. While there were no "before"/"after" differences in girls' perceptions of receiving encouragement both to continue in math and science and also to continue their education after high school, it was interesting to note the increase at School A in the family as a source of that support and the fact that not even one girl suggested that support in either instance came from the school system.

As mentioned in the summary of male/female comparisons, conception of personal life 10 or 20 years from the present seems too difficult for students this age and provides little meaningful insights. While materialism tended to increase over the four-month study period at all schools, neither mentoring nor workshops stimulated any changes in expectations of distribution of earnings within the family or familial responsibilities within a work/family dichotomy.
Now that we have examined both the male/female comparisons and the results of the more particular findings pertaining to the female elementary school students involved in the study, we now examine the mentoring process and its impact on the participants within the symbolic interaction framework and then attempt to place the findings within the same perspective.

Symbolic Interaction and the Mentoring Process

It has been established that the concept of the "significant other" is an important one for symbolic interaction and the foundation of mentoring. Initially, therefore, the focus of the interacting pairs was to establish a rapport through communication and interaction over time. Even though they were matched purposefully rather than by choice, it was very evident that a "courtship"-type process began immediately.

We will look initially at the protégée/university student experience where the success of the program appears to be as a result of three particular factors. First, the university students had more time available to spend with their protégées than did the community mentors and were, therefore, able to establish a closer, more personal interaction. It seems that "more is better" in a program of this type. Secondly, one gets a sense of continuity from the logbooks as both university students and protégées made
time for each other, not only to get together but also by leaving messages and birthday cards for one another and keeping in touch by telephone. Third, and I think very importantly, was the fact that the university students were closer in age to the elementary school students than most of the community mentors. As previously indicated, experience with workshops for females indicated that the younger participants appeared to be more responsive and found it easier to relate to younger presenters. It was this concept that suggested the protégée/university mentor linkage initially and was subsequently reinforced at the outset of the project by the principal of the experimental school. At the workshop for the university mentors, she prepared a list of expectations that her young female students had of the mentoring interaction. These expectations consisted of establishing a friendship with someone to talk to who would be a confidante, who would listen to her ideas, and who "was not like her mother". It was also evident that the age gap between the protégée and her university mentor (approximately 10-15 years) all but disappeared for many of the pairs as time went by and many of them commented on the similarities between them rather than the differences. It appears through information in the logbooks, that there was a great deal of communication and exchanging of ideas much of which was done in confidence. Many of the protégées and university students described their relationship in terms of being a friend, or like a big sister and many of them
stressed the equalitarian nature of their relationship. This was expanded upon by one student who said: "Even though ___ is 12 years younger than myself, I feel that we are developing a friendship that is similar to any that I have with friends my own age", also ___ who commented: "I don't feel much like just a mentor--we seem to be more like friends". It can be learned from analyzing the topics of discussion shared how intimate the relationships became. For example, one shared information about family problems that no one else knew; others talked about boyfriends who were a secret from everyone else; still others shared feelings about paintings at the art gallery..."I was surprised that one could feel so much from a painting." Some expressed their delight with the relationship by recording: "I like her, I like the way I feel about her, I like everything about her!", while others waxed poetic about the relationship, for example, by writing a poem to her university mentor entitled New Friends. While there was a great deal of communication and interaction with the protégée and her community mentor also, the age gap was commented on in comparative terms of difference rather than similarity. For example, one community mentor commented: "It was interesting to learn the values placed in certain areas especially when making the comparison of myself at age 13/14, my children at 13/14 and my young student." Others were more exclamatory about the age difference, their comments being "So young, so young!" In the cases where the
community mentor was a younger female, there was noticeable reference to friendship and equality, similar to that of the protégée and the university student rapport. The important factor here we believe, is that the elementary students can easily see themselves in the role of university student a few years from the present but to project as far as career success is much more difficult.

