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PERCEIVED AFFECTIVE AND BEHAVIORAL CHARACTERISTICS  
OF MOTHER-DAUGHTER RELATIONSHIPS AND SUBSEQUENT  
MENTORING RELATIONSHIPS

by

Anne McShane

A dissertation submitted in partial fulfillment  
of the requirements for the degree  
of  
DOCTOR OF PHILOSOPHY  
in  
Psychology

UTAH STATE UNIVERSITY  
Logan, Utah  
1989

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Anne Marie McShane

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ABSTRACT

Perceived Affective and Behavioral Characteristics  
Of Mother-Daughter Relationships and Subsequent  
Mentoring Relationships

by

Anne Marie McShane, Doctor of Philosophy

Utah State University, 1989

Major Professor: Glendon Casto, Ph.D.  
Department: Psychology

Mentoring has been recognized as an important relationship in a variety of circumstances. This study was conducted for the purpose of determining the perceived benefits or disadvantages of a mentor relationship and identifying characteristics of the relationship. Another objective was to explore to what extent the nature of the mother/daughter relationship functions as a factor that makes the choice of a mentoring pattern more likely.

The study sample consisted of 47 females, 12 graduate students and 35 assistant or associate professors on the faculty at Utah State University. The subjects completed several mother/daughter inventories, a mentoring inventory, and a personality inventory. Twenty subjects were

interviewed for a more in-depth exploration of both their mentoring experience and mother/daughter relationship. Subjects were divided into groups based on gender of the person most facilitative of their professional objectives.

The male-mentored, female-mentored, and non-mentored groups were comparable on measures of perceived mother/daughter relationship characteristics and personality variables. The relationship between the score on a mother/daughter attention measure and a total mentor score was .29. The Pearson correlations between perceived mother rejection and father love was  $-.61$ .

Subjects were categorized as to whether they met the criteria for having had a mentor based on scores on a mentor inventory. Seventy-eight percent of subjects who specified females as most significant to their career met the criteria for having been mentored. Fifty percent of subjects who indicated a male was most facilitative scored high enough to meet the criteria.

A multiple regression model used to predict total mentor score based on perceived mother attention and gender of mentor accounted for 20% of the total variability. An interaction was present between gender of the individual specified to be most significant to the protégé and perceived mother attention. Separate multiple regression equations resulted in a correlation of  $.53$  between mother

attention and mentor score when the specified individual was male and .16 when the individual named was female.

(110 pages)

CHAPTER I  
INTRODUCTION

Introduction and Statement of the Problem

The term mentor comes from Homer's Odyssey. Mentor was a friend of Ulysses. Ulysses left Mentor in charge of supervising the education, formal and informal, of his son, Telemachus. Over an extended period of time, Mentor became advisor, tutor, guardian, and surrogate father (Edlind & Haensly, 1985) to Telemachus. The mentoring relationship in this instance involved more than teaching or advising. There was implied a type of love or intimate relationship. Mentor had an emotional investment and a commitment to the well-being of Telemachus. As the word mentor is used today, perhaps less intensity is involved (Edlind & Haensly, 1985).

Levinson (1978) defined a mentor as a teacher, a sponsor, a guide into a new social world, an exemplar to admire and emulate, and a counselor giving moral support. Bova and Phillips (1981) gave the following definition:

Mentors are those who practice most of the following principles:

1. Try to understand, shape, and encourage the dreams of their protégés.

2. Often give their blessing on the dreams and goals of their protégés.

3. Provide opportunities for their protégés to observe and participate in their work by inviting their protégés to work with them.

4. Teach their protégés the politics of "getting ahead" in the organization. (p. 7)

Mentoring has been recognized as an important form of relationship in a variety of circumstances. As noted earlier, Levinson (1978) defined the mentor relationship broadly and placed great importance on its role in adult development, particularly for males. For example, Burton (1977), in a study of the transition to young adulthood, found the absence of a mentor resulted in what he termed an existential vacuum in his clients.

Mentoring has been used in many areas. For example, mentoring has been implemented formally in programs for gifted children (Runions & Smyth, 1985). In business and management activities a young newcomer is at an extreme disadvantage in the absence of a mentor (Roche, 1979). In the field of psychology, graduate students have perceived the significance of the mentor relationship; those students not having mentors expressed a desire to have one (Cronan-Hillix, Gensheimer, Cronan-Hillix, & Davidson, 1986). In medicine, a study by Calkins, Arnold, Willoughby, and Hamburger (1986) examined the perceived actual versus ideal role of the mentor relationship. The mentor, termed docent,

was formally assigned to each student in years three through six of medical study.

More recently, other studies have explored the importance to women of mentor-like relationships. Concern has been expressed that women may not have the same opportunities to develop a close relationship with a professional in their career field because of a paucity of female role models (Noe, 1988; Bogat & Redner, 1985). Some research suggests that women prefer interacting with another female in a work setting (e.g., Larwood & Blackmore, 1978). Goldstein (1979), in a study measuring proclivity of research publication in a sample of psychologists, found that psychologists with same-gender advisors were significantly more productive than were those with cross-sex role models.

One of the difficulties in drawing conclusions about the benefits of a mentor relationship is the variety of definitions used to describe what a mentor is or does. Some definitions are narrow, others broad; a mentor relationship can be described in behavioral or psychological terms. Current research tends to focus on behavioral aspects, as opposed to psychological significance (Bogat & Redner, 1985). For example, Alleman, Cochran, Doverspike, and Newman (1984) concluded that mentoring is a behavioral phenomenon as measured by responses on the Leadership Development Questionnaire and not related to personality traits. Much of the literature on mentoring lacks sound empirical

research foundations. Although it is acknowledged generally that the mentoring relationship is a positive one, there could be disadvantages or drawbacks to such a relationship. Little attention has been given to possible negative consequences, such as overdependence on the mentor.

Until recently, the primary caregiver for a girl has been her mother. In addition, the mother has functioned as a role model for the daughter in a way she has not for her sons. It has been speculated that females have more flexible ego boundaries than males and that women may never separate in total from their mothers (Chodorow, 1978; Friedman, 1980). The mother/daughter relationship, in fact, may involve a prolonged separation process characterized by ambivalent feelings and conflicts (Notar & McDaniel, 1986).

It is also possible that some of the characteristics of the mother/daughter relationship are similar to relationships involving a female mentor and female protégé. Indeed, women have been reported to expect different benefits, such as modeling the possibility of combining a personal and professional life, from a mentor-like relationship than men (Gilbert, 1985). Given the premise that a mentor relationship may be advantageous for professional growth, career advancement, and perhaps developmental well being, it might be surmised that the quality of the mother/daughter relationship could indirectly

influence the daughter's success by increasing the likelihood that the daughter would seek out and become engaged in a mentoring relationship with a female.

There is reason to suspect that the nature of the mother/daughter relationship may be related to a capacity for intimacy that is characteristic of future relationships. The developmental tasks of learning to be intimate and identity formation may occur simultaneously in adolescent females (Douran & Adelson, 1966). If the mother/daughter relationship is poor, perhaps the adult daughter behaves maladaptively in interpersonal processes, such that the development of a successful mentoring relationship becomes problematic. For example, in a clinical setting, a female client with a female therapist will resist discussing competitive and hostile feelings toward her mother more than will a female client with a male therapist (Sifneos, 1987).

Despite increased interest in the behavioral benefits of a mentor relationship, there has been little systematic investigation of psychological-needs fulfillment for the protégé. Gilbert stated that female students rate personal attributes, lifestyle, and values as significant factors in selecting a role model much more than do male students (1985). He hypothesized that females seek models who are able to integrate personal as well as professional roles. The problem is that there has been a lack of research to



determine (a) in what ways mother/daughter relationships are similar or dissimilar to mentor-like relationships and (b) to what extent mentor-like relationships reflect or re-enact mother/daughter relationships. Based on the researcher's clinical experience, as well as a review of literature, it is her position that women may seek to repeat parts of the roles they experienced as a daughter in their mother/daughter relationship or that they may be seeking to meet an unfulfilled need, a relationship with a "good" mother. This investigation will provide added information regarding the perceived benefits and detriments of female/female mentor-like relationships. It will also explore, in terms of affective facets, what the most salient characteristics of the mentor and mentor relationships are. In particular, this research will focus on women and their experience with female mentors and explore the ways this relationship is related to mother/adolescent daughter relationships.

#### Purpose and Objectives

The purpose of this study was two fold. The first purpose was to identify characteristics and patterns of the mentoring relationship as perceived by the protege when both parties are female versus when the mentor is male. The second purpose was to explore the nature of the

mother/daughter relationship in those instances when the mentor is female.

The specific objectives of this study were to:

1. Determine the perceived benefits of a mentor relationship involving female protégés and female mentors as compared to female proteges with no mentors or with male mentors.

2. Determine the most salient behavioral/cognitive/affective characteristics of the mentor and mentor relationship.

3. Determine subjects' perceived drawbacks/disadvantages within female/female mentor relationships as compared to male mentor/female protégé relationships.

4. Determine whether females who score differently on daughter's perceived measures of mother's loving attention, casualness, dominance, or rejection behavior differ in their abilities to obtain a mentor. Is the pattern of the mother/daughter relationship one factor that makes the choice of a mentoring pattern more likely?

Objectives 1, 2, and 3 are descriptive and, therefore, hypotheses are not required. There is a need for descriptive research because existing research has not focused on female/female mentorship patterns. Objective 4 is concerned with whether there is a difference on one variable (perceived affective and behavioral characteristics

of the mother/daughter relationship) among three different groups.

Hypothesis 1 is:

There is no difference in subjects' perceived affective characteristics of the mother/daughter relationship among females who have had female mentors, subjects who have had male mentors, and subjects who have not had mentors.

Working Hypothesis 1:

The perceived affective mother/daughter relationship will be different for the group of females who has had female mentors than for the groups who have had no mentors or whose mentors were male.

Hypothesis 2 is:

There are no differences in the perceived behavioral characteristics of the mother/daughter relationship among females who have had female mentors, those who have had male mentors, and those who have not had mentors.

Working Hypothesis 2 is:

The perceived behavioral mother/daughter relationship will be different for the group of females who have had female mentors than for those who have had no mentors or whose mentors were male.

CHAPTER II  
REVIEW OF LITERATURE

This chapter explores and integrates previous research and clinical impressions in two areas: the import that the mother/daughter relationship has on the young adult and the significance of a mentor relationship to female professionals. This chapter is divided into the following sections:

1. Influence that the affective mother/daughter relationship, as perceived by the daughter, has on the personal and professional well-being of the young adult.
2. Definitions and functions of the mentoring relationship.
3. Women and mentoring.

Mother/Daughter Relationship as Perceived  
by the Young Adult

The influence of the mother on her daughter's role choice, role satisfaction, and self-esteem is profound. In a sample of New York women, Sholomskas and Axelrod (1986) found that women's self-esteem and role satisfaction were greater when their perceived relationships with their

mothers were viewed as loving and more autonomous. The mothers' role choices were not significant to the daughters' role choices, but daughters were more satisfied with the roles they chose (career, non-career work, or homemaking) if they had experienced intimacy in the mother/daughter relationship. Sholomskas and Axelrod (1986) measured self-esteem via the Coopersmith Self-Esteem Inventory, Short Form. They used the Children's Report of Parental Behavior Inventory (CRPBI) to measure aspects of the mother/daughter relationship (Schaeffer, 1965). The mother/daughter dimension that accounted for the greatest variance on the Self-Esteem Inventory was the hostility scale.

Earl (1987) distinguished the construct of self esteem from the construct of self-trust. He proposed that self-esteem is dependent on a range of social feedback from others, but self-trust has internalized some of the issues. Self-esteem was highly correlated with closeness to mother ( $r = .51$ ) but nonsignificantly correlated with closeness to father. Self-trust, conversely, was related with closeness to father but not to mother. Self-trust was found to predict creativity, tenacity, and self-efficacy -- traits that would be highly desirable in many professions or businesses. Self-esteem, on the other hand, was not important in predicting these qualities. It may be the case that females are disadvantaged professionally because of the

nature of the mother/daughter relationship. It is further possible that the characteristics, both positive and negative, of a significant mother/daughter relationship may be repeated in a relationship with another female, such as transference as noted in female therapist/female client interactions (Sifneos, 1987).

