

4-29-1980

Characteristics of Mentor Relationships in Male and Female University Professors

Charlotte B. Miller

Western Kentucky University, cbmiller@magellanhealth.com

Follow this and additional works at: <http://digitalcommons.wku.edu/theses>



Part of the [Social Psychology Commons](#)

Recommended Citation

Miller, Charlotte B., "Characteristics of Mentor Relationships in Male and Female University Professors" (1980). *Masters Theses & Specialist Projects*. Paper 30.

<http://digitalcommons.wku.edu/theses/30>

This Thesis is brought to you for free and open access by TopSCHOLAR®. It has been accepted for inclusion in Masters Theses & Specialist Projects by an authorized administrator of TopSCHOLAR®. For more information, please contact connie.foster@wku.edu.

CHARACTERISTICS OF MENTOR RELATIONSHIPS IN
MALE AND FEMALE UNIVERSITY PROFESSORS

A Thesis

Presented to

the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment

of the Requirements for the Degree
Master of Arts

by

Charlotte B. Miller

October, 1979

AUTHORIZATION FOR USE OF THESIS

Permission is hereby

granted to the Western Kentucky University Library to make, or allow to be made photocopies, microfilm or other copies of this thesis for appropriate research or scholarly purposes.

reserved to the author for the making of any copies of this thesis except for brief sections for research or scholarly purposes.

Signed

Vernon C. Moore
for Charlotte B. Miller

Date

4/25/80

Please place an "X" in the appropriate box.

This form will be filed with the original of the thesis and will control future use of the thesis.

CHARACTERISTICS OF MENTOR RELATIONSHIPS IN
MALE AND FEMALE UNIVERSITY PROFESSORS

A Thesis
Presented to
the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Charlotte B. Miller

October, 1979

CHARACTERISTICS OF MENTOR RELATIONSHIPS IN
MALE AND FEMALE UNIVERSITY PROFESSORS

Recommended April 24, 1980
(Date)

Lain E. Layne
Director of Thesis

J. Thomas

R. E. P.

Approved April 29, 1980

Oliver Gray
Dean of the Graduate College

Acknowledgements

I would like to thank the members of this thesis committee, Dr. Lois Layne, Dr. John O'Connor, and Dr. Retta Poe, for their assistance and patience with this study, with a special thanks to Lois for her almost daily guidance, suggestions, and encouragement.

I would also like to express my appreciation to Linda, for listening; to Vernon and Jacque, for helping me double check the data; and to my family, for being supportive of my goals.

Table of Contents

	Page
Acknowledgements	iii
List of Tables	v
List of Appendices	vi
Abstract	vii
Introduction	1
Review of the Literature	3
Statement of the Problem	16
Method	19
Subjects	19
Instrumentation	20
Procedure	21
Results	22
Discussion	38
References	48
Appendices	52

List of Tables

Table		Page
1	Characteristics and Functions of Mentors of University Professors.	24
2	Comparison of Full Relationship Group and Partial Relationship Group on Characteristics and Functions of Mentors	27
3	Comparison of Male and Female Professors on Characteristics and Functions of Mentors	30
4	Comparison of Productivity of Those Who Had Had Mentors and Those Who Had Not	33
5	Frequency and Percentages of Reported Productivity of Same-Gender and Cross-Gender Mentor Relationships	36

List of Appendices

Appendix		Page
A	Mentor Survey (Questionnaire)	53
B	Phone Contact to Establish Participation	58
C	Cover Letter to Questionnaire	59
D	Feedback Letter to Participants	60

Characteristics of Mentor Relationships in
Male and Female University Professors

Charlotte B. Miller October, 1979

63 Pages

Directed by: Lois Layne, Retta Poe, John O'Connor

Department of Psychology

Western Kentucky University

Levinson's (1978) investigation into adult developmental stages revealed that mentor relationships are important to professional and personal growth for some people, but a review of the literature revealed a lack of research on the characteristics and consequences of mentor relationships and on male-female differences in mentor relationships. Male and female doctoral level faculty at WKU were compared regarding whether or not they had had mentors in their professional development and whether they had had same-gender or cross-gender relationships. The characteristics and functions of such relationships were also assessed. Those professors who had had mentors were compared to those who had not on productivity, professional satisfaction, and whether or not they had become mentors themselves. To obtain this information, a written, multiple choice questionnaire was constructed which replaced the less objective, more time-consuming method of interviewing that had been used in previous research. The questionnaire was administered to 28 male and 28 female doctoral level faculty who were matched by college, year degree was received (within five years), age (within ten years), and, when possible, academic department and type of degree. It was found that 78.6% of the men and 75.0% of the women had had mentors, but women were significantly more likely than men to have had cross-gender relationships. There were no significant differences

between those who had had mentors and those who had not in productivity and professional satisfaction. Although the difference was not significant, it was found that more of those who had had mentors had themselves become mentors, as compared to those who had not had mentors. The findings from the present study were compared to the findings of previous research, and suggestions for future research were discussed, including the need for similar research with a larger sample that includes a wide variety of professional and non-professional occupations. A longitudinal study which follows the professional development of students who have been questioned about their mentor relationships was also suggested as a means toward a better understanding of the possible contribution of mentor relationships to a person's professional development.

Characteristics of Mentor Relationships in Male and Female University Professors

Recent investigations into the existence and characteristics of adult developmental periods have suggested that mentor relationships can significantly influence young adult professional growth (Levinson, Darrow, Klein, Levinson, McKee, 1978; Sheehy, 1976; Stewart, 1977). These investigations have described a mentor as a complex combination of counselor, advisor, model, and teacher. However, mentor relationships have only recently been a subject of research, and very little empirical data have been obtained about them. Knowledge about the nature of mentor relationships has been derived primarily from research by Levinson, et al. (1978) using an interview technique with males as subjects. Other data have been from a very small female sample (Stewart, 1977) and from non-empirical interviews with a sample of both men and women (Sheehy, 1976). The data have supported the existence of mentor relationships, especially among men, but little is known about the characteristics, effects, and universality of such relationships, as well as whether mentor relationships are generally available to women.

While little research is available on mentors, other areas of the literature provide a background for the present study and, thus, will be discussed. First, the literature on adult development, which has established the notion that adults go through developmental phases in life, will be reviewed. The knowledge of adult developmental phases

or stages has facilitated an understanding of the developmental tasks that a mentor can help an individual resolve. The available theory and research concerning mentor relationships will then be presented to describe and clarify further the concept of mentor. Finally, since the definition of mentor includes the role of model, some of the relevant research on role models will be discussed.

Several problems with the previous research were addressed in the present study. The primary purpose of the present study was to compare the existence of mentor relationships among both men and women since no direct, empirical comparisons had yet been made. A second aim of this study was to explore the impact of a mentor on individual development. The potential impact had not been fully investigated, nor had it been measured by objective methods. Finally, a third aim of this study was to determine if the effects of mentor relationships may vary as a function of their being same-gender or cross-gender since investigators had speculated that such differences exist (Levinson, et al., 1978). If the mentor relationship is truly important to a young adult's development, research into these issues is needed.

Review of the Literature

Adult development was a relatively neglected topic until the last decade since it was assumed "that once a person passed the trauma of adolescence, completed his or her formal schooling, began a job and/or got married, and 'settled down', nothing new happened until death" (Wrightsmann, 1976, p. 1). Jung (1933) was one of the earliest theorists to conceptualize the years beyond adolescence as a continually evolving process of self-realization. Jung viewed young adulthood as a time of achievement-oriented attainment of cultural expectations, midlife (around the ages of 35 to 40) as a time of conflict between those cultural goals and the growth of one's own consciousness, and later adulthood as the unfolding of the direction taken during that midlife conflict (Jung, 1933). His description of adult growth centered on the midlife and was based on his own experience of conflict during that time (Jung, 1963). Although he explored the idea that growth continues into adulthood, he presented his theory in terms of one major conflict rather than a process of development.

Erikson's (1950) theory addressed the issue of the continuity of development more fully and has been perhaps the best known of the early attempts to describe stages of a person's development. He conceptualized the stages as the task of resolving the dichotomy of the positive versus the negative outcomes of dealing with particular issues inherent to an organism's awareness and interaction with "a widening social

and attitudes that were prominent in each age group. Because this investigation was a cross-sectional study, the possible influences of learned cultural values from the formative years of the different groups were recognized. Also, the theory was originally based on a sample of psychiatric patients, and although the data were later compared to a sample from the general population, the appropriateness of using such a sample as the basis for a theory of development is questionable.