The mentoring program was successful to a very large degree however because of several factors which can be credited to the protégée/community mentor aspect of the interaction process. These are the provision of actual marketplace experiences, invaluable networking among colleagues and friends, and the provision of a great deal of praise, positive re-inforcement and encouragement by women who can be seen to have "made it" in non-traditional career areas. While the first two experiences were explored in Chapter V, and were important to the success of the mentoring program, the latter was valuable in contributing to the establishment of the community person as a significant other. Much of the praise and encouragement was linked to factors concerned with academic goals such as grasping concepts, being articulate and showing interest in the various activities shared. However, much of it was more personal and served to create an affectional bond between the two. One community mentor was sharing her own goals with her protégée and reported:
On our way home, we talked about our accomplishments and how good they make you feel. I told her I had things I still wanted to do and would try, such as running for mayor and I asked her if she would be proud of me. She said yes and that she would try things like that so I could be proud of her. She said when she did it she would buy a red corvette convertible and take me for a ride. I think I made ___ feel special and I hope she may continue to strive for that feeling.

Also, a business woman recorded a conversation and impressions as she was picking up her protégée for a special dinner meeting.

I picked ___ at her home around 6:30 and she was wearing a lovely dress. She looked great and I told her so and I could see she was really pleased to be going with me. We talked about the importance of attitude, believing in yourself, making yourself "memorable".

It was fairly clear that the mentoring experience imparted new skills, expanded awareness and experiences which left most of them with the feeling that mentoring is a very positive venture which they would someday like to share with others.

While the foregoing discussion makes it clear that substantial interaction took place between the mentors and the protégées that was meaningful to them all and therefore likely to have an impact upon the development of self in the protégé it still remains to place the actual findings of the study within the boundaries of the symbolic interactional framework.
Discussion of the Findings Within a Symbolic Interaction Framework

The mentoring program was found to be related to substantial changes in the values, attitudes and behaviours pertaining to the educational and occupational goals of the elementary school female participants. This was most evident in areas such as increased interest in and information concerning the variety and availability of non-traditional careers, as well as the educational preparation required to achieve them. In addition, a more sophisticated understanding of discrimination barriers for women was developed and most gleaned an appreciation for the positive outcomes involved in the mentoring experience.

Symbolic interaction is a most useful perspective for understanding human social life and particularly the mentoring experience. It is an attempt to view young women as active, self-directed participants within their society rather than simply actors in the environment in which they find themselves. Symbolic interaction looks for the individual freedom that makes for uniqueness. The process of discovering that uniqueness is one of interaction, communication, role-taking and subsequent role-making with others in society--people in relation to each other, taking each other into account, interpreting and acting again. This essentially describes the essence of the mentor/protégée relationship--that through interaction, communication and shared meaning with a significant other,
mentors will facilitate cognitive, affective and creative growth in order that young females might think in different ways, therefore re-defining and focussing themselves in new directions. Following, then, is an in-depth elaboration of the findings of this study involving the understanding of the mentoring process articulated within a symbolic interaction framework.

As has been stated, the mentoring program had a greater effect at School A in relation to knowledge about, number, variety and positive influence of women in non-traditional occupations, especially where the family structure was stable, for example nuclear, parents were married, and the father was living in the home. Perhaps this stability from within allows the members of a family to feel secure about incorporating other important socializing elements from without.