The primary relationship with the mother may affect future relationships with peers. If the mother is traditionally the major force in the female adolescent's life, and closeness, support, and security are lacking from that source; confusion, insecurity, and inappropriate decision making by the young female may be the result (Olson & Worobey, 1984). Gold and Yanof (1985) explored facets of the daughter's capability for forming intimate friendships with others. If the daughter perceived her relationship with her mother as affectionate and democratic, she will have experienced some of the trust and autonomy that Erikson (1965) delineated as necessary for intimacy. Gold and Yanof's findings were contrary to the belief that adolescents who do not have relationships with their parents are drawn into relationships with peers. They may have relationships with peers, but such relationships are often problematic and lack key characteristics necessary for close friendships. Another finding was that daughters who reported having democratic mothers were able

to engage in more mutual influence in their later female/female interpersonal relationships.

Femininity and motherhood are often perceived ambivalently by young women. Motherhood may be highly valued yet simultaneously put down by the same society that exalts it (Notar & McDaniel, 1986). Many mothers experience conflict over their roles as women and mothers, and some of that tension may be communicated to their daughters who sense that although their mothers may identify with them, the sons are accorded more esteem (Flax, 1978).

The period of adolescence is a time when conflict between mother and daughter reaches a peak. The daughter seeks independence and autonomy that may be viewed as threatening to the mother. Particularly in the areas of sexual activity and lifestyle, conflicts are common (Flax, 1978). Feminism may operate to bind women together, particularly mothers and daughters, by giving them a sense of identity. Alternately, feminism might increase the conflict if the mother concludes that the daughter is rejecting her values and role. In a questionnaire study, Notar and McDaniel (1986) found that of those daughters who perceived good relationships with their mothers, most felt both they and their mothers had been affected by feminist thinking, although the daughters did not attribute their positive relationships to feminism. Conversely, daughters who reported poor relationships with their mothers

frequently referred to a struggle over feminist issues as a source of conflict and rejection.

If a female lacks either a role model in her mother or support for her role-choice, she may experience ambivalence about her role choice decisions. Consequently, she may be less committed and relatively less successful than her more committed male counterpart. If the daughter is able to obtain support in the form of encouragement, modeling, or interest from another source, some of her important needs for identification may be met. If she has already experienced a positive relationship with her mother, she may be apt to seek another female relationship. If she has not had a caring, supportive mother/daughter relationship, she may be looking for Woolf's "lost mother" (1927).

#### Definitions and Functions of the Mentoring Relationship

In contrast to the relationship Telemachus had with Mentor, many current definitions of mentor emphasize the facilitation of the protégé's career. For example, Bova and Phillips (1981) stated that "A mentor is usually a person of high organizational or specific career status who by mutual consent takes an active interest in the career development of another person" (p. 7).



Cronan-Hillix et al. defined a mentor as "an experienced adult who guides, advises, and supports inexperienced protégés for the purpose of furthering their careers" (1986, p. 123).

Much of the existing research on mentoring has focused on business and management. Academia is another broad area in which conflicting opinions exist on the importance of mentoring for the aspiring professional (Bogat & Redner, 1985). A graduate education prepares an individual by offering both an academic education and professional socialization. A mentor can facilitate the student's professional growth, provide encouragement, and, in general, promote the student's interest in the department (Bogat & Redner, 1985).

The academic setting is frequently the first opportunity to acquire a mentor; Kaufmann, Harrel, Milans, Woolverton, and Miller (1986) studied the Presidential Scholars of 1964-1968, 88% of whom had advanced degrees by 1980. Their population responded to a questionnaire concerning the past and present influence of mentors. Kaufmann et al. (1978) essentially used Levinson's mentorship model. Most of those who responded that they had been significantly influenced by mentors (55% of the sample) indicated that the relationships were with professors in graduate or secondary school, although colleagues, supervisors, and counselors were also mentioned.

Several studies have explored the role functions of the mentor in an academic setting. Erkut and Mokros (1984) found that female students with female role models rated their mentors high on the following functions: (a) provides feedback on quality of work, (b) encourages student to pursue further work, (c) helps with academic work, (d) provides moral support, and (e) shows interest in student's personal growth.

The most frequently described functions of mentors of by scholars in a study by Kaufmann et al. (1986) were subsumed under three categories: role modeling, support and encouragement, and professional socialization. A difference in the data of this study as compared to other research findings was that the more important functions of the mentors were perceived to be in role modeling and support and encouragement as opposed to professional socialization and support. Kaufmann et al. concluded that in a group of gifted adults, the most significant part of the mentorship lies in the transmission of values and attitudes to the young adults. Thus, gifted young adults obtain both direct and indirect benefits from a mentoring relationship.

Edlind and Haensly (1985) grouped the gifts of mentorship into seven categories. These included (a) career and interest advancement, (b) increase in knowledge and skills, (c) development of talent, (d) enhancement of

self-esteem and self-confidence, (e) development of a personal ethic or set of standards, (f) establishment of a long-term friendship, and (g) enhancement of creativity (p. 56). It is apparent that more than career or academic interest is involved in such a relationship.

The mentoring relationship should not be viewed as one-way. Levinson (1978) concluded that although altruism was involved, the mentor is also benefiting himself by connecting with the youth and energy of the protégé. By serving as a mentor, the individual is learning more about himself as well as new facets of the professional world he is sharing with his disciple. Runions and Smyth (1985) also emphasized a mentorship as a co-learning partnership in which the protégé is recognized as an equal partner in the learning experience. Their focus was on gifted adolescents who are linked with resource people in the community.

Commitment of time and energy appears to result in loyalty to the mentor on the part of the protégé. Calkins et al. (1986), in a new program with assigned docents in a university medical school, examined the relationship between the docent's perception of the ideal and actual practice and the student's perception of the ideal and actual role of the docent. Rank-order correlations were for the former .87 and for the latter .93. In both instances the area that had the greatest discrepancy between the ideal and the actual was the amount of time spent on activities together. Both

docent and student ideally would have more time with each other.

Although strong, the mentor relationship is usually short-lived. Levinson (1978) described a typical mentorship as being transitory, with the average relationship lasting two to three years. The mentor is also frequently eight to fifteen years older than the protégé. This is supported by Kaufmann et al. (1986). Mentorships are one to three years in length, the mentor is at least 15 years older than the respondent, and a move by either one of the parties accounts for 81% of the terminations of the relationship.

Several attempts have been made to measure the presence and strength of a mentoring relationship. Riley and Wrench (1985) combined concepts of mentoring from three theoretical treatises on mentoring and six empirical studies. They removed duplicates and reworded some of the facets to come up with a Career Support Scale consisting of 29 items under four subscales. Subscale 1 is a provision subscale. The mentor provides love, status, information, and services. Subscale 2 is an emotional subscale recognizing that there is a high degree of emotional involvement by the participant. Subscale 3 addresses the mentor's facilitation of the protégé's personal and professional self-concept. The last subscale is a resource subscale. Essentially, acknowledgment is made that the mentor has a higher status

than the protégé in terms of resources to which the mentor has access.

Each item is rated by the respondent on a scale of 1-5, with 5 indicating the item is very descriptive of their relationship and 1 indicating little or no resemblance to the relationship. For the respondent to be considered truly mentored, an average score of 3.5 on each of the subscales is needed. Only 35% of the women using the scale met the criteria for being truly mentored. This is less than in most studies in which a more loosely defined concept of mentoring is used. A mentor, loosely defined is an individual who takes a personal interest in helping a less experienced person advance in her career and teaches her the ropes. Riley and Wrench (1985) identified 28% of their sample as being group mentored. To meet the criterion for group mentorship, two or more individuals must have been supportive in different ways, such that the female respondent was able to report a relationship of 3.5 on each of the subscales. The remainder of the sample was considered nonmentored.

When the mentoring relationship was strictly defined, respondents who reported having mentors, as a group, had statistically higher scores on career success and satisfaction than did individuals who did not have mentors. This was not true for 67% of the respondents who met a loose definition of mentoring. Moreover, career success and

satisfaction were higher for individuals experiencing traditional mentorships than group mentorships.

#### Women and Mentoring

Females and males experience different opportunities and often hold different perspectives and values in the present society. Only recently has the importance of a female professor as a role model for female students been recognized. Gilbert (1985) explored some of the different dimensions that male and female students valued in a same-gender role model relationship with a professor. His sample consisted of 111 doctoral students of psychology at a large state university. Subjects responded anonymously to a mail-in questionnaire. Female students rated having a female role model as more significant to their professional growth than did male students who reported having a male role model. In addition, 75% of the females who responded selected a female role model even in situations in which female role models were much less available. Female students indicated that personal attributes, professional achievement, life-style, and values were all important factors in selecting a role model. However, Kaufmann et al. (1986) found that in their study 75% of females who reported having mentors stated the mentors were male. Erkut and Mokros (1984) in a sample of over 700 sophomores and

seniors attending liberal arts colleges found that female students selected female mentors in proportion to their availability. Those females who did choose female mentors, however, indicated it was important to them to have a role model who could successfully combine a personal and professional life.

Female graduate students may perceive negative attitudes towards women's achievement and women's roles as a barrier to obtaining success and career satisfaction. Having a same gender role model with similar values and attitudes, particularly concerning feminist issues, may provide encouragement. It is also possible that women may be more sensitive to some of the adverse effects of professional success than their male counterparts (Gilbert, 1985).

Assuming that role modeling is one of the more significant aspects of the mentorship and that people selectively choose to emulate the behaviors of same gender models, a ready conclusion would be that female mentors would have more to offer female protégés than would male mentors (Bandura, 1977).

Mentors probably do further the professional as well as academic success of the student. Women who have experienced a relationship with a mentor of either sex reported more involvement in professional activities than did those who did not have a mentor (LeClurpe, Tollefson, & Borgers,

1985). There are conflicting and inconclusive findings regarding the import of mentoring on academic achievement (Bogat & Redner, 1985; LeClurpe et al., 1985). A causal relationship is difficult to establish since it is likely that students with a higher GPA or those who are more motivated have a better chance of attracting a mentor than do poorer students. Thus, mentoring may influence not only the later professional success of the student, but also enhance the development of the student by introducing her to more professional activities.

Indirect evidence suggests that female graduate students may have fewer opportunities to establish mentoring relationships than do male graduate students. Women graduate students are less likely than male graduate students to receive positions in a department which entail working closely with a professor. For example, they are disproportionately given teaching assistantships as compared to research assistantships (McNeal, et al., 1975). Mentoring relationships are often established informally by working closely with a faculty member. Because females are awarded less overall funding than males and, in particular, less research funding, they have less of an opportunity to develop a close working relationship with a professor than do male students.



There are other factors limiting availability of mentoring relationships for female students. Frequently, women are under represented in departments of a university (Russo, Olmedo, Stapp, & Fulcher, 1981). Many of the women faculty members are untenured; research suggests that faculty are more likely to become mentors when they are in advanced career stages, such as associate or full professors, rather than assistant professor. Thus, the potential for a female mentor is further reduced. Furthermore, evidence indicates that persons may choose to become mentors as a result of their own history as a protégé and through a desire to duplicate the experience (Bova & Phillips, 1981). Without having had a mentor of their own to function as a model, it may be difficult to fulfill the role of mentor to others.