Levinson's (1978) theory of adult development proposed age specific periods (he prefers the term "period" to "stage" or "phase"). He intensively interviewed 40 men (10 laborers, 10 business executives, 10 academic biologists, and 10 novelists) and found that despite variations in certain milestones in life (employment, marriage, children, etc.), the developmental periods occurred at basically the same ages. This theory, that stages are age specific, is a controversial one that is likely to stimulate additional research, especially since Levinson's support for his theory was based on a limited sample of one gender. Since the subjects were asked to describe personal and situational aspects of their lives from past years, the conclusions of his research also may be confounded by socially desirable responding and selective memory. However, despite the acknowledged problems with his sample of subjects, Levinson postulated the following stages: Transition Into Early Adulthood (Age 17-22), Getting Into the Adult World (Age 22-28), Age Thirty Transition (Age 28-33), Settling Down (Age 34-40), Mid-Life Transition (Age 40-45), Entering Middle Adulthood (Age 45-50), Age Fifty Transition (Age 50-55), Culmination of Middle Adulthood (Age 55-60), Late Adult Transition (Age 60-65), and Late Adulthood (Age 65-85).

These periods were more explicitly defined than have been the stages of previous theories, and they are described in detail made possible by the hours of intensive interviews with each subject.

An emphasis on the male life pattern was apparent in Levinson's description of these periods, and even Levinson has questioned the generalizability to women. Although his book expressed the belief that women go through the same developmental periods, he stresses the necessity of studying the development of both genders (Levinson, et al., 1978).

The differences in the socialization processes for males and females are such that the entire orientation to life may be different for each gender. Schlossberg (1978) expressed the idea that women define themselves in terms of the dominant people in their lives rather than their own accomplishments, while men define their lives in terms of their own achievements. It has also been noted that different attitudes instilled in children of each gender shape very different patterns of adult behaviors, especially in terms of achievement and occupational goals (Bem and Bem, 1970).

Stewart (1977) applied Levinson's interview approach to a small sample ($n=11$) of women and found the same developmental periods, with differences, however, in some of the specific issues involved. She reported a greater variability both in the difficulties faced by women and in the order in which specific developmental tasks were accomplished by her female sample. For example, she found that the Dream, the young adult's image of the kind of life he or she wants to lead as an adult (Levinson, et al., 1978), was qualitatively different for women and that the stability of the life structure in the twenties

person's early adulthood that has been most applicable, since the mentor relationship seemed likely to emerge during this period.

The early adulthood phase encompassed a variety of issues and adjustments as a young person separated from a secure family life and entered into the new adult world. Jung viewed early adulthood as a time when the young adult becomes entrenched in filling social positions and expectations in an attempt to find his or her "attainable place in the world" (Jung, 1933, p. 104). By contrast, Erikson's stage of the early adult years is one in which a person either developed the capacity to trust others and affiliate or learned to avoid intimacy, setting a pattern of isolation and superficial relationships. Data from the intensive interviews by Levinson, et al. (1978), however, have provided a more specific account of the many changes and pursuits that confront the young adult. According to Levinson's theory of early adulthood (which encompasses the periods of Early Adult Transition, Entering the Adult World, Age Thirty Transition, and Settling Down), a person must have detached from the family, clarified occupational directions, formulated ideas about an adult life-style (the Dream), nurtured relationships with other adults, established a new home base, explored commitments to job and other people, and began to live out certain aspects of the Dream (Levinson, et al., 1978). The complexity of these tasks could be overwhelming, and thus Levinson found this period of life to be one in which special relationships were formed that could help a person to resolve some of these tasks. The mentor relationship is often one of the most important in that the functions served by a mentor were directly related to the tasks inherent in this period of life. For example, the subjects in Levinson's study

described the mentor as a model, teacher, guide, sponsor, and counselor who enhanced their development through the early adult years (Levinson, et al., 1978).

Research has indicated that the mentor relationship itself is quite complex and therefore difficult to define concisely (Levinson, et al., 1978; Sheehy, 1976; Stewart, 1977). Levinson described a mentor as a person who "acts as a teacher to enhance...skills and intellectual development"; who serves as "sponsor...to facilitate... entry and advancement" into one's chosen profession; who is a "guide" who acquaints the initiate with his or her "new occupational and social world...its values, customs, resources, and cast of characters;" who "may be an exemplar that the protege can admire and seek to emulate;" and who provides "counsel and moral support" to "facilitate the realization of the Dream," which is the person's image of his or her professional goals and adult lifestyle (Levinson, et al., 1978, pp. 98-99). Each individual mentor relationship is likely to vary in intensity and characteristics, and Levinson's definition has reflected this variability by describing the probable characteristics and functions served rather than specifying a formal, narrow role (Levinson, et al., 1978).

The mentor relationship could be formal, such as that of a teacher, boss, or colleague; or informal, such as that of a friend, neighbor, or relative. All of the male subjects in Levinson's study had had male mentors who were usually older by 8 to 15 years. The mentors were often viewed as more advanced or authoritative in their occupational fields. Also, the mentors were seen as displaying a

mixture of parent and colleague, sometimes treating the mentee as an inexperienced but promising protege and sometimes as an equal or peer.

Levinson also discovered that the mentor relationships among his subjects usually had lasted two or three years during early adulthood and resembled a love relationship, complete with the intensity, warmth, friendship, involvement, and difficulties associated with a love relationship. The comparison of mentor relationships to love relationships extended to the ending of the relationship, since the break was often accompanied by conflict, grief, bitterness, liberation, and other intense emotions which often occur when a love relationship ends.

Thus, the complexity of the mentor relationship is apparent, and it may be even more complex for women. Although Levinson did not interview women, he speculated that since female mentors were scarce, women were more likely than men to have had cross-gender mentor relationships which were complicated by other factors. For example, the female mentee and the male mentor may both have limited the benefits of such a mentor relationship by adhering to traditional attitudes of male dominance and/or female inferiority. Levinson suggests that the woman may have been regarded "as attractive but not gifted, as a gifted woman whose sexual attractiveness interferes with work and friendship, as an intelligent but impersonal pseudo-male, or as a charming little girl who cannot be taken seriously" (Levinson, et al., 1978, p. 98).

The interview data from women have suggested that female mentors are scarce, that a female is likely to have a male mentor,

and that mentor relationships are more complex for women than for men (Stewart, 1977; Sheehy, 1976). The men interviewed by Levinson, et al. (1978) were influenced by both male mentors and Special Women, the women who helped them realize their Dreams. Often the Special Woman was or became the man's wife and provided a loving, supportive environment. A woman may also have a romantic, supportive relationship (a Special Man), but often the roles of mentor and Special Man are filled by one person, further confusing the relationship. Sometimes the Special Man in a woman's life acts as an "anti-mentor"; that is, he contributes to the "formation of a negative identity" (Stewart, 1977, p. 43) and hinders the woman's development.

Stewart (1977) discovered that among her subjects the functions of a mentor had been served by several individuals. Women may be influenced by their mothers, bosses, distant role models (persons who were emulated, but with whom actual contact was minimal), and other persons, male or female, who filled certain aspects of the mentor role. The influence of these various people may be incompatible or even conflicting. In addition, possible influences of the Special Man and the conflicting female models of traditional and non-traditional lifestyles may contribute to the complexity (Stewart, 1977).

Sheehy (1976) found additional complexity in the mentor relationship for women. She noted that there was often an erotic or romantic interest in cross-gender mentor relationships. "The woman may have a difficult time finding her own equilibrium because her professional, emotional, and sexual nourishment are all piped in from the same person" (Sheehy, 1976, p. 190).

The conclusions drawn from the interviews with women must be viewed as tentative, however, since both studies provided limited data. Stewart's (1977) sample of 11 females was not only very small but was drawn from names provided by friends. The lack of an adequate sample has limited generalizability. The representativeness of Sheehy's (1976) sample was also questionable, and her interviews were considerably less thorough than those of the study by Levinson, et al. (1978). The questions concerning mentor relationships for women are thus still open to investigation.

The fact that a woman now has more lifestyle choices than in the past appears to affect the establishment of the mentor relationship. Stewart (1977) suggested that if during early adulthood a woman's life structure centers around achievement or a desire to remain single, she may more likely seek out a mentor relationship. On the other hand, if her lifestyle is based more on the goals of marriage, children, and home life, the Special Man may be the most influential relationship in her life. In the latter case, the model to be emulated may be the woman's mother (Stewart, 1977).