With respect to the findings concerning the recognition of discrimination in society against women in the workforce, it is perhaps understandable that those students whose parents have high levels of occupational and educational achievement will have been exposed, in a rather sophisticated fashion, to the various blockages or discrimination in society and will, therefore, be less affected by a mentoring program. Whereas those whose parents have lower levels of education and occupation may have more to learn. Additionally, however, it may very well be that those same females who are also raised in
structurally sound circumstances may be in a more stable environment and therefore more able to recognize the changing nature of the world around them, especially as their parents are supportive of their efforts to advance themselves and re-define themselves in new ways. While mentoring and workshops had little effect on the female students' educational plans, it must be remembered that, contrary to traditional expectations, more females than males initially had higher educational plans for themselves. There was, however, an increase in the number of girls who suggested they would increase to eight the numbers of science courses they were going to take. It is obvious, too, that some re-definition took place through both workshops and the mentoring process when we see an increase in the number of participants who select the "both" category, suggesting an ever widening choice of vocation for themselves. Here again, it is understandable that females from families where both educational and occupational levels are at the lower end of the scale might have more to learn from this experience. However, controlling for a stable family structure produces a similar increase. None of the boys, regardless of family structure, revised his expectations even towards androgynous career goals. Symbolic interaction emphasizes the interactive process of individuals, the role-taking and subsequent role making, communicating and action that influences others and society. These young females are undergoing change and consequently
society is going to change, including male/female relationships both personally and in the workplace. When we examined the responses to the question of home/work dichotomy, we reported few differences in expectations of getting married and having children between the male and females. We also noted that females, as often as males, were equally materialistic and expected to have jobs. The young females involved in the mentoring program appeared to have re-defined their futures away from being a homemaker and toward having a job or career outside the home. By their responses to the above question, we noted that 18% still expected to interrupt their career to some degree for familial responsibilities while none of the males indicated that he would do so. However, about 15% of the males felt that their spouse should stay home with the children. An additional 20% of the females recognized that child care of some variety would be necessary while only 6% of the males indicated their awareness of this need. Of this 6%, it was interesting that their solution to child care was particularly female oriented, for example their own mother or their sisters were designated as the persons who would look after their children in the future. An additional number of the females, recognizing the difficulties of managing work and family life, attempted to come to terms with the problem by suggesting such solutions, impractical as they might be, as finding a job that they could do in their homes so that they would be able to work and still
take care of their families; others suggested that they would work days and their husbands would work nights until the youngsters were in school full time. With a full 67% of the males not mentioning how they will deal with the problem of child care responsibilities, it seems that young males remain a near perfect reflection of a society which still focuses on the importance of a career for males, still expecting the privilege of a home life with children but bearing none of the responsibilities associated with it. It seems obvious, within a symbolic interaction framework that young males need to be directed and encouraged to re-define for themselves the symbols and meanings they use to communicate and interact within society as a whole lest male/female relationships are to become even more problematic than they are at present.

As the findings suggest, the mentoring process had no affect on the selection of mother as the primary source of information and guidance with regards to future career selection however it did serve to increase the number of females reporting mother as first choice for course selection guidance. The reasons for this could be many. Females, and particularly mothers are the traditional nurturers and care givers within the family who take care of the non-monetary needs arising from within that structure. Even when mother works outside the home, she remains the symbol of the interaction process carried on within. The choice of mother as the person to whom one goes for advice
regarding course choices and career options, however, may be seen as one of the less rational choices available, given the discriminatory socialization practices she most likely endured during times of even less enlightenment than exists today. However, she is most likely regarded as more gentle, less authoritarian, less demanding and non-threatening. Therefore, regardless of her knowledge, mother might be seen as the most helpful and the least judgemental when advice is needed. While the controls for family structure indicated, once again, that where there was a nuclear family, parents were married, father was present in the home and also where both parents were Canadian born, there was a further increase in the selection of mother as primary source of course selection guidance, it could be concluded that family structure may not be as important in this determination as the meaningful interaction through communication that happens within. Perhaps the traditional role of the father as wage earner outside the home precludes him from being as significant as mother in the process of information exchange and re-evaluation. This leads us to another finding with implications rooted in the socialization process so important to symbolic interaction. With respect to the boys’ response to the above question, they generally tended to select from a much wider range of persons from whom to seek advice on both career choices and course selection. However, boys from single parent families where father was absent, selected either “mother” or “no-one”. While it
leads one to speculate again on family structure, one is more likely to focus instead on the complex interactions that take place within the family unit. As was suggested previously, symbolic interaction theory focuses primarily on socialization, communication and interaction with significant others with whom we share meaning so that constant re-definition assists in the continuing process of developing self. Within a nuclear family, one usually has a choice between two parents and siblings with whom to engage in complex interactions. The family, therefore, has a mediating effect on all its members. If interaction is not satisfactory or possible on the one hand, there is usually another source of meaningful exchange readily available. The structural breakdown of a family, therefore, whether by death or divorce, may not be as important as the removal of an entire set of symbols that are no longer available. If, by softening the boundaries of the family, significant others from outside can be made available, then the ensuing interaction may lead to a re-vitalized process. This important concept can be examined through the accounts of two university mentors who recorded their early attempts to establish access to their elementary school students so that the sharing of ideas and activities could begin. The first account is indicative of the interaction where softened family boundaries eased the process.