A major implication concerning the nature of the mentoring relationship is apparent from the literature reviewed. A large commitment of time and energy from both participants is necessary. Enough time needs to be spent together that a relationship can bloom and grow. Many of the functions and roles that a mentor has for the protégé, or that the protégé has expressed a desire to have, are very similar to characteristics of an intimate parent-child relationship. Analogous to a professional in a particular career serving as role-model to a novice in that area is the parent of the same sex functioning as a model to the

adolescent. For example, both parent and mentor may offer special attention, respect the individual and her point of view, encourage the individual to excel, and help the individual sort out decisions.

CHAPTER III  
PROCEDURES FOR COLLECTION OF DATA

Setting and Population

The setting for this investigation was Cache County in northern Utah. Cache County is a largely rural community with a population of approximately 60,000. A state land grant college, Utah State University, is in Logan, the largest city. The target population, to which results will be generalized, was female graduate students and female assistant or associate professors at Utah State University.

Sample

The subjects were 47 females who were graduate students, assistant professors, or associate professors at Utah State University. The 12 graduate student subjects were all in doctoral programs. There were 35 assistant or associate professors who were employed full-time at Utah State University. At least one faculty member was included from each of the following departments and special units: Art, Biology, Business Administration, Chemistry, Communications, Developmental Center for Handicapped Persons, Education, English, Family and Human Development,

Fisheries and Wildlife, Home Economics, Instructional Technology, Landscape Architecture, Languages and Philosophy, Math, Nutrition and Food Sciences, Physical Education, Political Science, and Social Science. Since all participants were volunteers, the sample was not random and may not be representative of the target population. Therefore, rather than use the random sampling for representativeness model (Cook & Campbell, 1979) to increase external validity, the model of deliberate sampling for heterogeneity was used. In this model, the concern is to select a wide variety of instances from each class that will be represented in the design.

Subjects were intentionally selected so that they varied in age, department, and academic experience. Technically then, it is not possible to generalize results to a specific population.

Approval to conduct this investigation was obtained by the Human Subjects Approval Committee at USU. Authorization for names of female students and faculty was requested from each department. Individual consent forms were obtained from each subject and all data was kept confidential.

#### Instrumentation

Individuals who agreed to participate in the research were assessed by the following instruments:

1. A Mentoring Questionnaire. This is a 28 item Career Support Scale developed by Riley and Wrench (1985). This scale is designed to provide one of the more rigorous definitions of having been mentored. Subjects were asked to specify the gender of the mentor. The scale was developed by Riley and Wrench in the following manner: Three theoretical views and six empirical studies of mentoring were used to define the concept of mentoring. Each descriptor of a mentoring relationship found in the nine references was listed on a card. The 117 descriptors that resulted were reduced in number by combining those with similar meaning. The 28 existing statements were grouped into three subscales. The subscales included a provisions subscale, an emotion subscale, and a self-concept subscale.

Since there was no existing evidence of reliability or validity for this measure, it was established by the researcher in the following manner. Each of the 28 statements was printed on a separate card. Three judges (graduate students in psychology) were asked to (a) state whether this item was relevant to the broad concept of functions of a mentor and (b) if relevant, to independently classify the items into subscales. The percentage of agreement among the judges was 78 percent. This constitutes a measure of the concurrent validity of the measure. Reliability of the measure was test/retest; the

questionnaire was administered to ten of the subjects a second time after a two- to four-week delay. This resulted in a coefficient of stability for this instrument in this setting with this sample of .88.

Each item was rated on a 5-point scale from being not at all descriptive of the relationship to very descriptive of the relationship. A score for each subscale was obtained by adding the scores. A total score was then calculated by adding the three subscale scores. For purposes of determining whether the individual met the definition for being mentored, the criteria used by Riley and Wrench (1985) were followed. An average score of 3.5 was needed on each of the subscales.

2. A Mother/Daughter Intimacy Scale. This is a 17 item scale that was developed by Walker and Thompson (1983) and designed to measure various aspects of intimacy. Respondents rated each item on a Likert-type 4-point scale with 1 indicating the statement was very untrue of the relationship and 4 indicating the item was very true. Their original scale consisted of 50 items that were factor analyzed into five dimensions. The 17 items selected for the general intimacy scale displayed at least .5 loading on intimacy and less than .25 on any of the other dimensions. Reliabilities (Cronbach's alpha) reportedly have ranged from .91 to .97 depending on the respondents.

3. An Attachment Scale. This is a nine item scale that was developed at the same time as the Intimacy Scale. It was the dimension that had second highest loadings on any of the factors. Each item had at least .5 loading and less than .25 shared loading on other factors. Reliabilities (Cronbach's alpha) for the attachment scale ranged from .86 to .91 across respondents (Walker & Thompson, 1983).

Intimacy and attachment are two of the concepts that are repeatedly mentioned in the literature to describe the affective mother/daughter relationship (Olson & Worobey, 1984; Notar & McDaniel, 1986; Gold & Yanof, 1985). They are also two concepts this researcher was interested in assessing.

4. The Parent-Child Relation Questionnaire II (PCR II). (Siegelman & Roe, 1979). The PCR II is designed to be completed by adults who recall how their parents treated them while growing up. The items refer to specific behavior rather than attitudes or feelings. There are four forms, for same-sex and cross-sex parents and children. For purposes of this study, the mother/daughter and father/daughter forms were used. The form consists of 50 items, 10 each for behaviors categorized as loving, rejecting, casual, demanding, and attention. Factor analysis of the PCR II has yielded three distinctive orthogonal factors: love-reject, casual-demand, and attention. Item responses were rated one for very untrue to

four for very true. The score for each of the five categories was the total score of the five items.

Factor I, Love-Reject, was computed by subtracting the Reject score from the Love score and adding 50 to eliminate negative scores. High scores represent a more loving mother. Factor II, Casual-Demand, was computed similarly. Factor III, Attention, is the same as the category score, with higher scores representing a more attentive mother.

Reliability was computed by Kuder-Richardson Formula 20 on college undergraduates. Reliabilities ranged from .63 to .97 on all four samples.

Content validity was supported by unanimous agreement of four independent judges that certain items belonged in a given category. Support for the factorial validity of the PCRII can be found in the factor saturations depicted in Tables 11, 12, and 13 of Siegelman and Roe (1979, p. 5).

5. The California Psychological Inventory (CPI). The CPI is a 480 item personality inventory which yields scores on 18 scales. Approximately half of the items appear on the Minnesota Multiphasic Personality Inventory (MMPI) (Anastasi, 1982). Unlike the MMPI, the CPI was designed for use with normal populations. Three of the 18 scales are validity scales. The other 15 scales yield scores on a variety of personality dimensions, among them dominance, sociability, self-acceptance, responsibility, which are widespread and emphasize the positive aspects of personality



as opposed to pathology (Gough, 1975). The intercorrelations of the scales are high; most scales correlate .50 with at least one other scale. In one study test-retest reliability over a year period ranged from .44 to .77 for the 18 scales.

The CPI was included to determine if there were any differences on personality characteristics important for social interaction between females who had female mentors, male mentors, or were non-mentored. The CPI also served as a distractor to the subjects. A final reason for administering the CPI was that the scale scores could be compared with norms for specific populations such as graduate students or research scientists.

6. Two Structured Interviews. The interviews were not given to all the subjects. Instead ten subjects were selected at random from subjects having male mentors and ten having female mentors for a more in-depth exploration of the perceived benefits and characteristics of the mentoring relationship. The first interview asked a set of questions concerning the mentor relationship. The second interview focused on the mother/daughter relationship. The questions that were asked are in Appendices C and D. The researcher conducted the interviews which were audiotaped. Confounds and experimenter bias were controlled for, in part, by the structured nature of the interview (the same questions were

asked of each participant). The interviews not only served to add further information about the mentoring relationship and the mother/daughter relationship, but functioned as a validity check for the mentoring interview.

#### Data Collection

The subjects were contacted initially by telephone. All those who agreed to participate were given the inventories, including the CPI, on an individual basis. The order of the inventories was counter-balanced to avoid a response order bias. Inventory packets were identified by number such that the subjects' names did not appear on any of the forms.

1. Subjects completed the four self-administration report inventories. To reduce demand characteristics, the order of the inventories was counterbalanced. A distractor instrument, the CPI, was used.

2. The investigator reviewed the questionnaire responses for individuals who had met the criterion for having been mentored. The criterion was having obtained an average score of 3.5 or more on each of the subscales of the Mentoring Inventory. From the subject pool of respondents who were mentored by a female, ten individuals were selected at random and asked to participate in two structured interviews, each lasting approximately 50 minutes.

Similarly, ten individuals who met the criteria for having been mentored by a male were selected.

3. The first structured interview focused on perceived benefits, disadvantages, and characteristics of the mentor relationship and took place six to eight weeks following the completion of the inventories.

4. The second structured interview focused on the affective nature of the mother/daughter relationship. Both interviews were taped.

CHAPTER IV  
ANALYSIS OF DATA AND RESULTS

This investigation was conducted to identify perceived benefits of mentoring relationships, determine what the salient characteristics of the mentor and mentoring relationship are, and, finally, to determine if female protégés with female mentors respond differently on measures of perceived affective and behavioral characteristics of the mother/daughter relationship, than do female students who do not meet the requirement for having been mentored or who had a male mentor.

To achieve these purposes, measures of mothers' behavior toward their daughters, as perceived by the daughter were compared with the degree of mentoring experienced. Demographic information was obtained through a questionnaire. The demographic information included present age, approximate age of mentor, length of the relationship, marriage status, and religion (optional). Affective and behavioral characteristics of the mother/daughter relationship were examined by means of an inventory completed by the subject concerning her perceptions of her relationship with her mother. A similar inventory concerning behavioral characteristics of the father/daughter

relationship was completed. The intent of the father/daughter inventory was to provide information concerning a primary relationship in the adolescent's life. It also served as a distractor.

Subjects were told that the researcher was interested in exploring some characteristics of the relationship they had with the individual most significant to them professionally. If the subject did not have a mentor, their experience as a professional woman was of interest as a comparison. Subjects were told that the researcher was also interested in determining ways that other relationships may have been similar or dissimilar.

The inventory responses were on a Likert-type scale. These responses were treated as interval scale data for purposes of statistical analysis. A semi-structured interview was completed by the investigator on a percentage of the sample to serve as an indicator of the validity of the inventory.

Finally, a personality inventory was administered to determine whether women with female mentors, male mentors, or no mentors differed with respect on several personality variables. If a difference in personality variables was detected, an attempt to use them as independent variables in a regression model would have been made.

Once the comparisons between mother/daughter, father/daughter, and personality variables with the

mentoring scale were made and possible predictors identified, an interactive statistical model was developed to predict the intensity of the mentoring relationship.

The second type of data was of a descriptive nature. The responses from the structured interviews were examined for common descriptors and patterns. In order to reduce the interview information and treat it as nominal data, the responses on particular questions were categorized. The nature of the mother/daughter relationship was categorized as poor and problematic, neutral, or positive, intimate, and supportive. A Chi-square analysis was performed to assess the difference between women who had male mentors and women who had female mentors. Chi square is a nonparametric statistical test that may be performed on nominal data when the results are in the form of frequency counts (Borg & Gall, 1983).

#### Preparation of the Data

Data from the CPI and questionnaires were placed on coding sheets and checked for accuracy. Data were entered into the computer and checked again by running descriptive statistics. Descriptive statistics were used to determine the means, standard deviations, minimum and maximum values for all the variables in interval scale form.

### Description of the Sample

A description of the sample of 47 professional women is presented in Tables 1 through 3. Eighty-five percent of the subjects contacted agreed to participate in the study. Ninety-eight percent of the subjects were Caucasian. One subject was American Indian. There were no statistically significant differences between groups of women with male mentors, with female mentors, or without mentors, on the scales of the California Psychological Inventory. The mean age of the subjects was 39 years (SD = 7.1, range 24-56). The mean age for individuals reported to be mentors was 46 years at the beginning of the relationship (SD = 7.5, range 34-67).