Despite their reports of differences in mentor relationships, Levinson, et al. (1978), Stewart (1977), and Sheehy (1976) all have supported the idea that a mentor relationship is extremely important to and influential in the adult development process for both men and women. "Poor mentoring in early adulthood is the equivalent to poor parenting in childhood: without adequate mentoring a young man's entry into the adult world is greatly hampered" (Levinson, et al., 1978, p. 338). Sheehy reported that the women she had interviewed who had gained recognition in their careers had almost invariably been

influenced by a mentor at some point (Sheehy, 1976).

Because of the paucity of empirical data concerning the mentor relationship, however, it seemed prudent to explore the related research concerning the characteristics and effects of other influences on a person's life. One such influence has been that of a role model, and, although research comparing mentors with role models was lacking, certain aspects of the two concepts appeared similar enough to warrant a closer look at studies concerning role models.

The concept of role model has had a range of definitions, from the narrow description of one who demonstrates the technical aspects of a particular role (Kemper, 1968), to a much broader definition of one who explicates any aspect of a role that is important to the person who is emulating the model in understanding the consequences, mechanics, and complexities of the role (Wallston, 1979). The latter definition describes several functions that have been attributed to a mentor, and even Kemper's (1968) narrower definition describes one of the functions of a mentor. Thus, the distinction between role model and mentor may be best understood in terms of the number and variety of functions served. That is, the concept of role model describes some, but not all, of the functions of a mentor. The concept of mentor, as described in the studies of adult development, stresses those aspects of the role that enhance a person's professional development (Levinson, et al., 1978; Sheehy, 1976; Stewart, 1977). Thus, since professional role modeling is a major function of the mentor, research that investigates the effects of role models on professional development may serve to enhance the understanding of that part of the mentor relationship.

Social learning theorists such as Bandura and Walters (1963) and Mischel (1966) have described how socialization and acquisition of role-appropriate behaviors are facilitated by observing persons in certain roles. Although most social learning theories have been based on research with children, the theories seem appropriately applied to the learning that is required of a young adult entering an occupation.

Several studies have suggested the importance of role models in career development (Anderson, 1974; Dement, 1962; Henning, 1971, cited in Wallston, 1979; Kimmel, 1976), but the attention recently given women who are pursuing careers (e.g., Angrist and Almquist, 1975; Theodore, 1971) has instigated more systematic research into the impact of professional role models. Kemper (1968) reported that role models demonstrated the technical aspects of a particular role and possibly influenced the behaviors and judgments of the person who sought to emulate the model. In a survey of graduating college seniors the subjects reported that advisors and professors had been influential (Angrist and Almquist, 1975). The role models who were viewed as most influential by these subjects were those who demonstrated a total lifestyle. By emulating a model in more than just technical areas, the person may have been able to reduce the possible role conflicts faced later by noting how such conflicts were resolved by the model. Thus, models were found to influence complex role appropriate behaviors (Angrist and Almquist, 1975).

Since female professional role models have been shown to be rare (Bernard, 1964; Robbins, 1972; Teghtsoonian, 1974; Sheehy, 1976; Douvan, 1976), the lack of professional role models may have added to

the difficulties that achievement-oriented and career-oriented females have faced such as the fear of negative consequences for achievement (Horner, 1968, 1972). This raises the question of exactly what impact a role model has on a person's occupational development.

Simonton reported a positive correlation between the availability of role models and the eminence of creative persons (Simonton, 1975, 1976, 1977). Similarly, science students who were trained by top scientists became in turn the most productive scientists of the next generation (Crane, 1975). Thus, productivity and eminence have been related to role models and the environment they provide, although causation cannot be inferred from these correlational data.

Feldman (1974) stated that professors were crucial to the creation of a student's professional self-image and that having a close relationship with a professor positively affected a student's career aspirations. Graduate students who planned to enter careers of university teaching, full-time university research, or junior college teaching were questioned about the quality of their relationships with the professors closest to them. Female graduate students who had had close relationships with professors were more likely to pursue the higher status position of university professor than were the female students who had had no contact with professors outside the classroom.

The adequacy of a role model may involve more than being a person to emulate, however, since research findings have suggested that the gender of the role model is an important factor. Plost and Rosen (1974) found that young girls chose an occupation modeled by a woman more often than one modeled by a man, even with occupations that were

not sex-typed. Hirsch (1976) demonstrated that participants in T-groups developed more positive self-perceptions when same-gender role models were available than when opposite-gender role models were available. Even viewing videotaped interviews with women who had a high level of occupational and family responsibilities increased the occupational aspiration levels of female college freshman (Elliott, 1973).

Convincing evidence for the importance of same-gender influences was provided in a recent study by Goldstein (1979). The productivity of 55 male and 55 female PhD psychology graduates was compared based on the gender of the subjects' dissertation advisors. In this study productivity was defined as the number of research articles published within a four-year period after graduation from the doctoral program. It was found that 79% of the articles published were by subjects who had had dissertation advisors of the same gender, while those with cross-gender advisors had published only 21% of the articles. The researchers pointed out, however, that in spite of this evidence, causality can not be inferred since perhaps "more ambitious or intelligent males and females seek out same-sex advisors" (Goldstein, 1979, p. 409). The data indicate, however, that the gender of the role model may have been an important factor.

Statement of the Problem

The existence of mentor relationships has emerged in research concerning adult development; information from interviews has shown that a mentor relationship has an important impact on a young adult, especially in terms of professional development. None of the investigations into mentor relationships have compared men and women of

and women, then the tasks confronting women who seek professional and personal growth might be better understood. Such differences might also suggest ways to enhance a woman's development. Although the research concerning mentors has not addressed the question of whether or not a person who has had a mentor will be more likely to become a mentor, the answer to such a question might provide insight into how the difficulties faced by women have been perpetuated.

This study, therefore, proposed to take a systematic approach to gathering information concerning the mentor relationship via a questionnaire and addressed the following hypotheses:

1. That mentor relationships are more prevalent among men than among women.
2. That women are more likely than men to have cross-gender mentors rather than same-gender mentors.
3. That a mentor relationship enhances a person's productivity and subjective satisfaction with his or her present professional position.
4. That those who experienced a mentor relationship are more likely than those who did not have a mentor relationship to act as mentors themselves.

undertaken concerning mentors.

If the availability of mentors, the gender of the mentor, and the impact of the mentor relationships were found to be different for men

Method

Subjects

A matched sample of doctoral-level faculty at Western Kentucky University served as subjects for this study. The doctoral-level population was chosen to control for possible differences due to degree levels and because the longer time generally required to earn the doctorate is more likely than a masters or bachelor program to allow for the development of a mentor relationship. According to the university administration's official list of full-time faculty members, there were 277 male and 36 female doctoral level faculty members at W.K.U. in the fall of 1979 (these numbers did not include faculty in administrative offices). The three faculty members of this thesis committee were excluded from the list. The remaining 310 doctoral faculty members (most of whom have PhD's but also include those with EdD's and other doctorates) constituted the population from which the sample was drawn. Since the number of female doctoral faculty members was relatively small, almost all of them were asked to participate and a sample of male doctoral faculty members was matched to the female sample by college, year of terminal degree (within five years), and age (within ten years). Type of degree and academic department were matched whenever possible.

Out of 56 professors asked to serve as subjects, 28 male and 28 female professors agreed to participate. All questionnaires were

returned for a total n of 56. The total sample included equal numbers of men and women from each college who had received their terminal degrees at approximately the same time (within five years). The ages were very similar for the male and female groups. For the males, the age range was from 30 to 62, with a mean of 43.9. For the females, the age range was from 33 to 61, with a mean of 44.0.

The colleges from which the subjects were drawn were: 1) Potter College of Arts and Humanities, 2) College of Education, 3) Bowling Green College of Business and Public Affairs, 4) College of Applied Arts and Health, and 5) Ogden College of Science and Technology.

Instrumentation

The survey questionnaire (Appendix A) was constructed to obtain information which could be categorized concerning mentor relationships. First, a list of questions was constructed based on the interview data available on mentor relationships. Questions for the survey were taken from this list and worded to elicit information needed to test the proposed hypotheses. The multiple choice format was chosen to facilitate categorization of responses, but since such a closed format had not been used in previous research in this area, some questions provided the option of a written-in response. It was hoped that this format would offer a systematic approach to the data while still allowing for other responses that had not been considered. Since the investigation of the mentor relationship is relatively new, the questionnaire may be viewed as a pilot attempt to replace the interview technique previously used by Levinson, et al. (1978), Stewart (1977), and Sheehy (1976).