1 Softening the boundaries of the family is defined as being more open and receptive to information and alternate views from other legitimate persons and institutions.
was getting so jaded by school we were getting concerned about her commitment to education. We noticed that what we said to her about education and her future seemed to go in one ear and out the other, however what she is picking up from her community mentor and yourself is being repeated verbatim and discussed around the dinner table.

The second account suggests the difficulties in interaction with outsiders when family boundaries are rigid and very difficult to penetrate.

Whenever I call ___’s home to make arrangements to see her after school hours, I have to talk to her father because he always answers the phone. But, when I have completed my request or message, I then have to speak to the mother to get permission. It seems like the father makes the decision and the mother relays the message but has no say.

We are aware from symbolic interactionism that it is with significant others that we share meaning through symbols which primarily for humans is communication through language. We are also aware from the literature on socialization that the primary source of these significant others is the family. It appears evident, therefore, that in order for the mentoring relationship to flourish and subsequently for information exchange and re-definition to take place, there needs to be an acceptance of the importance of including significant others from outside that unit.

Another explanation as to why the mentoring experience enhanced the role of mother as a source of course and career
guidance could be directly related to the fact that many of the university and community females with whom they were linked were themselves already mothers or expressed motherhood as one of their own future goals. This could possibly have led to a re-definition of the elementary students’ own perception of their mothers’ contribution. It should be suggested, also, that the mentoring interaction between both university students and community women was a two-way process. This was most definitely a reciprocal arrangement whereby the mentoring experience caused several of the mentors, themselves, to think about, re-evaluate and reassess their own accomplishments. One of the university mentors commented:

I am not sure what got out of our interaction, only time will tell, but I'll never forget the experience. I learned tons! Watching and listening to her ponder her future made me think about how we develop our concept of what we can be and why I'm doing what I'm doing--who were the people and what were the things that led me down this particular path.

Other expressions of re-evaluation came from several community mentors with comments from the logbooks such as: "... made me think, wonder inquire about my own goals"; "I taught her about accounting and together we learned things about architecture that I previously didn’t know";

It caused me to think about my own career, how I got here, and why it was that I felt I could do a job like this, even though no one in my family is in anything similar, nor did I know anyone who is. It did occur to me that a number of women and men
have been excellent role models to me (even though they were not in the same line of work I'm now in).

We have reported that mentoring had little effect in the area of either liking or disliking math and science and also including both subjects in future course choices. It appears that girls are aware of the long term benefits and report encouragement both to continue including math and science in their high school plans and to pursue post high education, however, the majority of information and encouragement regarding educational plans is perceived as coming from the family rather than from the school system itself. We are very aware that the family is a much more limited source of learning than the school system which also can access other important information from the community as a whole. It seems, however, that the family as a unit is increasingly alienated from important institutions of socialization, especially the school system which is so immediate for the young. Families no longer want their children educated within the school about religion, sex and related health issues or morals and yet, many families may not have the knowledge and resources or, in fact, the ability or time to do an adequate job themselves. It is evident as well, that information about courses of study in high school and future career choices are also not perceived as coming from our school system which we know includes knowledgable teachers, informed principals and trained guidance counsellors. We did find, however, that the
mentoring program and the information shared by the interaction process did work its way into the family unit. As a result of mentoring, mothers increasingly became more important as sources of information and guidance, even though that was not the purpose of the program. Mentoring came to be seen as a source of information that was valuable and worth discussing within the family. Figure 2, an adaptation from Figure 1, the initial theoretical model presented in Chapter II, demonstrates the added feedback mechanism between the family, and more particularly mother, and the adjusted self of the mentored female (see Figure 2).