### Description of Relationship Between Independent and Dependent Variables

The first step in the analysis was the Pearson Product Moment Correlation between all the dependent and independent variables. Table 4 contains the results of the zero order correlations between the dependent variables (the Total Mentor Scale Score) and the scores on the mother/daughter relationship measures and the father/daughter relationship measures. The only relationships to reach a statistically significant level between the mentor score and the independent variables were mother attention, and mother and

Table 1

Incidence of Qualitative Demographic Variables by Group

Variable	Female Mentored (N = 14)		Male Mentored (N = 14)		Non-Mentored (N = 19)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Marriage status</b>						
Married	6	42.9	10	71.4	11	57.9
Single	6	42.9	1	7.1	3	15.8
Divorced	2	14.3	2	14.3	5	26.3
Unknown	0	0	1	7.0	0	0
<b>Religion</b>						
LDS	2	14.3	1	7.1	4	21.1
Catholic	2	14.3	0	0	0	0
Protestant	6	42.9	3	21.4	4	31.1
Unknown/none	4	28.6	10	71.4	11	57.9



Table 2

Incidence of Demographic Variables by Group

	Female Mentored		Male Mentored		Non-Mentored	
	(N = 14)		(N = 14)		(N = 19)	
	Mean	SD	Mean	SD	Mean	SD
Age at Testing	38.07	7.70	38.77	5.73	40.53	7.81
Age of Mentor (approximate)	45.79	7.93	47.57	7.23	--	--
Length of Mentorship	4.79	2.22	7.93	7.45	--	--

Table 3

Means and Standard Deviations of California Psychological Inventory Scales by Group

	Female Mentored (FM)		Male Mentored (MM)		Non-Mentored (NM)		Group Contrasts
	(N = 14)		(N = 14)		(N = 19)		
	Raw Score		Raw Score		Raw Score		
	Mean	SD	Mean	SD	Mean	SD	
Dominance	34.85	5.44	33.25	6.40	28.74	8.92	FM & MM > NM
Capacity for status	23.15	2.79	23.25	1.71	21.63	4.67	FM & MM > NM
Sociability	28.15	3.10	28.42	4.42	26.21	6.33	FM & MM > NM
Social presence	38.69	5.41	38.33	7.48	35.32	7.48	FM & MM > NM
Self-acceptance	28.38	3.18	22.42	4.08	21.10	3.68	FM > MM > NM
Sense of well-being	38.77	3.17	37.33	2.60	35.95	5.04	FM > MM > NM
Responsibility	34.85	3.53	33.42	4.56	32.21	5.67	FM > MM > NM
Socialization	39.15	4.18	36.00	5.06	35.16	6.90	FM > MM & NM
Self-control	31.23	6.67	31.08	6.80	32.10	5.50	FM & MM < NM
Tolerance	26.08	2.75	26.25	2.63	23.74	4.38	FM < MM > NM

(table continues)

	Female Mentored (FM)		Male Mentored (MM)		Non-Mentored (NM)		Group Contrasts
	(N = 14)		(N = 14)		(N = 19)		
	Raw Score		Raw Score		Raw Score		
	Mean	SD	Mean	SD	Mean	SD	
Good Impression	20.62	6.28	19.00	4.80	18.58	5.90	FM > MM > NM
Achievement via conformance	32.00	3.63	32.00	3.10	28.90	4.36	FM & MM > NM
Achievement via independence	25.54	2.85	25.00	2.37	24.90	3.98	FM > MM & NM
Intellectual efficiency	42.69	3.60	43.00	4.07	39.32	5.88	FM < MM > NM
Psychological- mindedness	16.38	5.50	15.17	1.90	14.37	2.85	FM > MM > NM
Flexibility	12.77	5.72	12.25	3.42	11.68	3.82	FM > MM > NM
Femininity	23.38	2.76	21.50	3.03	22.79	3.38	FM > NM > MM

Table 4

Pearson Correlations Between Mother/Daughter, Father/Daughter, and Mentoring Inventories

	Mentoring Inventory			
	Provisions	Emotion	Self-Concept	Total
	Subscale	Subscale	Subscale	Mentoring
PCR-II Scales	(n = 47)	(n = 47)	(n = 47)	Scale Score (n = 47)
Mother love	-.11	-.01	-.09	-.12
Mother dominance	.30*	.16	.22	.32*
Mother attention	.30*	.21	.14	.29
Mother rejection	.18	-.01	.07	.14
Mother casual	-.06	-.17	-.16	-.16
Father love	-.06	.02	.04	-.03
Father dominance	.33*	.16	.21	.33*
Father attention	.27	.00	.12	.23
Father rejection	.15	-.01	-.08	.06
Father casual	-.08	-.15	-.18	-.16

\*significant at .05 level

father dominance scales on the Parent-Child Relationship Questionnaire II (PCR-II), the correlations were .29, .32, and .33 ( $p < .05$ ) respectively. These results suggest that as the subject perceives her mother and father as being more dominant, the higher is the score on the mentoring scale. As the subject perceives her mother as being more attentive, the mentoring score again increases statistically.

Table 5 contains the product moment correlations between the variables reflecting the mother/daughter relationship and the father/daughter relationship. There were moderate correlations between the mother/daughter reject scale of the PCR-II and the love scale of the father/daughter questionnaire ( $R = -.53$ ,  $p < .01$ ). The more likely the daughter perceives her mother as rejecting her, the less love she is likely to receive from her father.

The attention scales of the PCR-II for mother and father correlated .66. The mother dominance scale and the mother love scales of the PCR-II correlated at the -.56 level. This suggests that the more the daughter perceived the mother to be dominating, the less love she perceived in the relationship.

The product moment correlations between scores on scales of the CPI and the mentoring inventory are listed in Table 6. The CPI scales were intended to measure the following (Gough, 1975): Dominance -- assess factors of leadership ability and dominance; Capacity for Status --

Table 5

Pearson Correlations of Mother/Daughter and Father/Daughter Measures

Father/ Daughter Scales	Mother/Daughter Scales				
	Love	Dominance	Attention	Rejection	Casualness
Love (LO)	.53**	-.28	-.21	-.54**	.04
Dominance (DO)	-.43**	.30*	.09	.37	-.09
Attention (AT)	-.13	.22	.66**	.14	.07
Rejection (RE)	-.53*	.24	.23	.61**	.09
Casual (CA)	.00	-.02	-.10	.11	.37*

\*.05 level of significance

\*\*.01 level of significance

Table 6

Pearson Correlations of California Psychological Inventory Variables and Mentoring Inventory

	Mentor Inventory			Total Mentor Score
	Career	Emotion	Self-	
	Support		Concept	
California Psychological Inventory (CPI)				
Dominance	.02	.29	.27	.23
Capacity for status	-.07	.24	.23	.06
Well-being	-.04	.32**	.37**	.17
Responsibility	.05	.20	.11	.12
Socialization	.04	.20	-.01	.07
Tolerance	.19	.38*	.25	.26
Achievement via conformance	.22	.38*	.41**	.35**
Achievement via independence	-.23	.19	.14	-.06
Intellectual efficiency	.11	.33*	.21	.19
Psychological-mindedness	.08	.30	.19	.16

\*Only those CPI scales which correlated  $\geq .20$  with at least one measure were included.

\*\*Significant at .05 level

assess personality qualities which underlie a high status achiever; Sociability -- to identify persons as outgoing and social; Social Presence -- to assess factors such as poise and self confidence in personal interaction; Self-acceptance -- to assess factors such as self-acceptance and personal worth; Sense of Well Being -- to identify persons who minimize their worries; Responsibility -- to identify persons of conscientious and responsibility personality; Socialization -- to indicate degree of social maturity; Self-Control to assess the adequacy of self-control; Tolerance -- to identify persons with accepting and judgemental attitudes; Good Impression -- to identify people capable of creating a good impression; Achievement via Conformance -- to identify factors of motivation and interest which further achievement in which conformance is advised; Achievement via Independence -- to identify factors of motivation and interest which further achievement when autonomy is viewed positively; Intellectual Efficiency -- to indicate the level of intellectual efficiency attained; Psychological-Mindedness -- to measure the degree an individual is responsive to the needs of others; Flexibility -- to indicate the degree of adaptability of a person's thinking; and Femininity -- to assess the masculinity and femininity of interests. The only relationship to reach statistical significance was that between the mentoring scale and the Achievement via Conformance scale ( $R = .35$ ).



High scorers on the Achievement via Conformance scale tend to be seen as capable, cooperative, efficient, responsible, stable, persistent, and as valuing intellectual achievement (Gough, 1975).

When just the emotion subscale of the mentoring inventory is related to personality variables as measured by the CPI, several other statistically significant correlations are found. This subscale correlates with the Tolerance Scale ( $R = .38$ ). Persons with high scores on the Tolerance Scale tend to be seen as enterprising, informal, quick, tolerant, resourceful, and as having broad and varied interests (Gough, 1975). The emotion subscale of the Mentor Inventory consists of only five items. With so few items, correlations would be expected to be relatively low. It is also difficult to claim that a measure with only five items has internal consistency or adequately defines a particular construct. For this reason, the entire Mentor Inventory score has been used for subsequent analyses.

Table 7 lists the zero order correlations between the scale scores on the CPI and the scores on the mother/daughter and father/daughter relationship measures. The Dominance Scale of the CPI correlated with the mother and father casual scores ( $R = -.33$  and  $-.37$  respectively). The Capacity-for-Status Scale of the CPI negatively correlated with Father Attention but not with Mother

Table 7

Pearson Correlations Between Measures of Mother/Daughter and Father/Daughter Relations and California Psychological Inventory Scales

CPI Scales	Mother/Daughter Scales					Father/Daughter Scales				
	LO	DO	AT	RE	CA	LO	DO	AT	RE	CA
Dominance (Do)	.12	.06	-.14	-.18	-.33*	.16	.08	-.23	-.21	-.37*
Capacity for status (Cs)	.20	-.28	-.17	-.20	.11	.16	.05	-.39*	-.08	-.20
Sociability (Sy)	.27	-.26	.00	-.38*	-.03	-.07	-.07	-.24	-.28	-.26
Social presence (Sp)	.23	-.39*	.01	-.25	.21	.11	-.08	-.25	-.10	-.21
Self acceptance (Sa)	.14	-.01	-.12	-.19	-.23	.05	.06	-.38*	-.04	-.44*
Well being (Wb)	.16	-.25	-.10	-.33	-.03	.20	-.03	-.10	-.27	-.20
Responsibility (Re)	.24	-.05	-.10	-.33*	-.21	.37*	-.19	-.11	-.31*	-.16
Achievement via										
conformance (Ac)	.25	-.18	-.20	-.25	.00	.44*	-.16	-.17	-.38*	-.14
Intellectual efficiency (Ie)	.20	-.34*	-.19	-.38*	.04	.40*	-.19	-.13	-.38*	-.12

\*Only those CPI scales which correlated at  $\geq .30$  level with at least one measure were included.

LO = Love; DO = Dominance; AT = Attention; RE = Rejection; CA = Casual

Attention ( $R = -.39$ ). The Sociability Scale correlated negatively with Mother Rejection Scale ( $R = -.38$ ). The Social Presence scale correlates negatively with Mother Dominance ( $R = -.39$ ). The Self-Acceptance Scale correlated negatively with Father Attention ( $R = -.38$ ) and Father Casual ( $R = -.44$ ). The Responsibility Scale correlated negatively with Mother Rejection ( $R = -.33$ ), Father Rejection ( $R = -.31$ ) and positively with Father Love ( $R = .37$ ). The Achievement via Conformance Scale correlated positively with Father Love ( $R = -.44$ ) negatively with Father Rejection ( $R = -.38$ ). The Intellectual Efficiency Scale correlated negatively with Mother Dominance ( $R = -.34$ ), Mother and Father Rejection ( $R = -.38$ ), and positively with Father Love ( $R = -.40$ ). There were more statistically significant relationships between scores on the CPI scales and scores on the father/daughter relationship measures than between CPI scores and mother/daughter relationship measures.