The resulting questionnaire was administered to three men and three women who were instructed to respond as if they were doctoral level professors, and then they were asked to comment on the clarity of the instructions, the wording of the questions, and the time needed to complete the questionnaire. Other suggestions for improvement of the questionnaire were also elicited. Changes were made in the questionnaire based on these suggestions and comments. The time needed for the completion of the questionnaire ranged from 5 to 18 minutes.

Procedure

The potential participants who were selected according to the matching criteria described above were contacted by phone (Appendix B) to establish their willingness to participate in the study. When a subject's permission was obtained, he or she was mailed the survey questionnaire (Appendix A) with a brief explanation of the research project and with instructions for completing and returning the questionnaire (Appendix C). Participants were requested to omit their names from the questionnaires and return envelopes so that their responses would be anonymous. Identification was requested on the outer mailing envelope only so that it could be determined which questionnaires had been returned. The identifying information was discarded before the questionnaires were analyzed, however, so that the responses could not be individually identified. Those participants who had not returned the questionnaire after ten days were called by the experimenter. Reminder calls to six participants were necessary, but all questionnaires were eventually returned. After the study was completed, a letter describing the results was sent to all participants (Appendix D).

Results

The purposes of this study were to explore the existence of mentor relationships in adult development in male and female university professors at Western Kentucky University, to test by statistical analysis four hypotheses concerning mentor relationships, and to provide descriptive data concerning such relationships.

The findings from the present study were consistent with previous research by Levinson, et al. (1978), Sheehy (1976), and Stewart (1977) concerning the existence of mentor relationships. Of the 56 professors studied, 43 (76.8%) reported having had mentor relationships which influenced their development. The professors who reported such relationships were divided into two groups: those who stated that they definitely had had mentors during their professional development (Full Relationship Group, $n=22$) and those who stated that they had had mentor relationships which provided some, if not all, of the functions of a mentor as defined in the present study (Partial Relationship Group, $n=21$).

The hypothesis that mentor relationships would be more prevalent among men than among women (hypothesis one) was not supported. This hypothesis was tested by a chi-square analysis of the responses of males and females to the first question of the survey, which asked the professor if he or she had had a mentor. The responses to this question were collapsed for statistical analysis so that response "a"

("Yes, I had a mentor") and response "b" ("There was someone who performed some of the functions of a mentor, but not to the extent described above") were combined to indicate that the person had had a mentor. Response "c" ("There was someone I viewed as a model and emulated, but a relationship did not exist") and response "d" ("No, I did not have a mentor") were combined to indicate that the person had not had a mentor. Thus, the answers to the question of whether the professor had had a mentor were converted to "yes" or "no" responses. The chi-square analysis compared the proportions of males and females who had had mentor relationships. The Yates' corrected chi-square showed the proportions to be not significantly different from one another ($\chi^2(1)=0.0, p < 1.0$).

The data from this sample supported the second hypothesis, that women would be more likely than men to have cross-gender mentors rather than same-gender mentors. Question four of the survey asked the professors about the genders of their mentors, and the responses of the males and females were compared by a chi-square test of proportions. The findings of the analysis indicated that a significant difference existed between same-gender and cross-gender relationships for males and females; i.e., women reported cross-gender relationships significantly more often than men (Yates' corrected $\chi^2(1)=7.14, p < .01$). In the female sample 42.9% had had cross-gender mentors as compared to only 13.6% of the male sample. Same-gender relationships had existed for 86.4% of the males and 57.1% of the females.

Hypothesis three concerned whether a mentor relationship enhanced a person's productivity and subjective satisfaction with his or her professional position. To test this hypothesis the subjects'

questionnaires were divided into two groups based on whether or not the professors had had mentors. First, the two groups were compared concerning their responses to Question 29 which concerned the professor's level of professional productivity. No significant difference in productivity existed between those who had had mentors and those who had not ($\chi^2(5)=2.59, p < .76$), although it is interesting to note that all four professors who reported the higher levels of productivity (five or more works per year) had had mentors. Table 1 shows the level of productivity for each group.

Secondly, the two groups were compared concerning their responses to Question 30, which asked for a subjective rating of the professor's satisfaction with his or her professional position. There was no significant difference between the groups in reported satisfaction with their professional positions ($\chi^2(4)=3.83, p < .43$). Most professors reported being either very satisfied or somewhat satisfied with their professional positions. Of the professors who had had mentors, 88.4% reported satisfaction, compared to 84.7% of the professors who had not had mentors.

The hypothesis that those who had had mentors were more likely to act as mentors themselves (hypothesis four) was not supported. The responses to Question 26 of the survey, which asked whether or not the professor had been a mentor to someone else, were compared by a chi-square analysis of responses of the subjects who had had mentors and those who had not had mentors. Although the difference between these two groups was not significant (Yates' corrected $\chi^2(1)=2.75, p < .097$), there is a trend in that direction; 72.1% of those who had had mentors became mentors, while only 46.2% of those who had not had mentors

TABLE 1

Frequency and Percentages of Reported Productivity
of Those Who Had Had Mentors and Those Who Had Not

Productivity - Average number of works per year

Responses to Question 1		0		1-2		3-4		5-6		7+	
		<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
Mentor:	a	2 (9.1%)	8 (36.4%)	8 (36.4%)	1 (4.5%)	2 (9.1%)					
	b	5 (23.8%)	11 (52.4%)	4 (19.0%)	0 (0 %)	1 (4.8%)					
No Mentor:	c	0 (0 %)	1 (50.0%)	1 (50.0%)	0 (0 %)	0 (0 %)					
	d	1 (9.1%)	6 (54.5%)	4 (36.4%)	0 (0 %)	0 (0 %)					

became mentors.

In addition to testing the four hypotheses above, the present study obtained descriptive information about the existence and nature of mentor relationships. The responses to Question one of the survey, which asked the participant if he or she had had a mentor relationship, were examined for possible gender differences. Question one produced the following responses: 11 males and 11 females reported that they definitely had had mentors (response a); 11 males and 10 females reported that they had had a relationship which provided some of the functions of a mentor, although not to the full extent of the definition provided (response b); 2 males and 0 females reported that they had emulated a model but that a relationship had not existed (response c); and 4 males and 7 females reported that they had not had a mentor (response d).

The percentages of professors endorsing specific characteristics and functions as descriptive of their mentors are presented in Table 2. When those who stated they definitely had had mentors (Full Relationship Group) and those who reported that their mentor relationships provided some, but not all of the mentor functions (Partial Relationship Group) are combined, 35 or more of the 43 professors endorsed the following characteristics as being present in their relationships (by marking 1 or 2 on the 1 to 5, "present" to "not present", scale): "was someone I liked personally;" "acquainted me with the values, roles, customs, and resources of my profession;" "provided me with moral support;" "enhanced my intellectual and professional development;" "was a teacher in structured training situations such as classes."

TABLE 2

Frequencies and Percentages* of University Professors'
Ratings of Characteristics and Functions of Mentors

	Present		Present to some degree				Not Present			
	1		2		3		4		5	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Model of Professional behavior	34	79.1	7	16.3	1	2.3	0	0	1	2.3
Model of personal lifestyle	15	34.9	8	18.6	10	23.3	6	14.0	4	9.3
Counseled regarding professional decisions	19	44.2	18	41.9	4	9.3	1	2.3	1	2.3
Counseled regarding personal problems	4	9.3	3	7.0	6	14.0	12	27.9	18	41.9
Admired professionally	32	74.4	8	18.6	2	4.7	1	2.3	0	0
Liked personally	27	62.8	11	25.6	3	7.0	1	2.3	1	2.3
Regarded as protege	10	23.3	15	34.9	9	20.9	2	4.7	6	14.0

*Percentages of those professors who had had mentors (n = 43).

Table 2
Continued

	Present		Present to some degree				Not Present			
	1		2		3		4		5	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Acquainted with values, roles, customs, etc.	28	65.1	8	18.6	4	9.3	3	7.0	0	0
Shaped adult lifestyle	7	16.3	11	25.6	8	18.6	6	14.0	10	23.3
Facilitated goals	22	51.2	16	37.2	3	7.0	1	2.3	1	2.3
Provided moral support	23	53.5	13	30.2	5	11.6	2	4.7	0	0
Enhanced intellectual and professional development	27	62.8	10	23.3	6	14.0	0	0	0	0
Shared affectional regard	11	25.6	6	14.0	16	37.2	6	14.0	3	7.0
Teacher	33	76.7	2	4.7	1	2.3	0	0	7	16.3
Introduced to others in profession	14	32.6	13	30.2	7	16.3	5	11.6	4	9.3

Note: A total of less than 100% (or n less than 43) indicates that not all professors responded to that item.