Mentoring was demonstrated in this study to have an effect upon young women's perceptions of themselves and their future. Just as clearly, the effect was greatest where the family was open to consideration and discussion of the concepts and experiences their daughter gained from the mentoring process.

Practical Applications of This Study

The findings of this study suggest several possible practical applications for the school system. An obvious conclusion is that some form of mentoring program be initiated for those females who could benefit most since it would be impossible to find a sufficient number of mentors to pair with all students. This study would suggest mentoring for those females capable of completing an academic high school program but who come from homes where
Figure 2. Mentoring Model Within a Symbolic Interaction Framework after Analysis of the Mentoring Process.
the likelihood of being exposed to positive non-traditional female role models is low. Students from homes where the occupational and educational levels of both parents was low or moderate but where the parents were married resulted in the highest levels of change as a response to mentoring.

Beyond the development of a mentoring program it would appear that young females could benefit from a curriculum which included exposure to the realities of a gender differentiated world. They could benefit from a social science of society as much as they could from science, english or geography. In order to plan realistically for their futures, they need to understand the consequences of stereotypical choices in high school, about the reality of "female-type" jobs, and why, because of low wages and low prestige, they remain that way. They need to understand the rigours of dual income families, the double burden of home and job and the long-term consequences of taking time off to raise children. They need to learn about women who are dealing with social issues such as lack of child care, consequences of divorce and the impact of poverty on aging women, which are as important as environmental pollution and AIDS.

This research quite clearly demonstrates that while young females' perceptions about their future roles are changing, young males' perceptions are not. While the curriculum could include materials to assist males in perceiving a possible equalitarian world, perhaps males, as
well, should be mentored by successful females as a way of breaking down rigid stereotypical views of female roles.

The school system should also design some methodologies for including the family in the educational process. Despite all the inherent dangers of such inclusion, the benefits would appear obvious. The family that is included is much more likely to make effective use of the information propagated by the school.

**Future Research**

A follow-up study of the participants in this program as they enter the twelfth grade would provide some measurements of the long term effects of non-traditional educational and occupational mentoring and perhaps suggest some ways in which mentoring programs could be suitably adjusted.

Future research might also examine the various social and personal interest characteristics of both mentors and protégées to establish which kinds of mentor/protégée relationships are most beneficial to the participants and effective for the educational system as a whole.

Finally, the impact of structural breakdown of the family on the perceptions and behaviours of male children is strongly indicated by the current study and might usefully be examined within an interactional rather than a structural framework.
REFERENCES


APPENDIX A

STUDENT QUESTIONNAIRE

1. What is your age? (___)

2. Are you Male (___), Female (___)?

3. What grade are you in?
   Mr. Plantus (___)
   Mr. DeGraw (___)
   Mr. Perry (___)

4. Would you describe your family as:
   1. a nuclear family. (___)
   2. a single-parent family (___)
   3. a blended family (___)
   4. other (specify) ___________________________

5. Are your parents:
   1. (___) Married
   2. (___) Divorced
   3. (___) Widowed
   4. (___) Single Parent
   5. (___) Other (specify) ___________________________

6. Who are the people living in your home? Please circle the appropriate relationships:
   father     sister (# ___)  grandmother  aunt
   mother     brother (# ___)  grandfather  uncle
   other ______________________

7. What is your birth order in your family?
   (___) Only child
   (___) Oldest child
   (___) Youngest child
   (___) Middle child
   (___) Other

8. Were your parents born in Canada? Yes (___) No (___)

9. If No, where were they born? Mother _______________
   Father _______________

10. What is your father's present occupation? _______________
11. What is your mother's present occupation? ____________________________

12. If your mother is presently a homemaker, did she have another occupation at any time? Yes (___) No (___)
If yes, what did she do? ____________________________________________

13. What is the highest level of education your father achieved?
   1. (___) Elementary school
   2. (___) High school
   3. (___) Post high school technical or professional training.
   4. (___) College
   5. (___) University
   6. (___) Post Graduate