Table 8 presents the means and standard deviations of raw scores on the CPI obtained from the Professional Women Mentor Study and those obtained from a sample of psychology graduate students at Utah State University (female), and the CPI norm samples. Forty-four subjects completed the CPI. The scores on this study were more similar to the sample of psychology graduate students than to the normative samples. The raw scores were slightly higher on the Dominance and the

Table 8

Means and Standard Deviations of Sample California Psychological Inventory (CPI) Scores Compared with Reference Groups

	Professional Women		Psychology Graduate		CPI	
	Mentor Study		Students - Female		Norm Sample	
	Sample Scores		(from CPI Manual)			
	(n = 44)		(n = 336)		(n = 7,150)	
	Mean	SD	Mean	SD	Mean	SD
Dominance (Do)	31.7	7.7	29.2	5.5	26.8	5.6
Capacity for Status (Cs)	22.5	3.6	23.6	3.3	20.1	3.6
Sociability (Sy)	27.4	5.0	25.8	4.7	24.5	4.7
Social presence (Sp)	37.1	6.9	40.1	5.6	34.1	5.6
Self-acceptance (Sa)	22.1	3.7	22.8	3.7	20.0	3.6
Well being (Wb)	37.1	4.1	36.9	4.1	37.5	4.4
Responsibility (Re)	33.3	4.8	32.2	4.1	32.1	4.8
Socialization (So)	36.6	5.8	36.5	4.6	39.5	5.3
Self-control (Sc)	31.6	6.1	30.6	6.3	32.0	7.2

(table continues)

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	Professional Women		Psychology Graduate		CPI	
	Mentor Study		Students - Female		Norm Sample	
	Sample Scores		(from CPI Manual)		(n = 7,150)	
	(n = 44)		(n = 336)			
	Mean	SD	Mean	SD	Mean	SD
Tolerance (To)	25.1	3.7	26.7	3.6	23.0	4.3
Good Impression (Gi)	19.3	5.7	17.8	5.6	20.0	6.0
Achievement via Conformance (Ac)	30.7	4.1	39.3	3.8	28.2	4.4
Achievement via Independence (Ai)	25.1	32.3	26.2	3.2	19.0	4.0
Intellectual Efficiency (Te)	41.3	5.0	43.8	4.2	39.0	4.9
Psychological Mindedness (Py)	15.2	3.6	15.7	2.6	11.0	2.8
Flexibility (Fy)	12.2	4.2	15.3	3.4	9.0	3.5
Femininity (Fe)	22.6	3.1	22.5	2.9	23.0	3.4

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Achievement via Conformance scales in this group than on the psychology graduate reference group.

Table 9 presents means and standard deviations on the PCR-II obtained in this sample with the reference mean scores listed in the California Psychological Inventory manual. The manual mean scores are a composite of five samples obtained in New York, Louisiana, Georgia, and Arizona. The sample in this study had considerably lower scores on the Mother Reject Scale. Scores on both Mother and Father Dominance and Attention Scales were also lower than in the normative sample.

The mean scores and standard deviations for the group with female mentors, with male mentors, or non-mentored on the independent variables are listed in Table 10. There were no statistically significant differences between any of the groups on any of the variables. The largest group differences were in the Mother Dominance, Mother Attention, and Father Attention Scales of the CPR-II. The effect size differences between the group that had a female mentor and the non-mentored group was .80, .83, and .86 respectively. These effect sizes were calculated using the formula:

$$\text{Effect size} = \frac{\bar{X}_F - \bar{X}_N}{S_W}$$

Table 9

Sample Parent Child Relationship II Scores Compared with Reference Groups

PCR II Variable	Mentor Study (n = 47)		Norm Group (n = 244)	
	Mean	SD	Mean	SD
<b>Mother</b>				
Loving	31.9	6.2	31.5	6.7
Dominance	21.7	6.4	24.8	5.3
Attention	20.6	4.5	22.6	5.1
Rejection	15.9	5.1	33.6	5.1
Casual	23.7	6.0	22.7	5.4
<b>Father</b>				
Loving	28.6	7.6	28.6	7.9
Dominance	23.1	6.9	24.4	7.0
Attention	19.0	4.1	31.6	5.6
Rejection	18.6	7.2	17.1	6.6
Casual	22.3	6.5	22.8	5.7

Table 10

Mean Scores and Standard Deviations of Independent Variables by Group

PCR-II Scales	Female Mentored		Male Mentored		Non-Mentored	
	(n = 14)		(n = 14)		(n = 19)	
	Mean	SD	Mean	SD	Mean	SD
<b>Mother</b>						
Loving	27.5	5.9	26.0	9.8	26.1	5.6
Dominance	24.0	5.9	21.4	4.7	20.3	7.5
Attention	21.9	4.8	21.4	3.5	18.9	4.7
Rejection	16.4	5.0	15.4	5.9	15.9	4.6
Casual	22.9	6.5	24.0	4.6	24.1	6.8
<b>Father</b>						
Loving	29.1	7.8	29.5	7.8	27.5	7.6
Dominance	24.4	7.6	24.6	7.8	20.8	5.1
Attention	20.6	3.6	19.1	3.7	17.5	4.4
Rejection	18.3	8.5	18.3	8.2	19.3	5.3
Casual	21.6	7.1	31.2	5.2	23.9	6.9



$\bar{X}_F$  = mean of female mentored

$\bar{X}_N$  = mean of non-mentored

$\bar{S}_W$  = standard deviation within groups

The female-mentored group had higher scores on scales measuring daughter's perception of her mother as being more dominant and more attentive than did the group that did not have mentors.

#### Construction of the Predictive Model

There appeared to be no significant differences between mentoring groups on any of the mother/daughter or father/daughter relationship measures. Analyses of between group differences were not run because of minimal differences.

Analysis of combinations of factors that relate to mentoring is most powerful when all continuous variable factors can be maintained in their appropriate scale structure. The dependent variable was the total score on the Mentoring Scale. The independent variables to be used in the construction of the predictive model were selected by examining the Pearson Product Moment Correlation they had with the dependent variable and those that were of theoretical interest. Several potential independent variables correlated highly with each other. To avoid multi-collinearity, a decision was made to use the Mother

Attention Scale of the PCR-II. Attention is more easily defined in behavioral terms than is love. Other independent variables used were the gender of the mentor and a joint variable created by the combination of mother attention and mentor's gender. Gender of the mentor was effect coded (Male mentor = -1, Female mentor = 1). When the variables mother attention, mentor's gender, and the joint variable were forced into the multiple regression model, the following equation was produced:

$$\text{Mentoring Score} = .677 X_1 + 24.575 X_2 - 1.153 X_3 + 96.22$$

[ $X_1$  = mother attention score of the PCR-II;

$X_2$  = gender of the mentor (male = -1, female = 1);

$X_3$  = mother attention x mentor's gender]

$R^2$  for this equation was 20.3%. This model accounted for 20% of the variability in the dependent variable. The regression model that enters the interaction of the joint variable with mother attention and mentor gender did add significantly to the predictive model.

The common regression coefficient when the product of the categorical variable (gender of mentor) and the continuous variable (Mother/Daughter Attention score) was entered into the model increased significantly. Because the interaction is significant, separate regression equations

are necessary to best fit the data. The separate regression equations for the two groups are as follows:

Group 1. Subjects who designated a male as most significant in their career.

$$\text{Predicted Mentoring Score} = 1.827X + 71.645$$

[X = mother attention score of the PCR=II]

Group 2. Subjects who designated a female as most significant to their career.

$$\text{Predicted Mentoring Score} = -.479X + 120.794$$

[X = mother attention score of the PCR-II]

Table 11 lists the results for the overall regression equation and the separate regression equations. When the subjects are divided into two groups along the categorical data, it becomes apparent that the regression coefficient for the male mentored group ( $R = .525$ ) is much greater than for the female mentored group ( $R = .164$ ). Figure 1 illustrates the separate regression lines used to predict mentoring scores for two groups. Group 1 identified the most significant person influencing their academic or career experience as being male. Group 2 identified the most influential individual as female. The graph indicates the interaction between gender of mentor and perceived mother attention is disordinal. The point of intersection is well within research interest. The differential effects of gender of influential person become more marked for women whose scores on perceived mother attention are relatively

Table 11

Multiple Regression Used for Building a Predictive ModelCommon Regression Equation

Dependent Variable: Mentor Score

Enter: Step 1 - MDAT (Mother Attention Score on the PCR-II)

Step 2 - MENGEN (Gender of the Mentor)

Step 3 - MDAT X MENGEN

Step 3 -	Multiple R	.450	R Square Change	.119
	R Square	.203	F	6.407
	Adjusted R Square	.147	Signif F	P = .015
			(degrees of Freedom 1 and 43)	
	Standard Error	13.191		

Variables in the Equation

Variable	B	SE B	Beta	Correl	Part Cor	Partial T	Sig T	
MDAT	.674	.455	.213	.289	.201	.220	1.479	.147
MENGEN	24.574	9.817	1.691	.094	.341	.357	2.503	.0162
MDAT X								
MENGEN	-1.153	.455	-1.690	.011	-.345	-.360	-2.531	.0151
(Constant)	96.220	9.817						

(table continues)

---

Separate Regression Equation

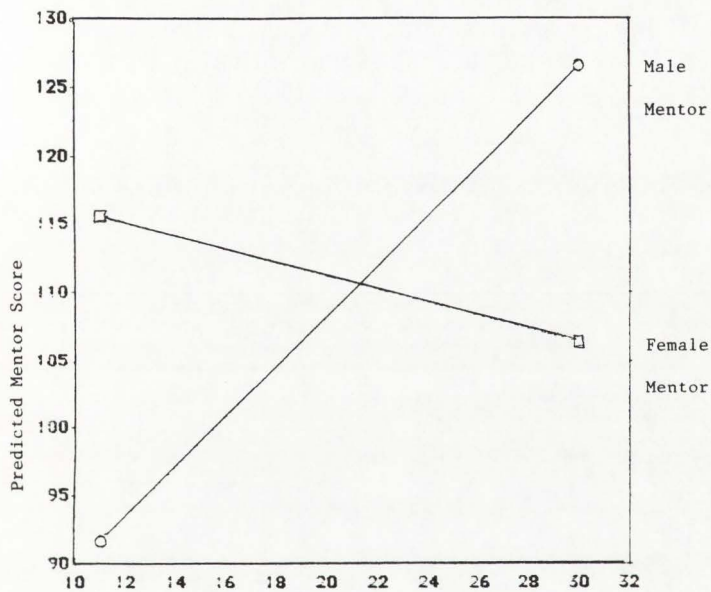
## Group 1 - Influenced by a Male

Multiple R	.525	F = 10.27
R Square	.275	Significant F = .0035
Standard Error	13.01	(degrees of freedom 1 & 27)

## Group 2 - Influenced by a Female

Multiple R	.164	F = .443
R Square	.027	Non-significant
Standard Error	13.49	(degrees of freedom 1 & 16)

---



Mother Attention Score on the Parent Child Relations II

Figure 1. Perceived mother attention and predicted mentor score, by group.

high or low compared to women whose scores on mother attention are in the middle of the range.

### Results of Interviews

Originally, the subjects' perceived relationships with their mothers was to be assigned to one of three categories, (1) positive, supportive, encouraging, and attentive; (2) neutral, or (3) negative, rejecting, and problematic, based on responses to questions asked in the structured interviews. However, of the 20 subjects who were interviewed, responses were such that all nominal data could all be assigned to either category one or three. Category two was therefore eliminated. A Chi-square test of independence was performed. Table 12 gives the observed cell frequencies in a 2 by 2 table. There was no relationship observed between gender of the mentor and qualitative characteristics of the mother/daughter relationship. This result is consistent with results of both the mother/daughter affective scale and the mother/daughter behavioral inventory (PCR-II).