Only one item ("counseled me regarding personal problems") was not strongly endorsed, with less than 20% of the professors endorsing it as present in their relationships. Two other items were present in less than 45% of the professors' mentor relationships: "helped me in shaping my adult lifestyle" and "was someone with whom I shared affectional regard and comraderie."

The responses of the Full Relationship Group and the Partial Relationship Group to the questions concerning mentor characteristics and functions were compared by the use of descriptive statistics. The frequencies of endorsements of characteristics and functions of mentor relationships by members of each group are presented in Table 3.

The frequencies of endorsements of characteristics and functions of mentor relationships appeared similar for males and females. Table 4 shows the comparison of male and female professors' endorsements of the items descriptive of their mentor relationships.

Other descriptive information about the mentor relationship was obtained. Of the professors who had had mentors ($n=43$), 9.3% indicated that the mentor relationship had lasted less than two years, 39.5% indicated two to four years, 30.2% indicated five to seven years, and 20.9% indicated eight years or more. On the question concerning the age difference between the professor and his or her mentor, the mentor was reported by the respondents as having been older by five to eight years for 7.0%, by nine to twelve years for 16.3%, by twelve to fifteen years for 18.6%, and by fifteen or more years for 51.2%. Only 4.7% of the professors had had mentors who were younger, and 2.3% had had mentors of the same age.

TABLE 3
 Frequencies and Percentages of Endorsement of
 Characteristics and Functions by the Full Relationship
 Group and Partial Relationship Group

	Present 1		2		Present to some degree 3		4		Not Present 5	
	F*	P	F	P	F	P	F	P	F	P
Model of prof. behavior	18 (81.8)	16 (76.2)	6 (18.2)	3 (14.3)	0 (0)	1 (4.8)	0 (0)	0 (0)	0 (0)	1 (4.8)
Model of pers. lifestyle	11 (50.0)	4 (19.0)	3 (13.6)	5 (23.8)	6 (27.3)	4 (19.0)	2 (9.1)	4 (19.0)	0 (0)	4 (19.0)
Counseled, prof. decisions	14 (63.6)	5 (23.8)	5 (22.7)	13 (61.9)	3 (13.6)	1 (4.8)	0 (0)	1 (4.8)	0 (0)	4 (4.8)
Counseled, pers. problems	3 (13.6)	1 (4.8)	3 (13.6)	0 (0)	4 (18.2)	2 (9.5)	6 (27.3)	6 (28.6)	6 (27.3)	12 (57.1)
Admired professionally	17 (77.3)	15 (71.4)	4 (18.2)	4 (19.0)	1 (4.5)	1 (4.8)	0 (0)	1 (4.8)	0 (0)	0 (0)
Liked personally	18 (81.8)	9 (42.9)	3 (13.6)	8 (38.1)	1 (4.5)	2 (9.5)	0 (0)	1 (4.8)	0 (0)	1 (4.8)
Regarded as protege	8 (36.4)	2 (9.5)	8 (36.4)	7 (33.3)	2 (9.1)	7 (33.3)	1 (4.5)	1 (4.8)	2 (9.1)	4 (19.0)

*F = Full Relationship Group (n = 22), P = Partial Relationship Group (n = 21).
 Note: Numbers in parenthesis are percentages of each group.

Table 3
Continued

	Present		Present to some degree				Not Present			
	1		2		3		4		5	
	F	P	F	P	F	P	F	P	F	P
Acquainted w. values, etc.	16 (72.7)	12 (57.1)	5 (22.7)	3 (14.3)	0 (0)	4 (19.0)	1 (4.5)	2 (9.5)	0 (0)	0 (0)
Shaped adult lifestyle	5 (22.7)	2 (9.5)	7 (31.8)	4 (19.0)	4 (18.2)	4 (19.0)	1 (4.5)	5 (23.8)	4 (18.2)	6 (28.6)
Facilitated goals	16 (72.7)	6 (28.6)	6 (27.3)	10 (47.6)	0 (0)	3 (14.3)	0 (0)	1 (4.8)	0 (0)	1 (4.8)
Provided moral support	17 (77.3)	6 (28.6)	5 (22.7)	8 (38.1)	0 (0)	5 (23.8)	0 (0)	2 (9.5)	0 (0)	0 (0)
Enhanced intell./prof. dev.	17 (77.3)	10 (47.6)	4 (18.2)	6 (28.6)	1 (4.5)	5 (23.8)	0 (0)	0 (0)	0 (0)	0 (0)
Affectional regard	10 (45.5)	1 (4.8)	6 (27.3)	0 (0)	3 (13.6)	13 (61.9)	2 (9.1)	4 (19.0)	0 (0)	3 (14.3)
Teacher	16 (72.7)	17 (81.0)	1 (4.5)	1 (4.8)	0 (0)	1 (4.8)	0 (0)	0 (0)	5 (22.7)	2 (9.5)
Intro. to others in prof.	9 (40.9)	5 (23.8)	6 (27.3)	7 (33.3)	4 (18.2)	3 (14.3)	2 (9.1)	3 (14.3)	1 (4.5)	3 (14.3)

Most of the professors reported that their mentors had assisted them in the development of their productivity. The mentor had been a dissertation advisor only for 30.2% of the professors, had been dissertation advisor and had assisted with other professional works for 27.9%, and had not been a dissertation advisor but had assisted with professional works other than a dissertation for 9.3%. The development of professional productivity had not been a part of the mentor's function for 23.3% of the professors.

The question concerning what had happened to the mentor relationship was answered as follows: 18.6% of the professors who had had mentors reported that the relationship had ended gradually; 11.6% reported that the relationship had ended abruptly, but with continued warm feelings; 7.0% reported that the relationship had ended abruptly such as by a disagreement; 7.0% reported that their mentor relationships still existed; 48.8% reported that they still had relationships with their former mentors, although the relationships were no longer mentor relationships; and 7.0% wrote in that their relationships had ended with the death of their mentors.

The largest number of professors who had had mentors ($n=43$), reported that their mentor relationships had occurred in graduate school (48.8%). Of the other professors with mentors, 4.7% reported having had mentors during the first few years of their professional careers, 20.9% reported having had the same mentors during graduate school and the first few years of their profession, 16.3% reported having had different mentors at different times, and 9.3% wrote in that their mentor relationships had occurred in undergraduate school.

TABLE 4

Comparison of Male and Female Professors on
the Frequency of Endorsement of
Characteristics and Functions of Mentors

	Present 1		2		Present to some degree 3		4		not Present 5	
	M*	F	M	F	M	F	M	F	M	F
Model of prof. behavior	18 (81.8)	16 (76.2)	3 (13.6)	4 (19.0)	1 (4.5)	0	0	0	0	1 (4.8)
Model of pers. lifestyle	6 (27.3)	9 (42.9)	4 (18.2)	4 (19.0)	8 (36.4)	2 (9.5)	3 (13.6)	3 (14.3)	1 (4.5)	3 (14.3)
Counseled, prof. decisions	9 (40.9)	10 (47.6)	8 (36.4)	10 (47.6)	3 (13.6)	1 (4.8)	1 (4.5)	0	1 (4.5)	0
Counseled, pers. problems	3 (13.6)	1 (4.8)	1 (4.5)	2 (9.5)	1 (4.5)	5 (23.8)	8 (36.4)	4 (19.0)	9 (40.9)	9 (42.9)
Admired professionally	17 (77.3)	15 (71.4)	3 (13.6)	5 (23.8)	1 (4.5)	1 (4.8)	1 (4.5)	0	0	0
Liked personally	13 (59.1)	14 (66.6)	7 (31.8)	4 (19.0)	1 (9.5)	2 (4.8)	1 (4.5)	0	0	1 (4.8)

*M = Male professors (n=22)

F = Female professors (n=21)

Note: Numbers in parenthesis are percentages of each group.