14. What is the highest level of education your mother achieved?
   1. (___) Elementary school
   2. (___) High school
   3. (___) Post high school technical or professional training.
   4. (___) College
   5. (___) University
   6. (___) Post Graduate

15. List the three things you like to do most often in your spare time:
   1. ____________________________________________
   2. ____________________________________________
   3. ____________________________________________

16. Do you know any women in non-traditional jobs? Name them.
   Yes (___) No (___)

17. If yes, how many? (___) Please list their occupations. (up to 3)
   1. ____________________________________________
   2. ____________________________________________
   3. ____________________________________________

18. How did you meet or come to know these women? Please circle one or more.

   school family member friend my part-time job
   church other (specify) ____________________________________________
19(a). Has meeting or knowing these women influenced your career choice?

1. (___) Yes (___) No.
2. (___) Yes (___) No.
3. (___) Yes (___) No.

19(b). Please explain in what way. ________________________________

_________________________________________________________________

20. Do you think there is discrimination against women in the workforce? Yes (___) No (___)


_________________________________________________________________

_________________________________________________________________

22. After secondary school, how many years of education do you plan? Please circle one only.

None 1-3 years Community College 3 years University
4 years University Masters Degree Ph.D. or equivalent

23. If none, what are your strongest reasons for not continuing in school? (Number your answers 1, 2, 3, with 1 being the main reason)

(____) Pressured into working instead
(____) Want to work instead
(____) Want to get married
(____) Lack of money
(____) Dislike school
(____) Feel school is not a challenge
(____) Other (specify) ________________________________
24. If you are going to continue in school, what are your strongest reasons for doing so? Number your answers 1, 2, 3, with 1 being the main reason.

(____) Pressured into it
(____) To make other people happy
(____) Enjoyment/Interest
(____) To get a good job
(____) Needed to pursue desired occupation
(____) Personal growth
(____) Economic benefits (money)
(____) Prestige
(____) Power
(____) To best use my abilities
(____) To increase opportunity to get to the top or influence others
(____) Because I don't think there are any jobs now
(____) Other (specify) ____________________________

25. If you plan to continue your education after high school, what would you like to study? ____________________________

26. List up to three occupations that you have recently thought of going into. Where did you learn about them?
   1. ____________________________
   2. ____________________________
   3. ____________________________

27. Why did you select these occupations? Number your top three answers 1, 2, 3, where 1 is the main reason.

(____) To make other people happy
(____) Enjoyment/Interest
(____) Personal Growth
(____) Economic benefits (money)
(____) Opportunity to get to the top or influence others
(____) Prestige
(____) Power
(____) To use mental/physical abilities
(____) Other (specify) ____________________________

28. How many years do you plan to work? _____________
29. When you want to talk to someone about your future course choices, to whom do you most frequently turn for guidance? Please circle one only.

   No-one  grandmother  grandfather  aunt  uncle
   mother  father  sister  brother  teacher  friend
   school counsellor  vice-principal  principal
   other (specify) ______________________

30. When you want to talk to someone about your future career, to whom do you most frequently turn for guidance? Please circle one only.

   No-one  grandmother  grandfather  aunt  uncle
   mother  father  sister  brother  teacher  friend
   school counsellor  vice-principal  principal
   other (specify) ______________________

31. What marks do you usually receive in school?

   1. (___) "A" student
   2. (___) "B" student
   3. (___) "C" student
   4. (___) "D" student

32. What subjects do you most enjoy in school? Why?

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

33. What subjects do you least enjoy in school? Why?

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
34(a). You will be required to take a minimum of 2 high school math courses with the option of taking a maximum of 7. How many do you plan to take?

2 (____)
3 (____)
4 (____)
5 (____)
6 (____)
7 (____)

34(b). What level of math do you plan to take?

Basic (____) General (____) Advanced (____)

35(a). You will be required to take a minimum of 2 high school science courses with the option of taking 8. How many do you plan to take?

2 (____)
3 (____)
4 (____)
5 (____)
6 (____)
7 (____)
8 (____)

35(b). What level of science do you plan to take?