The interviews that focused on the mentoring relationship evoked considerable emotion from the subjects. All the individuals interviewed made positive statements about their mentoring experience and indicated it definitely facilitated their professional career. The subjects became involved with their mentor in a variety of ways. In nine of

Table 12

Observed Frequency: Positive/Negative Mother/Daughter Relationship by Mentored Group

---

	Male Mentor	Female Mentor
Positive		
Mother/Daughter	8	5
Negative		
Mother/Daughter	2	5

---

$$\chi^2 = 1.98$$

Degrees of Freedom = 1

Critical value at .05 level is 3.84

---



the cases, the mentor was the graduate student's committee chairperson. The interviewees frequently mentioned how the mentorship evolved into more than that of a supervisor/supervisee role. Often the mentor was instrumental in seeking out the relationship and creating a strong relationship. Six of the mentors were older and more experienced faculty members in an academic setting where the protégé was employed. Three of the mentors were department heads or deans. Subjects indicated they felt the administrator took a personal as well as administrative role in their career. Two of the mentors were described as more senior scientists who took the junior member under their care and collaborated with them on a number of projects.

Of the subjects interviewed, 11 indicated the relationship continued to be active. Collaboration on research, attending professional meetings, correspondence via mail, or telephone was on-going. Several of these individuals referred to an evolution toward equality in the relationship; therefore, similar activities were being reciprocated. Nine subjects considered the relationship to be essentially inactive, although in most cases some correspondence continued to occur. Most often, the reason given for the termination of the relationship was a move by one or both parties. In none of the cases were altercations or bad feelings associated with the disruption of the relationship.

Subjects were asked to tell the interviewer what they perceived to be the most important functions their mentor served. The following, listed in order of frequency with which they were mentioned, were observed: encouraging, supporting, giving me self-confidence, being a model, giving sensitive rather than critical feedback, "being there to guide me," introducing the protégé to key people in the area, introducing the protégé to the ins and outs of faculty politics, nominating the protégé to activities, facilitating or collaborating in publication, sharing information - including particular techniques, and, in general, easing the way. Many of these functions were mentioned by protégés who had female mentors and protégés who had male mentors. One of the differences between the groups was the frequency of times that support or encouragement were given as the most important functions. Support or encouragement were listed as Number 1, seven times by subjects having female mentors. It was listed Number 1 only once by those having male mentors. When asked to be more specific as to what support or encouragement meant to them, subjects responded with the following: "Telling me I could do it." "Expecting that, of course, I would be able to do it." "Showing me they cared about me as a person." "Taking time to listen to me."

The protégés were asked to list several descriptions of their mentors. In some cases synonyms were combined. The

following characteristics were all mentioned at least twice and the descriptors are listed in order of frequency mentioned: caring, intelligent, supportive, sense of humor, concerned, very capable as scientist or teacher, possessing integrity, empathic, encouraging, strong, ambitious, professional, friendly, communicative, optimistic, and compassionate. Table 13 presents a summary of the descriptors mentioned in the interview.

All of the subjects gave an unequivocal "yes" to the question asking whether they felt the mentoring relationship affected their success. Three individuals stated they would not have finished schooling in their area if they had not been encouraged by their mentor. Others gave examples of papers that would not have been published, positions that would not have been applied to or which they would not have been selected for. Often the mentor and contacts that he or she had were instrumental in obtaining a promising position. The subjects indicated the very positive nature of the recommendations and the effort that was made by the mentor to bring their protégé to the top of the list of applicants.

Many of the subjects stated they felt their mentor affected them positively in ways other than just career success. Most notable of these was a young woman who came from a physically and sexually abusive family. She stated that one of the faculty sought her out after she obtained a

Table 13

Frequency of Mentor Characteristics Mentioned by Interviewed Subjects

---

Dimension	Number of Times Mentioned
Caring	8
Intelligent	5
Supportive	4
Sense of Humor	4
Concerned	4
Capable	4
Having Integrity	4
Empathic	3
Encouraging	3
Strong	3
Ambitious	3
Professional	2
Friendly	2
Communicative	2
Optimistic	2
Compassionate	2

---

high grade in a class. The faculty member queried her as to whether she had a major or an advisor. When the response was no, she was told, "You do now." A mentoring relationship evolved over several years. The mentor later shared with the protégé her initial impression which was, "You are an extremely bright 18-year-old who is scared to death with a chip on your shoulder the size of the kitchen sink." This particular subject felt her mentor helped her to trust herself as well as others and to actually believe that she would be capable of a professional career.

There were only two disadvantages that were mentioned by subjects. Two individuals felt they had some difficulty separating the roles of a supervisor and a good friend in the relationship. One individual whose mentor was also the dean, felt there might be some animosity or accusations of favoritism from other faculty members in the department. The only aspect that the protégés would change about the relationship to have made it more ideal was time spent with the mentor. Four subjects indicated they wished they had more time either more intense or over a longer period of time.

Subjects were queried about their feelings of how the relationship with their mentor would have been qualitatively different if the mentor had been of the opposite gender. Of the subjects who had male mentors, only one felt there would have been a difference; she felt she would have had

more in common with a female mentor. However, of the women who had female mentors, nine indicated either the relationship would not have developed with a male, it would not have been as close, encouragement would have been less, or it would have been more adversarial.

All of the subjects interviewed indicated they felt having a mentor contributed to their self-esteem in positive ways. Several stated the attention given them by an individual who was often noted in their field made them feel important. One subject stated, "I felt I was worth something if she deemed me valuable." Feedback that was supportive as well as critical strengthened the individual's sense of self in an area, either graduate school or a new career position, in which the woman might initially be more vulnerable to self doubt.

Subjects were asked to evaluate the nature of the mentor relationship on a dimension of formal/informal. None of the women stated they felt the relationship was formal. Six subjects with female mentors stated the relationship was very informal. Four indicated that at least some aspects of the relationship which tended to be role defined, as in the case of the committee chair, were about half-way along a continuum. Three volunteered the relationship had evolved from formal to more casual. All of the subjects with female mentors stated they were able to talk about personal matters

with their mentor. Responses by women with male mentors were very similar. Seven rated the relationship as quite informal. Two stated their mentor was "like a father to me." Three responded they felt the relationship was semi-formal. Of these, two felt they were setting constraints that kept the relationship not completely informal. As one subject stated, "I just had so much respect for him it was impossible not to treat him with some deference." Again, all subjects stated they were able to talk about personal matters. One unmarried subject who had been estranged from her parents for sometime, stated it was her mentor (a male) who encouraged her to keep her baby when she became pregnant rather than elect an abortion. She was in tears as she related how he sat down and talked with her in ways her father never had; he facilitated a flexible research assistantship for her in the remaining time she worked with him.

## CHAPTER V

### DISCUSSION

This investigation was undertaken to identify perceived benefits of mentoring, determine what the salient characteristics of the mentor and mentoring relationship are, and to use mother/daughter and father/daughter relationship variables to predict the intensity of the mentoring relationship. The sections of this chapter include a summary and discussion of the findings. The strengths and weaknesses of the study are then considered, followed by recommendations for further research.

#### Summary

This study was a retrospective investigation. It consisted of a two-group comparison research design that was utilized in a multiple regression analysis. Subjects were arbitrarily assigned to a third group based on failure to meet criterion scores on the dependent variable. Comparisons were made between scores on mother/daughter, father/daughter and personality variables with scores on a mentoring inventory. Once correlates were identified, an interactive statistical model using multiple regression was developed to predict scores on the mentoring scale. The



major hypotheses tested were if the nature of the subject's relationship with her mother would influence (a) her ability to become involved in a mentoring relationship, (b) the gender of the mentor, (c) the completeness of the mentoring experience based on scores on an inventory and an interview.

The study sample was composed of female assistant professors, associate professors, and graduate students at Utah State University during the 1988-1989 academic year. A mentoring inventory was used to assign 47 subjects into two groups which were those who acknowledged a female as most influential to them in their professional career and those who acknowledged a male as most influential. This could be during their academic experience or while they were a practicing professional. On demographic data and personality variables the groups were comparable. All of the independent variables had low correlations with the criterion variable. Mother and father dominance and mother attention were associated with increased mentoring scores.

A multiple regression model was constructed to attempt to predict mentoring scores. When mother attention, gender of the mentor, and the interaction of mentor's gender and mother attention are forced into the multiple regression equation, the interactive model accounted for 20.3% of the sample variability. Separate regression equations resulted in mother attention as accounting for 28% of the sample

variability for subjects who designated a male as most influential to their career. Figure 1 plots the separate regression lines.

Qualitative data obtained from the interviews confirmed the construct validity of the mentor inventory. With respect to other characteristics of the mentor relationship, the following were found:

1. Seventy-eight percent of subjects who indicated the most influential person in their academic or career success was a female met Riley and Wrench's (1985) criteria for being mentored. Only 50% who indicated a male was most influential met the criteria for being mentored.

2. Subjects who were mentored by a female listed support or encouragement as of more importance in the relationship than females mentored by a male.

3. All subjects felt having a mentor was critical to their success.

4. Subjects who had had female mentors were very interested in having a female mentor, whereas subjects who had a male mentor did not think the nature of the relationship would have changed significantly had their mentor been a female.

5. For both groups, the relationship tended to be informal. All subjects interviewed stated they would feel comfortable in discussing personal matters with their mentor.

6. Many of the relationships were still active. In no case did the relationship terminate because of negative feelings between mentor and protégé.

#### Discussion and Findings

The major analysis of this study disclosed three statistically significant variables whose presence were associated with the mentor relationship as perceived by the protégé and the gender of the mentor. The interaction of the gender of the mentor and the perceived attention from the mother is of particular importance. To illustrate the predictive model, the following examples are used.

Predictive Model: multiple regression.

Group 1 - Male Influenced

Predicted mentor score =  $1.827X + 71.645$

X = Mother/Daughter Attention Score on the PCR-II

Example 1:

Score on Mother/Daughter Attention Scale = 11

(minimum value on this sample)

Predicted mentor score =  $1.827(11) + 71.645$

Mentor Score = 91.74

This score is over 1 standard deviation below the mean for this sample.

## Example 2:

Score on Mother/Daughter Attention Scale = 30

(maximum)

Mentor Score =  $1.827(30) + 71.645$

Mentor Score = 126.45

This score is over 1 standard deviation below the mean for this sample.

Group 2 - Female Influenced

Predicted Mentor Score =  $-.479X + 120.794$

X = Mother/Daughter Attention Score on the PCR-II

Score on Mother/Daughter Attention Scale = 11

## Example 3:

(minimum value for this sample)

Mentor score =  $-.479(11) + 120.794$

Mentor score = 115.525

This score is about 1/2 standard deviation above the mean for this sample.

## Example 4:

Score on Mother/Daughter Attention Scale = 30

(maximum)

Mentor Score =  $-.479(30) + 120.794$

Mentor Score = 106.42

This score is close to the mean for this sample.

Riley and Wrench (1985) in using the Mentor Inventory defined a relationship as truly a mentor/protégé

relationship if an average score for each of the subscales that compose the Mentor Inventory was 3.5. Converting their criteria to raw score points would require that a minimum value of 99 would need to be obtained before a mentoring relationship existed. In actual practice, the total raw score might need to be considerably greater than that to achieve an average of 3.5 on each subscale. The subscales measure different constructs and are of different lengths. For example, a high score on the Provisions Subscale (15) items and a low score on the Emotion Subscale (5) items could yield a total score of over a 100, but not meet the criteria of having an average of 3.5 for each subscale. All subjects who had a total score greater than 109 in this sample met Riley and Wrench's criteria.

Of the examples given, the hypothetical subject who received little attention from her mother would be more likely to have a mentoring relationship if she became connected with a female in her academic or career experience. She would be unlikely to form a mentoring connection with a male.