Table 4
Continued

	Present		Present to some degree				Not Present			
	1		2		3		4		5	
	M	F	M	F	M	F	M	F	M	F
Regarded as protege	3 (13.6)	7 (33.3)	10 (45.5)	5 (23.8)	5 (22.7)	4 (19.0)	1 (4.5)	1 (4.8)	3 (13.6)	3 (14.3)
Acquainted w. values, etc.	13 (59.1)	15 (71.4)	4 (18.2)	4 (19.0)	3 (13.6)	1 (4.8)	2 (9.1)	1 (4.8)	0	0
Shaped adult lifestyle	4 (18.2)	3 (14.3)	5 (22.7)	6 (28.6)	4 (18.2)	4 (19.0)	4 (18.2)	2 (9.5)	5 (22.7)	5 (23.8)
Facilitated goals	10 (45.5)	12 (57.1)	8 (36.4)	8 (38.1)	2 (9.1)	1 (4.8)	1 (4.5)	0	1 (4.5)	0
Provided moral support	11 (50.0)	12 (57.1)	9 (40.9)	4 (19.0)	0	5 (23.8)	2 (9.1)	0	0	0
Enhanced intell./prof. dev.	13 (59.1)	14 (66.6)	6 (27.3)	4 (19.0)	3 (13.6)	3 (14.3)	0	0	0	0
Affectional regard	5 (22.7)	6 (28.6)	2 (9.1)	4 (19.0)	12 (54.5)	4 (19.0)	2 (9.1)	4 (19.0)	1 (4.5)	2 (9.5)
Teacher	15 (68.2)	18 (85.7)	2 (9.1)	0	1 (4.5)	0	0	0	4 (18.2)	3 (14.3)
Intro. to others in prof.	6 (27.3)	8 (38.1)	7 (31.8)	6 (28.6)	3 (13.6)	4 (19.0)	5 (22.7)	0	1 (4.5)	3 (14.3)

For those who had not had a mentor ($n=13$), 53.8% reported that some of the mentor functions had been provided by other graduate faculty members. Some of the functions had been provided by the spouses of 7.7% of the professors who had not had mentors and by the peers of another 7.7%; 23.1% of the professors reported not having had anyone to provide these functions to them. When questioned about how helpful these others had been to them, 46.2% reported "very helpful", and 23.1% reported "adequate". When asked if they thought they would have benefited from having had mentors, there were equal percentages of "yes" and "no" responses.

To the question concerning the experience of being a mentor, 64.3% of the professors answered that the experience had been pleasant, 10.7% answered that it had been somewhat pleasant, and none described the experience as having been unpleasant. Also, 75.0% of all the professors stated that being mentors enhanced or would enhance their own development, while only 12.0% stated that it would not affect their own development.

Since Goldstein (1979) had related productivity to whether a graduate student had had a same-gender or cross-gender dissertation advisor, the data of this sample were examined to determine if a similar effect existed for mentor relationships. Thus, those professors who had had mentors were divided into groups according to whether the relationship was male mentee/male mentor, male mentee/female mentor, female mentee/male mentor, or female mentee/female mentor, and these groups were compared on their responses to the question concerning productivity. Table 5 presents the frequency of professors reporting each

TABLE 5

Frequency and Percentages of Reported Productivity
of Same-Gender and Cross-Gender
Mentor Relationships

Productivity - Average number of works per year.

	0		1-2		3-4		5-6		7+	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Same-Gender:										
male mentee/male mentor (<u>n</u> = 19)	3	15.8	9	47.4	5	26.3	1	5.3	1	5.3
female mentee/female mentor (<u>n</u> = 11)	2	16.7	4	33.3	5	41.7	0	0	0	0
Cross-Gender:										
male mentee/female mentor (<u>n</u> = 3)	0	0	1	33.3	2	66.7	0	0	0	0
female mentee/male mentor (<u>n</u> = 9)	2	22.2	5	55.6	0	0	0	0	2	22.2

level of productivity. In order to compare these findings with the results of Goldstein's study, a chi-square test of proportions was performed. No significant difference was found in the productivity of those who had had some-gender mentors and those who had had cross-gender mentors ($\chi^2(4)=3.45, p < .49$).

Discussion

Previous researchers (Levinson, et al., 1978; Sheehy, 1976; Stewart, 1977) had reported that mentor relationships were an integral part of adult development. The present study investigated the existence of mentor relationships among a sample of doctoral-level faculty members at Western Kentucky University and found that over three-fourths of the professors studied had had mentor relationships. Based on the discussion of mentor relationships by Levinson, et al. (1978), a mentor was defined as a person who helps guide another person into a profession, contributes to his or her professional development, and serves as a professional role model and teacher, providing encouragement, direction, information, and friendship.

The first hypothesis, which proposed that men would report having had mentors more often than women, was not supported. The finding that men and women of this sample had had mentors in almost identical numbers was unexpected. Levinson, et al. (1978) speculated that mentor relationships were less available for women than for men. The women studied in the present investigation nonetheless had had mentors as often as the men. One explanation for this unexpected finding may be that the present investigation studied university professors, while Levinson, et al. (1978) studied laborers, business executives, academic biologists, and novelists. In academic settings students may have worked closely with their professors, especially their

dissertation advisors, so that both male and female students were afforded ample contact with persons suitable to become mentors. The formal role of dissertation advisor may have included some or many of the functions attributed to a mentor. Thus, mentors in academic settings may have been more available to both men and women than in the fields sampled by Levinson, et al. (1978).

Another explanation for the high frequency of mentors for both male and female professors in the present study is that the men and women of the sample may all be considered successful in that they have earned doctorates and achieved professional positions. It is possible that people who do not have mentors may have been hindered in their achievement of success in academia. Sheehy (1976) stated that all of the women in her sample who had achieved professional recognition had at some point had mentors. Thus, it apparently was the less successful women who had not had mentors. To help to determine the possible contributions of mentor relationships to academic success, a longitudinal study of doctoral candidates might be conducted. Contact with the graduate students could be maintained over a period of several years so that their later academic and professional success might be assessed as a function of their mentor relationships.

Levinson, et al. (1978), also speculated that female mentors were probably scarce. Since significantly more women than men in the present study had had cross-gender mentors, there is some support for the notion that female mentors are not always available to women; thus, the second hypothesis, which stated that women would report having had cross-gender mentors more often than men, was confirmed. This finding also was in agreement with the speculations made in the literature

(Levinson, et al., 1978; Sheehy, 1976; Stewart, 1977). Whether the relationship was same-gender or cross-gender could have made a difference in the nature of the mentor relationship. Although the endorsements of mentor characteristics and functions appeared to be very similar for both men and women, the present investigation did not deal with the issues of romantic involvement, attitudes toward women in non-traditional roles, or possible differences between men and women in expectations of the mentor and mentee roles. That is, there may be differences between same-gender and cross-gender mentor relationships that this study did not explore.

The third hypothesis, that those who had had mentors would report being more productive and more satisfied with their professional positions than those who had not had mentors, was not supported. While the subjects who were interviewed by Levinson, et al. (1978) stated that having had a mentor had been beneficial to their professional growth, the present investigation found that the reported levels of productivity and professional satisfaction of those who had had mentors and those who had not had mentors were similar. However, since the university from which the present sample was drawn stressed teaching over research, there may not have been as much variability in levels of productivity for the present sample as may have been found in samples drawn from other settings.

It was interesting to note that over half of the professors who had had mentors stated that their mentors had aided them in the development of their professional productivity. Although the data did not support the third hypothesis that having had a mentor would be related to productivity and professional satisfaction, having a mentor

may have been beneficial to other facets of professional functioning that were not assessed by the present study. The operational definitions of productivity and professional satisfaction that were used in the present study may have been too limited to assess the impact of mentor relationships on those two areas of professional development.

The fourth hypothesis, that those who had had mentors would be more likely to act as mentors themselves, also was not statistically supported, although the data appear to suggest a trend in that direction. Since 72.1% of those who had had mentors became mentors and only 46.2% of those who had not had mentors became mentors, having a mentor may be related to the probability of becoming a mentor in some way. Further study with a larger sample would help to clarify this issue.

The descriptive information obtained from the present sample was generally in agreement with the descriptions of mentors obtained from the interviews by Levinson, et al. (1978), especially concerning the characteristics and functions attributed to mentors. However, some apparent differences in the frequencies of endorsements between the Full Relationship Group and the Partial Relationship Group may have indicated possible differences between the mentor relationships of the two groups. For example, it appeared that those in the Full Relationship Group reported that their mentors had been "a model of personal lifestyle" and "was someone with whom I shared affectional regard and comradeship" more frequently than those in the Partial Relationship Group. Other characteristics and functions that may differentiate between the two groups were: "counseled me regarding professional decisions," and "facilitated the realization of my professional goals."

Other data from this study appeared to be slightly different from the findings of Levinson, et al. The data from the subjects studied by Levinson, et al. (1978), indicated that the average length of a mentor relationship was two to three years, but over half ($n=22$) of the 43 professors of this study who had had mentors reported that the relationship had lasted five or more years. Also, most of the subjects studied by Levinson, et al. (1978) reported that their mentors had been older by 8 to 15 years, while more than half ($n=22$) of the participants of this study who had had mentors reported that their mentors had been older by 15 years or more. That is, the age differences between mentor and mentee for this sample appeared to be larger than the age differences reported by Levinson, et al. (1978).