Basic (____) General (____) Advanced (____)

36. Has anyone specifically encouraged you to continue your studies in math and/or science? Yes (____) No (____)

If so, who? ____________________________________________

37. Have you experienced any pressures not to go on in math and/or science? Yes (____) No (____)

If yes, please explain. ______________________________________

38. Has anyone specifically encouraged you to continue your education after high school? Yes (____) No (____)

If so, who? ____________________________________________

39. Have you experienced any pressures not to continue your education after high school? Yes (____) No (____)

If yes, please explain. ______________________________________

40. Where do you see yourself 10 years from now? Please circle one or more choices.

in school parent married single homemaker working outside the home other (specify) __________
41. Where do you see yourself 20 years from now? Please circle one or more choices.

in school  parent  married  single  homemaker
working outside the home  other (specify)__________

42. Which of the following do you see as part of your lifestyle 20 years from now? Circle one or more choices.

own apartment  own house  car  boat
summer cottage  travel  other (specify)__________

43. These will have been purchased with: (Circle one only)

parent's money  my own earnings  my spouse's earnings
joint earnings (spouse + self)  other ________

44. If you plan to work, explain how you will maintain your work and family life.

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
APPENDIX B

UNIVERSITY MENTORS

Training Session

Wednesday, February 3, 1988 7:30 - 9:30
Office of Student Affairs (West Library)

PARTICIPANTS

University Student Mentors
Dr. Gerald Booth, Department of Sociology & Anthropology
Mrs. Carol Fathers, Principal
Professor Marge Holman, University of Windsor Employment
   Equity Co-ordinator/Sexual Harassment Advisor
Mrs. Heather Metcalfe, Graduate Student, Dept. of Sociology

AGENDA

Introduction of the Research Project
"What is a Mentor"
Responsibilities of the University Student Mentors

Sex Role Socialization and Its Sources
Consequences for Females
Mentoring as a Possible Solution

Structural Barriers for Females
You ARE a positive role model

Questions, Attitudes and Behaviours to Expect
Preparation for meeting the Community Mentor

DISCUSSION AND REFRESHMENTS
APPENDIX C

Department of Sociology & Anthropology
University of Windsor
Windsor, Ontario N9B 3P4

February 1, 1988

Dr. Victoria Paraschak
Faculty of Human Kinetics
University of Windsor
Windsor, Ontario N9B 3P4

Dear Dr. Paraschak:

My sincerest thanks for your agreeing to participate in this project which involves a three-stage mentoring process for elementary school females, female University students and professional women in our community, concerning young females' perception of their handling of non-traditional educational and occupational goals.

The purpose of this study is to assist young girls in the exploration of their abilities and areas of interest and to make them aware of and eager to explore educational and occupational opportunities. A student will contact you within the next week to arrange to spend a day with you, during the month of February (to be repeated during March and April), at your convenience. During that time, I would appreciate your giving consideration to the following areas of interaction:

1. Awareness of all aspects of your particular profession.
2. Information regarding related areas of employment.
3. Exposure to female colleagues in professional areas, whenever possible.
4. Advantages & disadvantages of being a professional woman.
5. Management of home/work dichotomy.
We feel this will be an interesting and rewarding experience for the young girls involved in this project as it will give them an opportunity to receive information regarding educational and occupational opportunities before stereotypical messages become firmly entrenched.

I have enclosed, for your convenience, a log book, in which I would request you keep a record of the interaction so that I may evaluate the experience from your perspective.

Again, may I express my appreciation and request that you contact me if any questions or problems arise.

Sincerely,

Dr. Gerald Booth  
Professor  
Department of Sociology  
University of Windsor

Mrs. Heather Metcalf  
Graduate Student  
Department of Sociology  
University of Windsor
APPENDIX D

MENTORING PROGRAMME

WORKSHOP I

CAREER AND FAMILY

Dr. Durhane Wong-Reiger

1. Change in historical patterns of education and employment. A higher proportion of females take post-secondary education and enter the workforce.