The standard error of estimate for the predictive model used is 13.1. The standard error of estimate may be used to set confidence limits around the predicted value (Glass & Hopkins, 1984). In the case of Example 1, approximately 68% of females with a score of 11 on the Mother/Daughter

Attention Scale who were working with or being supervised by a male professor/supervisor would have a mentoring score that lies between 78.7 and 104.9. In this sample, there were seven subjects who had a total mentoring score lying between 99 and 105. Of these, only one, or 14.3%, met the criteria for having been mentored. The standard error of estimate for this multiple regression equation is relatively large, reflecting that only 28% of the variance is accounted for. Thus, for practical purposes, this model is not likely to accurately predict a mentoring relationship. It is of interest, however, for its theoretical implications. The number of confounding variables that contribute to a mentoring experience is large. Availability of female mentors may not be possible, arbitrary assignment of new graduate students to particular teaching or research assistantships is often made before the student arrives on campus. Serendipity, being at the right place at the right time, may account for a mentor relationship developing. This study explored the nature of a mentor relationship only from the perspective of the protégé. It is likely the variables inherent in the personality or behavioral characteristics of the mentor account for much of the variance in a real or potential relationship. The interaction between any given potential mentor and prospective protégé might be most significant of all. An

individual who is in a position to be a mentor may well have prospective male protégés as well as female protégés to choose from. A female desiring a mentor often will compete not only with other females, but with males as well.

The single variable from the Mother/Daughter and Father/Daughter Relationship measures that was included in the multiple regression model was Mother/Daughter Attention. This represents the amount of attention the daughter perceived she received from her mother. This scale consists of 10 items rated on a Likert scale of 1 to 4. Examples of items from the Attention Scale are: "Gave me special attention as a reward," and "pushed me to excel in everything I did." The Attention Scale is a unipolar factor that purports to measure the amount of attention. Attention may be either the amount of time the parent spends with the daughter, relaxed rules, or rewards given.

Another variable that was stepped into the multiple regression equation, but which did not appear in the equation was Factor 2 on both the Mother/Daughter and Father/Daughter PCR-II measures. Factor 2 is a single factor calculated by subtracting the Demand score from the Casual score. Higher scores represent a more casual attitude toward authority.

Factor 1, another bipolar factor, calculated by subtracting the Rejection score from the Love score, did not correlate with the Mentor Inventory Score at all and was

not, therefore, stepped into the equation. It is possible that if there was a relationship between the amount of love-rejection and mentoring, it may be non-linear. Both of the measures of the affective-relationship between the mother and daughter, the Intimacy and the Attachment scales designed by Walker and Thompson (1983), correlated .72 and .63 with the Mother Love scale. The decision was made not to enter them into the predictive model because of possible collinearity between independent variables and the desire to limit the degrees of freedom in the equation. In addition, these measures did not have a counterpart for the father/daughter relation, therefore, a comparison between parents was not possible.

The results of the multiple regression equation are inconsistent with the finding that 79% of subjects who indicated a female was the most influential person in their academic or career experience met the criteria for being mentored, while only 50% of subjects who indicated a male was the most influential individual were mentored in the more rigorous definition of the term. Although the Chi-square analysis on the interviews attempting to relate the nature of the mother/daughter relationship and subsequent gender of the mentor did not reach statistical significance, the trend was consistent with the multiple regression model. Five of the subjects interviewed who acknowledged having a



female mentor had problematic relationships with their mother during adolescence. Three of the subjects volunteered similarity between their mentor and a mother they wished they had. Two of the subjects with poor mother/daughter relationships during adolescence stated they had been in counseling in the past to work through some feelings of anger they felt toward their mother.

When separated into the groups of female mentored, male mentored, and non-mentored, the mother/daughter relationship measures did not reflect a disparity between gender of mentor and mother/daughter relationship. In part, this may be an artifact of the sub-sample randomly selected for interviews. However, after examining several individuals' responses on the PCR-II and subsequent interviews of these subjects, it became apparent that several individuals who did not have particularly low scores on the Mother Love and Attention scales expressed more negativity about their mother's relationship with them during the interview. In some instances, a personal interview may be more effective in assessing feelings that have been denied than a paper and pencil test.

Several of the CPI scales which are designed to measure poise, ascendancy, self-assurance, and interpersonal adequacy correlated negatively with Mother Dominance in the Rejection scales of the PCR-II ( $R = -.38, -.33, -.39$ ). The mean age for subjects in this sample was 39 years. Perhaps

the effects of a dominant, rejecting mother may be active over 20 years after most of the women have left their parent's home. Although not statistically significant, these CPI scales were lower for the non-mentored group than for either group that had been mentored. The subjects in this sample represent a restricted range to the extent they are all relatively successful -- either completing graduate studies or having completed and obtained positions as faculty at a major institution of learning. A difference on a scale purported to measure self-acceptance or social presence would be expected to be slight when taken from a group with such a restricted range.

The interviews indicated that women place considerable importance on encouragement, support, and a sense of humor in their mentor. These findings are consistent with previous studies (Gilbert, 1985; Erkut & Mokross, 1984) which investigated functions of mentors in female populations. More of the women interviewed who had female mentors as opposed to male mentors stated they viewed their mentor as a model. The model was not just a professional model but included such items as "I admire the way she relates with other people," or "I feel encouraged when I see that she can be very effective as a scientist, yet still has time to have a family." In other instances, the ambivalence toward having a career and a family may be resolved in

different ways. One subject, an assistant professor in the Biology Department, indicated she was struggling to fulfill the roles of wife and mother. In tears, she talked about the sacrifices she had found necessary to make at the expense of her career and how much more productive her female colleagues were who did not have families. She commented, "I don't see them as a role model for professional women; they have chosen to concentrate on just being a scientist."

Prior to this research, there were no known published studies that investigated the relationship between the mentor/protégé relationship and the mother/daughter relationship. The results found were slight but in the direction consonant with the researcher's hypothesis. Women who received little attention from their mothers may form a close bond with a female mentor. Women who receive sufficient attention and caring from their mothers seem able to enter a mentor relationship with either a male or a female. However, a female who received insufficient attention from her mother may have a difficult time establishing the intimacy of inter-relationship skills to be successful in developing a mentoring relationship with a male mentor. The quantitative data obtained in the PCR-II did not differ, however, between groups of professional women who had a male mentor, a female mentor, or who were non-mentored.

Strengths and Weaknesses in  
Design and Methodology

A major strength of this study was the use of women, most of whom had completed a doctoral degree and were employed as assistant or associate professors at an institution of higher learning, as subjects. Many previous studies focusing on mentors have used undergraduates or graduate students in a particular area. This study included a high percentage of females who had been mentored.

A second strength of the study was the use of interviews to validate the Mentor Inventory and the Mother/Daughter form of the PCR-II. Very few studies on mentoring have utilized anything other than a paper and pencil test. The Mentor Inventory appeared to be valid for this purpose. The measures used to assess the mother/daughter relationship may be suspect in some areas.

A weakness of this study was the sample size. The interviews added qualitatively to the results. The quantitative analyses would have been more powerful had the sample size been larger. It is possible that the PCR-II did not adequately assess several constructs of the mother/daughter relationship that might be related to the mentoring relationship. Finally, there are enough confounding variables that input the choice of a mentor or the nature of that relationship that it would be difficult to

statistically detect similarities of patterns between two different yet significant relationships in a woman's life.

#### Recommendations for Further Study

Based on the results of this study, the following recommendations are made:

1. The relationship between gender of the mentor and subsequent productivity of the protégé should be investigated. Productivity could be measured in number of publications or grants or teaching excellence.
2. Further study on ways to increase the availability of female mentors would increase the number of options available to professional women. It is conceivable that a substantial number of women would be unlikely to form a mentor relationship with a male, but would be more successful in developing such a relationship with a female.

## REFERENCES

- Alleman, E., Cochran, J., Doverspike, J., & Newman, I. (1984). Enriching mentoring relationships. Personnel and Guidance Journal, 62, 329-332.
- Anastasi, A. (1982). Psychological testing. New York: Macmillan.
- Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentis Hall.
- Bogat, E. A., & Redner, R. L. (1985). How mentoring affects the professional development of women in psychology. Professional Psychology: Research and Practice, 16 (6), 851-859.
- Borg, W., & Gall, M. (1983). Educational research: An introduction (rev. ed.). New York: Longman Press.
- Bova, B. M., & Phillips, R. R. (1981). The mentor relationship: A study of mentors and protégés in business and academia. (ERIC Document Reproduction Service No. Ed. 208 233).
- Burton, A. (1977). The mentoring dynamic in the therapeutic transformation. The American Journal of Psychoanalysis, 37, 115-122.
- Calkins, L. V., Arnold, L. M., Willoughby, L., & Hamburger, S. C. (1986). Docents' and students' perceptions of the ideal and actual role of the docent. Journal of Medical Education, 61, 743-748.
- Chodorow, N. (1978). The reproduction of mothering, psychoanalysis, and the sociology of gender. Berkeley: University of California Press.
- Cook, T., & Campbell, D. (1979). Quasi-experimentation: Design and analysis issues for field setting. Chicago: Rand McNally.

- Cronan-Hillix, T., Gensheimer, L. K., Cronan-Hillix, W. A., & Davidson, W. S. (1986). Students' views of mentors in psychology graduate training. Teaching of Psychology, 13 (3), 123-127.
- Douran, E., & Adelson, J. (1966). The adolescent experience. New York: Wiley.
- Earl, W. (1987). Creativity and self-trust: A field study. Adolescence, 22(86), 423-431.
- Edlind, E., & Haensly, P. (1985). Gifts of mentorship. Gifted Child Quarterly, 29(2), 55-60.
- Erikson, E. H. (1965). Youth: Fidelity and diversity. In E. H. Erikson (Ed.), The Challenge of Youth (pp. 1-28). New York: Anchor Books.
- Erkut, S., & Mokros, J. R. (1984). Professors and mentors for college students. American Educational Research Journal, 21(2), 389-417.
- Flax, J. (1978). The conflict between nurturance and autonomy in mother-daughter relationships and within feminism. Feminist Studies, 4(2), 171-189.
- Friedman, G. (1980). The mother-daughter bond. Contemporary Psychoanalysis, 16(1), 90-97.
- Gilbert, L. A. (1985). Dimensions of same-gender student-faculty role-model relationships. Sex Roles, 12(1 & 2), 111-123.
- Glass, G., & Hopkins, K. (1984). Statistical methods in education and psychology (rev. ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Gold, M., & Yanof, D. S. (1985). Mothers, daughters, and girlfriends. Journal of Personality and Social Psychology, 49(3), 654-659.
- Goldstein, E. (1979). Effect of same-sex and cross-sex role models on the subsequent academic productivity of scholars. American Psychologist, 34(5), 407-410.
- Gough, H. (1975). Manual for the California Psychological Inventory (rev. ed.). Palo Alto, CA: Consulting Psychologists Press.

- Kaufmann, F. A., Harrel, G., Milans, C. P., Woolverton, N., & Miller, J. (1986). The nature, role, and influence of mentors in the lives of gifted adults. Journal of Counseling and Development, 64, 576-578.
- Larwood, L., & Blackmore, J. (1978). Sex discrimination in manager selection: Testing predictions of the vertical dyad linkage models. Sex Roles, 4, 110-132.
- LeClurpe, E. E., Tollefson, N., & Borgers, S. B. (1985). Differences in female graduate students in relation to mentoring. College Student Journal, 19(4), 411-415.
- Levinson, D. J. (1978). The seasons of a man's life. NY: Alfred A. Knopf.
- McNeal, S., McKillip, J., DiMiceli, A., Van Tuinen, M., Reid, E., & Barret, G. (1975). Social psychology job applicants: Normative information and the question of sexism. Personality and Social Psychology Bulletin, 1, 570-574.
- Noe, R. A. (1988). Women and mentoring: A review and research agenda. Academy of Management Review, 13(1), 65-78.
- Notar, M., & McDaniel, S. A. (1986). Feminist attitudes and mother-daughter relationships in adolescence. Adolescence, 21(81), 11-21.
- Olson, C. F., & Worobey, J. (1984). Perceived mother-daughter relations in pregnant and non-pregnant adolescent sample. Adolescence, 19(76), 781-794.
- Riley, S., & Wrench, D. (1985). Mentoring among women lawyers. Journal of Applied Social Psychology, 15(4), 374-386.
- Roche, G. R. (1979). Much ado about mentors. Harvard Business Review, 57(1), 14-28.
- Runions, T., & Smyth, E. (1985). Gifted adolescents as co-learners in mentorships. Journal for the Education of the Gifted, 8(2), 127-132.
- Russo, N. F., Olmedo, E. L., Stapp, J., & Fulcher, R. (1981). Women and minorities in psychology. American Psychologist, 36, 1315-1363.