The difference in these two factors, the length of the relationship and the age difference, might have reflected characteristics more common to mentor relationships in academic settings than in the fields studied by Levinson, et al. (1978). For example, the longer duration of the mentor relationships described in the present study may have been related to the fact that preparation for an academic career spans several years. That is, mentor relationships in academic settings may last through the years of the doctoral program and into the first few years of professional functioning, while mentor relationships in other settings (such as business or industrial settings) may span only the first few years of professional functioning in those settings. The longer education required for academic professionals also may have been related to the ages of the mentors since academic professionals who have gone through lengthy doctoral programs may reach the level of professional maturity that may be necessary in order to become a mentor

at a later age than professionals in other settings. This speculation could be tested by further research in which mentor relationships in different career fields (academic and business settings, for example) are compared.

The finding that productivity was not significantly related to whether the mentor relationship had been same-gender or cross-gender was in disagreement with the findings of Goldstein (1979). Several differences between Goldstein's (1979) research and the present study might be seen as providing possible explanations for the contradictory results. First, and perhaps most important, was the fact that Goldstein's study dealt with same-gender versus cross-gender dissertation advisors, rather than with mentors. A dissertation advisor is not necessarily a mentor, and vice versa. Thus, the different results may have been due to the differences between these two types of relationships. A mentor serves a variety of functions and might, for example, stress moral support and professional role modeling over encouragement of research and publication. A dissertation advisor, on the other hand, has the primary function of directing the dissertation research and writing, a much more direct link to future productivity.

Secondly, the doctoral students of Goldstein's (1979) study received their degrees between 1965 and 1973, while subjects in the present study received their degrees over a much longer period of years (1951 to 1978). It is possible that social changes within the past several years have resulted in a broader selection of available advisors and mentors for those who have received doctoral degrees in recent years, especially regarding the increased availability of female advisors and mentors. Thus, the gender of the mentor or dissertation

advisor may have become a more relevant variable in recent years.

Also, everyone who was required to complete a dissertation had had a dissertation advisor, while not everyone had had a mentor. Thus, the fact that dissertation advisors may have been assigned, the fact that they were probably more frequent than mentor relationships, and the fact that they were often based on interest in a particular research topic rather than evolving from a mutual professional and personal relationship (as was characteristic of mentor relationships) might have contributed to important differences between the two types of relationships and their influence on productivity.

Some sampling and procedural differences in the present study may have contributed to the differences between the findings of this study and previous research (i.e., that women had had mentors as often as men, that having had a mentor did not significantly increase productivity or professional satisfaction, and that productivity was not significantly different for those who had had same-gender mentors versus those who had had cross-gender mentors). The sample of the present study was larger than the samples of Levinson et al. (1978) and Stewart (1977), but it was still relatively small for statistical analysis. However, because equal numbers of males and females were desired, and because the university population from which the sample was drawn included so few females, a relatively small sample was obtained.

The imbalance of male and female doctoral level faculty also necessitated the use of almost all the female faculty members and only a small portion of the male faculty members. This situation also could have influenced the results in that the male sample was limited by having been matched to the female sample. That is, males were

selected by matching several characteristics to all available female faculty members such that the selection of males was not random. Thus, it is unknown whether or not the sample of males was representative of the subpopulation of male faculty members.

The fact that all subjects were from an academic setting was a limitation of the present study. Mentor relationships in academic settings may be inherently different from mentor relationships in other settings, so generalizability of these results is limited. For example, the presence of dissertation advisors may have encouraged the development of mentor relationships so that mentor relationships occur more frequently than in other settings. In addition, mentor relationships in academic settings may be inherently different in nature from mentor relationships in other settings since academic mentor relationships often include the role of dissertation advisor.

Another way that the present study differed from previous research (Levinson, et al., 1978; Sheehy, 1976; Stewart, 1977) was in the use of a questionnaire format rather than an interview format as used by Levinson, et al. (1978), Sheehy, (1976), and Stewart (1977). Since the questionnaire approach had not been used before, the construction of the questionnaire involved making some assumptions that may not have been correct. For example, four professors wrote in that their mentor relationships had occurred in undergraduate school, and three wrote in that their relationships had ended with the death of their mentors. Thus, the fact that a few subjects wrote in responses that were not presented as alternatives in the questionnaires indicates that the response options may have been too limited and that some revision of the instrument may be needed before it is used for future research.

Also, as previously mentioned, the questionnaire may have been limited by the way in which productivity and professional satisfaction were operationally defined.

However, the fact that the questionnaire format yielded information and results similar to those obtained through extensive interviews is encouraging. The use of the questionnaire took considerably less time and presumably increased the objectivity of the data.

In summary, the findings of the present study supported the hypothesis that mentor relationships exist as part of adult development, at least in the academic setting investigated by the present study and probably in similar academic settings. The present study also supported the general description of mentor relationships provided by previous researchers (Levinson, et al., 1978; Sheehy, 1976; and Stewart, 1977).

The data from this select sample did not support the hypothesized differences between men and women in the existence or nature of their mentor relationships, but several differences between the present study and previous investigations may have contributed to this unexpected finding. These data were not interpreted as showing similarity in men's and women's mentor relationships since this study was based on a limited sample. Women in the present sample were significantly more likely than men to have had a cross-gender relationship which may have affected their mentor relationships in ways that were not investigated in this study. Also, the lack of same-gender mentors for women may have hindered some women's professional development, perhaps even to the point of having contributed to a higher attrition rate from academic programs for women than for men.

No significant differences in productivity and professional satisfaction were found in the present study between those professors who had had mentors during their professional development and those who had not. Although a greater percentage of those who had had mentors became mentors than those who had not had mentors, the difference was not statistically significant.

The present study, therefore, supported some of the basic findings concerning mentor relationships of previous researchers (Levinson, et al., 1978; Sheehy, 1976; Stewart, 1977), especially concerning the existence of such relationships for both men and women. The results were interpreted with caution, however, since the generalizability to different samples or settings was limited. By approaching the investigation of mentor relationships with a questionnaire instead of interviews, the present study provided an alternative that may facilitate future research in this area. The topic of mentor relationships appears to be a pertinent area of investigation, and the issue of the importance and influence of such a relationship is open to further study.

References

- Anderson, J. V. Psychological determinants. In R. B. Knudsen (Ed.) Women and success: The anatomy of achievement. New York: Morrow, 1974, 200-207.
- Angrist, S. S. & Almquist, E. M. Role and model influences on college women's career aspirations. In A. Theodore (Ed.), The professional woman. Cambridge, Mass.: Schenkman Publishing Co., Inc., 1971, 301-323.
- Bandura, A. & Walters, R. Social learning and personality development. New York: Hold, Rinehart & Winston, 1963.
- Bem, S. L. & Bem, D. J. Case study of a nonconscious ideology: Training the woman to know her place. In D. J. Bem, Beliefs, attitudes, and human affairs. Belmont, Calif.: Brooks/Cole, 1970, 89-99.
- Bernard, J. Academic women. University Park, Penn.: The Pennsylvania State University Press, 1974.
- Buhler, C. & Massarik, F. (Eds.) The course of human life. New York: Springer, 1968.
- Crane, D. Scientists at major and minor universities: A study of productivity and recognition. American Sociological Review, 1965, 30, 699-714.
- Dement, A. L. The college woman as a science major. Journal of Higher Education, 1962, 33, 487-490.

- Douvan, E. The role of models in women's professional development. Psychology of Women Quarterly, 1976, 1(1), 5-20.
- Elliott, E. D. Effects of female role models on occupational aspiration levels of college freshman women. Dissertation Abstracts International, 1973, 34, 1975A.
- Erikson, E. H. Childhood and Society. New York: Norton, 1950.
- Erikson, E. H. Identity and the life cycle. Psychological Issues, 1959, 1 (1).
- Feldman, S. D. Escape from the doll's house: Women in graduate and professional education. New York: McGraw-Hill, 1974.
- Goldstein, E. Effects of same-sex and cross-sex role models in the subsequent academic productivity of scholars. American Psychologist, 1979, 34(5), 407-410.
- Gould, R. The phases of adult life: A study in developmental psychology. American Journal of Psychiatry, 1972, 129, 353-358.
- Hirsch, C. L. The effect of the sex of role models on the process of adult growth and development. Dissertation Abstracts International, 1976, 36, 2523B.
- Horner, M. S. Sex differences in achievement motivation and performance in competitive and noncompetitive situations. Dissertation Abstracts International, 1969, 30, 407B.
- Horner, M. S. Toward an understanding of achievement related conflicts in women. Journal of Social Issues, 1972, 28, 157-175.
- Jung, C. G. Memories, dreams, reflections. New York: Pantheon, 1963.
- Jung, C. G. Modern man in search of a soul. New York: Harcourt, Brace & World, Inc. 1933.