2. Workplace constraints to success.
   a) attitudes of males
   b) attitudes of females toward themselves
   c) modes of male and female interactions

3. Other constraints
   a) pregnancy
   b) child rearing expectations
   c) responsibility for child care and household activities.

4. Methods to deal successfully with possible career and family conflicts.
   a) education
   b) consciousness raising re: image of women
   c) successful male/female interactions in the occupational areas
   d) planning-goals and planning the avenues to attain those goals.
APPENDIX E
MENTORING PROGRAMME
WORKSHOP II

THE OCCUPATIONAL MARKETPLACE TODAY

Mrs. Sue Zanin, Affirmative Action, Resource Teacher
Windsor Board of Education

1. What does the current occupational marketplace look like with respect to employment?
   a) Proportions of people employed in various employment sectors.
   b) Gender breakdown within these sectors
   c) The reward structure in the various sectors, including gender pay differentials and some future projections as to job distribution.

2. Availability currently of entrance jobs in the various sectors and some future projections as to job distribution.

3. Educational commitments associated with entry into these occupations.
   a) Educational turning points--points at which course decisions expand or restrict future occupational choices.
   b) Extent of educational training associated with various occupations.
   c) Some specifics with regard to minimum secondary school education associated with direct job entry, community college training, and university training.

4. Gender stereotypes: where they come from and how they impact upon educational and occupational selections for females.

5. Methods of combatting these stereotypical expectations.
   a) Knowledge of what is available and what is necessary to attain it.
   b) Assertiveness
   c) Questioning any efforts to limit pursuit of goals because one is female.
   d) Perception of self--"be the best you can". You can be what you dream of being as long as you carefully plan an educational route to occupational success.
APPENDIX F
MENTORING PROGRAMME
WORKSHOP III

GIRLS CAN

Mrs. Sue Zanin, Affirmative Action, Resource Teacher
Windsor Board of Education

This workshop begins with a short video to demonstrate some of the problems associated with stereotypical images for those females who seek entry into non-traditional educational and occupational career paths. "Girls Can" was produced by Victoria Women in Trades Society, Victoria, B.C. Canada. (Cat. # VT000067-01)

This video depicts eight women in non-traditional occupations who give a short description of who they are, the nature of their education and the preparation for the position they now hold. They describe when and how they decided to pursue their respective careers, insights into sources of their motivation and the qualities necessary to be successful in their chosen field, as well as rewards and difficulties encountered.

Alternating with the discussions by the eight women who are successful as air traffic controller, fisherperson, pilot, programme analyst, veterinarian, marine biologist, carpenter, and antique furniture restorer, are discussions among two or more teens in the 13-16 age group who typify attitudes that produce pitfalls and roadblocks for young females contemplating non-traditional educational goals.

The workshop then proceeds, involving groups of 4 girls who investigate various non-traditional jobs with the aid of information guides, making posters looking at Non Traditional Careers for Women under the following headings:

1. Working Conditions
2. Requirements
3. Salary
4. Personal Qualities and Interest
5. Job Prospects

The session ends with each group presenting their poster and explaining what they have discovered to the rest of the group.
VITA AUCTORIS

Heather Estelle (Murray) Metcalfe, born in Farnham, Surrey, England July 21, 1944, was raised in Victoria, British Columbia and graduated from Mount Douglas High School in 1962. After her marriage to Alan, in August 1963, they moved to Madison, Wisconsin where Alan attended graduate school and their first daughter, Alisa, was born in January, 1966. After one year in New York they moved to Windsor, Ontario in 1969, where their second daughter, Karen was born in May, 1970.

After raising her family and being involved in volunteer activities, she began as a part-time student at University of Windsor, majoring in Sociology and graduating with a B.A. in October, 1985. In September, 1985, she was admitted to the Faculty of Graduate Studies and Research at the University of Windsor. As a graduate student, she was a Graduate Assistant in Statistics for three years and completed the requirements for her M.A. in Sociology in 1989. In January, 1990, she will be employed as a sessional instructor at the University of Windsor.