- Schaeffer, E. S. (1965). A configurational analysis of children's reports of parent behavior. Journal of Consulting Psychology, 29(6), 552-557.
- Sholomskas, D., & Axelrod, R. (1986). The influence of mother-daughter relationships on women's sense of self and current role choices. Psychology of Women Quarterly, 10, 171-182.
- Siegelman, M., & Roe, A. (1979). The parent-child relations questionnaire II Manual. NY: City College
- Sifneos, P. (1987). Short-term dynamic psychotherapy: Evaluation and techniques (rev. ed.). New York: Plenum.
- Walker, A., & Thompson, L. (1983). Intimacy and intergenerational aid and contact among mothers and daughters. Journal of Marriage and the Family, 841-849.
- Woolf, V. (1927). To the lighthouse. New York: Harcourt, Brace & World.

## APPENDICES

## Appendix A

### Protocol for Verbal Explanation of the Study

#### Purpose of This Study

The purpose of this study is to identify characteristics of a mentor-like relationship experience by females with female mentors and to determine in what ways other relationships may be similar or dissimilar to mentor-like relationships. A mentor is sometimes defined as a teacher, a sponsor, a guide into a new social world, an exemplar to admire and emulate, and a counselor giving moral support.

#### Involvement by Participants

1. The information will be obtained by a graduate student in psychology.
2. The diagnostician will be asking some questions about significant female individuals in the participant's life. Questions will include in what ways the relationship with this significant female was helpful and/or harmful
3. Several questionnaires will be administered, each taking less than 30 minutes to complete. In addition, two interviews, each approximately one hour long and two to

three weeks apart will be necessary. The interviews will be audio-taped. The researcher and assistant will be the only individuals having access to the tapes which will be erased within two months of completion of the research.

4. The subjects will receive a written report of their assessment results.

5. The subject can receive a summary of the research results upon request.

#### Advantages of Participation

1. Insight regarding the importance of specific individuals in the participant's life and ways in which that might relate to current behavior and personal as well as career satisfaction.

2. An opportunity to contribute important information on the subject of the mentorship relationship.

#### Consent/Confidentiality

1. Subjects will be asked to sign a consent form and will receive a copy of that form.

2. No identifying information will be reported regarding the individual or the mentor or other significant person to that individual.

3. All information obtained will be confidential.

4. The subject can withdraw from the study at any time without prejudice.

Appendix BInformed Consent Form: Female Mentorship Study

This certifies that I have been informed of the purpose of the proposed research project. The research project involves exploring the nature of the mentor relationship that I have experienced. Of particular importance will be ways in which I feel the relationship was significant. Some of the questions may involve characteristics of relationships I have had with other individuals. I understand that the risks to me will be minimal.

I understand that I will be given several questionnaires and will be asked to complete one or two measures of personality. The study will include two semi-structured interviews with a graduate student in psychology. Each interview will be approximately one hour and will involve audio taping. I will receive a written report of my assessment results and may request and will receive the results of the study. The tapes will be kept secure at all times and will be destroyed within two months of completion of the research.

If I decide to withdraw from the study, I understand that I may do so at any time, without prejudice. All

information obtained will be confidential. No identifying information will be reported regarding the individual.

If I have any questions, I may contact Anne McShane, the Project Coordinator at 750-1179. I also understand that I may contact Glendon Casto, Ph.D. at 750-2000 in those cases where a problem cannot be discussed with Anne McShane.

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Anne McShane, Project Coordinator

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Glendon Casto, Ph.D., Supervisor  
Professor of Psychology  
Utah State University

I have received a copy of this consent form.

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Participant Signature

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Date

---

Witness Signature

---

Date

Appendix CStructured Interview Focused on Mentoring Relationship

1. How did you happen to become involved in the mentoring relationship with this individual?
2. If you are not currently in an active relationship with your mentor, how long did the relationship last? When did it end? How did it end?
3. What were the most important functions this person served?
4. If you were to pick five descriptors to characterize your mentor, what would they be?
5. Has this relationship affected your happiness, values or success? If so, how?
6. Were there disadvantages to the mentoring relationship? If so, what were they?
7. What would you change about the relationship to make it more ideal?
8. How do you feel the relationship would have been different if your mentor had been of the opposite sex?
9. How did this relationship contribute to your self-concept or self-esteem.

10. What was the nature of the mentor relationship? Was it an intimate one? Was it somewhat distant or formal?



Appendix DStructured Interview Focused on  
Mother/Daughter Relationship

1. What were the most important functions your mother served during your late adolescence?
2. If you were to pick five descriptors to characterize your mother, what would they be?
3. Has the relationship you had with your mother during adolescence affected your happiness, values, or success. If so, how?
4. Were there conflicts in your mother/daughter relationship? What were they. How do you feel it effected you?
5. What would you have changed about the relationship, if anything, to make it more ideal?
6. How did this relationship contribute to your self-concept in positive ways? In negative ways?
7. How was your relationship with your father as compared to your mother? In what ways was it similar? In what ways was it dissimilar?

Appendix EInventory to Measure AffectiveMother/Daughter Relationship

by Alexis Walker and Linda Thompson

Name \_\_\_\_\_ Date \_\_\_\_\_

Age \_\_\_\_\_ Married \_\_\_\_\_ Single \_\_\_\_\_ Divorced \_\_\_\_\_

Degree &amp; Area \_\_\_\_\_

Religious affiliation, if any (optional) \_\_\_\_\_

Here are 26 statements which describe different ways that mothers and daughters feel about each other. Read each statement carefully and think how well it describes your relationship with your mother. Think especially about the time you were an adolescent.

Please rate each item on a scale of 1-5 with 1 indicating the statement was "very untrue" of the relationship and 5 indicating the item was "very true."

1. We want to spend time together. \_\_\_\_\_
2. She shows that she loves me. \_\_\_\_\_
3. We're honest with each other. \_\_\_\_\_
4. We can accept each other's criticism of our faults and mistakes. \_\_\_\_\_
5. We like each other. \_\_\_\_\_
6. We respect each other. \_\_\_\_\_

7. Our lives are better because of each other. \_\_\_\_\_
8. We enjoy the relationship. \_\_\_\_\_
9. She cares about the way I feel. \_\_\_\_\_
10. We feel like we're a unit. \_\_\_\_\_
11. There's a great amount of unselfishness in our relationship. \_\_\_\_\_
12. She always thinks of my best interest. \_\_\_\_\_
13. I'm lucky to have her in my life. \_\_\_\_\_
14. She always makes me feel better. \_\_\_\_\_
15. She is important to me. \_\_\_\_\_
16. We love each other. \_\_\_\_\_
17. I'm sure of this relationship. \_\_\_\_\_
18. We're dependent on each other. \_\_\_\_\_
19. We anticipate each other's mood. \_\_\_\_\_
20. We nurture each other. \_\_\_\_\_
21. I feel like I want to support her. \_\_\_\_\_
22. She is closer to me than others are. \_\_\_\_\_
23. We're emotionally dependent on each other. \_\_\_\_\_
24. When we anticipate being apart, our relationship intensifies. \_\_\_\_\_
25. We anticipate each other's needs. \_\_\_\_\_
26. Our best times are with each other. \_\_\_\_\_

Appendix FMentor Inventory

by S. Riley and D. Wrench

Name \_\_\_\_\_

Sex of Influential Individual \_\_\_\_\_ (M or F)

Approximate Age of Individual \_\_\_\_\_ (Best Estimate)

Years the Relationship was Active \_\_\_\_\_ (e.g., 1980-1983)

Here are 28 statements which describe different ways an individual may have played a positive role in the development of your career (or academic achievement). Please think of the one individual who has been the most significant to you in pursuit of your career or academic progress and respond to the items with that person in mind.

Please rate each item on a scale of 1-5 with 1 indicating the statement was "not at all descriptive of the relationship" and 5 indicating the item was "very descriptive of the relationship."

1. Assists you in learning the technical aspects of your job. \_\_\_\_\_
2. Provides you with advice on how to solve problems. \_\_\_\_\_
3. Gives feedback regarding your work. \_\_\_\_\_
4. Sets challenging performance standards for you to follow. \_\_\_\_\_
5. Serves as a model or example for you to follow. \_\_\_\_\_

6. Shares information on the customs, values, and politics of your profession or work environment. \_\_\_\_\_
7. Genuinely cares about you as a person. \_\_\_\_\_
8. Provides support and encouragement in stressful times. \_\_\_\_\_
9. Gives you challenging work to do that tests your abilities. \_\_\_\_\_
10. Helps you in planning your career. \_\_\_\_\_
11. Uses their influence to get you hired, promoted, or in some way to advance your career. \_\_\_\_\_
12. Introduces you to important others. \_\_\_\_\_
13. Makes sure you receive credit, recognition for your work. \_\_\_\_\_
14. Relates more positively to you than to most others. \_\_\_\_\_
15. Acknowledges you as an accepted member of your profession. \_\_\_\_\_
16. There is mutual respect and admiration in our relationship. \_\_\_\_\_
17. This person has been like a mother to me at times. \_\_\_\_\_
18. There is a willingness to share information and exchange favors. \_\_\_\_\_
19. The relationship is valued in and of itself and not necessarily for the material things. \_\_\_\_\_
20. I have experienced negative feelings toward this person (e.g., envy, resentment, inferiority, intimidation). \_\_\_\_\_
21. This person possess qualities that I admire and that I have tried to make a part of myself. \_\_\_\_\_
22. This person has had a positive influence on my self-confidence. \_\_\_\_\_
23. I see things in this person that remind me of myself. \_\_\_\_\_
24. This person makes demands of me that I can't meet. \_\_\_\_\_
25. I feel free to challenge this person's point of view. \_\_\_\_\_
26. I feel free to make mistakes without fear of repercussions. \_\_\_\_\_
27. I believe that this person see things in me that remind me of themselves. \_\_\_\_\_

28. This person encourages me to have high expectations of myself.
-

## VITA

Anne M. McShane

Candidate for the Degree of  
Doctor of Philosophy

## DISSERTATION

Perceived Affective and Behavioral Characteristics of Mother  
Daughter Relationships and Subsequent Mentoring Relationships.

## EDUCATION

- 1990 Ph.D. Candidate, combined Professional  
Scientific Psychology, Utah State University, Logan, UT.
- 1987 M.S. Psychology, Utah State University, Logan, UT.
- 1974 B.S.N. College of Nursing, Vanderbilt University,  
Nashville, TN.
- 1970 High School Degree, Wenatchee High School, Wenatchee, WA.

## PROFESSIONAL EXPERIENCE

- 1989-90 Accepted to Tucson, VA Medical Center, Psychology Intern,  
Tucson, AZ.
- 1988-89 Research Assistant, Early Intervention Research Institute,  
Utah State University, Logan, UT.
- 1982-83 Staff Nurse, Neurological and Neurosurgical Division,  
Oregon Health Sciences University, Portland, OR.
- 1975-77 LTJG, United States Navy NAVREG MEDCEN Millington,  
Millington, TN.

## PERSONAL DATA

Born January 27, 1952, Pensacola, Florida. Parents: Gene and  
Norma Herring. Married Damian McShane, April 30, 1974; a daughter,  
Brook, born May 21, 1976 and a son, Peter, born July 12, 1978.