- Kemper, T. D. Reference groups, socialization and achievement. American Sociological Review, 1968, 33, 31-45.
- Kimmel, E. Contributions to the history of psychology: XXIV. Role of women psychologists in the history of psychology in the south. Psychological Reports, 1976, 38, 611-618.
- Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. Periods in the adult development of men: Ages 18 to 45. In N. K. Schlossberg and A. D. Entine (Eds.), Counseling Adults. Monterey, Calif.: Brooks/Cole, 1977, 45-59.
- Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. The seasons of a man's life. New York: Alfred A. Knopf, Inc., 1978.
- Mischel, W. A social-learning view of sex differences in behavior. In E. E. Maccoby (Ed.), The development of sex differences. Stanford, Calif.: Stanford University Press, 1966, 189-200.
- Neugarten, B. L. Personality in middle and late life: Empirical studies. New York: Atherton Press, 1964.
- Plost, M. & Rosen, M. J. Effect of sex of career models on occupational preference of adolescents. Communication Review, 1974, 22, 41-50.
- Robbins, M. L. A smoother road for women scientists? Journal of the Washington Academy of Science, 1972, 62(3), 234-239.
- Schlossberg, N. K. Five propositions about adult development. Journal of College Student Personnel, 1978, 19(5), 418-423.
- Sheehy, G. Passages: Predictable crises of adult life. New York: Dutton, 1976.

- Simonton, D. K. Sociocultural context of individual creativity: A trans-historical time-series analysis. Journal of Personality and Social Psychology, 1975, 32(6), 1119-1133.
- Simonton, D. K. Philosophical eminence, beliefs, and zeitgeist: An individual-generational analysis. Journal of Personality and Social Psychology, 1976, 34(4), 630-640.
- Simonton, D. K. Eminence, creativity, and geographic marginality: A recursive structural equation model. Journal of Personality and Social Psychology, 1977, 35(11), 805-816.
- Stewart, W. A. A psychosocial study of the formation of the early adult life structure in women. Dissertation Abstracts International, 1977, 38, 381B.
- Teghtsoonian, M. Distribution by sex of authors and editors of psychological journals, 1970-1972: Are there enough women editors? American Psychologist, 1974, 29(4), 262-269.
- Theodore, A. (Ed.) The professional woman. Cambridge, Mass.: Schenkman Publishing Co., Inc., 1971.
- Wallston, B. S., Cheronis, J. H., Czirr, R. P., Edwards, S. J., & Russo, A. J. Role models for professional women. Unpublished manuscript, (Vanderbilt University), 1979.
- Wrightsman, L. S. Adult personality development -- scripts or stages? Invited address, Kansas Psychological Association meeting, Oct., 1976.

Appendices

Appendix A

MENTOR SURVEY

Sex: M F

Age: _____

Degree: _____

Year of terminal degree: _____

Please circle the most appropriate response:

1. A mentor is a person who helps guide another person into a profession and contributes to his or her professional development. The mentor may serve as a professional role model and teacher, providing encouragement, direction, information, and friendship. Did you have a mentor at some point in your professional development?
 - a. Yes, I had a mentor.
 - b. There was someone who performed some of the functions of a mentor, but not to the extent described above.
 - c. There was someone I viewed as a model and emulated, but a relationship did not exist.
 - d. No, I did not have a mentor.

If you have had a mentor or a similar relationship (response a or b above), go on to questions 2 through 22.

If you have not had a mentor, omit questions 2 through 22 and respond to questions 23 through 32.

2. How long did the mentor relationship last?
 - a. Less than 2 years.
 - b. 2 to 4 years.
 - c. 5 to 7 years.
 - d. 8 years or more.

3. Was there an age difference between you and your mentor?
 - a. Yes, my mentor was older by 4 years or less.
 - b. Yes, my mentor was older by 5 to 8 years.
 - c. Yes, my mentor was older by 9 to 12 years.
 - d. Yes, my mentor was older by 12 to 15 years.
 - e. Yes, my mentor was older by 15 or more years.
 - f. Yes, my mentor was younger by _____ years.
 - g. No, there was no age difference.

4. What sex was your mentor?
 a. Male.
 b. Female.

The following are characteristics and functions usually attributed to a mentor. Please rate the extent to which each attribute was characteristic of your mentor.

	present	present to some degree	not present		
5. Was a model of professional behavior	1	2	3	4	5
6. Was a model of a personal lifestyle	1	2	3	4	5
7. Counseled me regarding professional decisions	1	2	3	4	5
8. Counseled me regarding personal problems	1	2	3	4	5
9. Was someone I admired professionally	1	2	3	4	5
10. Was someone I liked personally	1	2	3	4	5
11. Regarded me as a protege	1	2	3	4	5
12. Acquainted me with the values, roles, customs, and resources of my profession	1	2	3	4	5
13. Helped me in shaping my adult lifestyle	1	2	3	4	5
14. Facilitated the realization of my professional goals	1	2	3	4	5
15. Provided me with moral support	1	2	3	4	5
16. Enhanced my intellectual and professional development	1	2	3	4	5
17. Was someone with whom I shared affectional regard and comraderie	1	2	3	4	5
18. Was my teacher in structured training situations such as classes	1	2	3	4	5
19. Introduced me to important people in my profession	1	2	3	4	5

20. Did your mentor aid in the development of your professional productivity (publications, presentations, works of art, performances, etc.)?
- Yes, but was dissertation advisor only.
 - Yes, by sponsoring my dissertation and one or more other works.
 - Yes, by sponsoring one or more works other than dissertation.
 - No, my mentor did not sponsor any professional contributions.
 - Other. Explain: _____
21. What has happened to the relationship with your mentor?
- The relationship ended gradually, with a lessening of contact over time.
 - The relationship ended somewhat abruptly, with continued warm feelings.
 - The relationship ended abruptly, such as by a disagreement.
 - The mentor relationship still exists.
 - The relationship still exists, but is no longer a mentor relationship.
22. When did your mentor relationship occur?
- During graduate school only.
 - During the first years of entering the profession only (after graduate school).
 - The same person was a mentor both in graduate school and during the entry into my profession.
 - I had different mentors at different times.

Now skip questions 23 - 25 and respond to questions 26-32.

Respond to questions 23 - 25 if you did not have a mentor.

23. Since you did not have a mentor, do you feel that the functions of a mentor were partly provided to you by others?
- Yes, mostly by my spouse.
 - Yes, mostly by other family members.
 - Yes, mostly by the graduate faculty of my program.
 - Yes, mostly by my peers.
 - No, no one provided these functions to me.
 - Other. Explain: _____
24. Which of the following best describes how helpful the other people were in serving some of the functions of a mentor?
- Very beneficial.
 - Adequate.
 - Less than what I felt I needed.
 - Other. Explain: _____

25. Do you think you would have benefitted from a mentor?
- a. Yes. Explain: _____
 - b. No. Explain: _____
- _____

All respondents complete the remaining questions.

26. Have you been a mentor to someone such as a student or colleague?
- a. Yes, I have been a mentor _____ times.
 - b. No, I have not.
 - c. No, but I would like to be a mentor in the future.
 - d. No, and I don't care to be a mentor in the future.
 - e. Not sure.
 - f. Other. Explain: _____
27. Which of the following best describes the experience of being a mentor?
- a. Pleasant.
 - b. Somewhat pleasant.
 - c. Somewhat unpleasant.
 - d. Unpleasant.
 - e. Unknown, since I have not been a mentor.
28. How does being a mentor affect your own development (or, if you have never been a mentor, how do you think it would affect you)?
- a. Being a mentor enhances my own professional and/or personal growth.
 - b. Being a mentor does not (or would not) affect my own development.
 - c. Being a mentor was (or would be) a hindrance to my own development.
 - d. Other. Explain: _____
29. What is your yearly average of professional productivity (publications, presentations, works of art, performances, etc.)?
- a. 0
 - b. 1 or 2.
 - c. 3 or 4.
 - d. 5 or 6.
 - e. 7 or more.
30. How do you feel about your present professional position?
- a. Very satisfied.
 - b. Somewhat satisfied.
 - c. Indifferent.
 - d. Somewhat dissatisfied.
 - e. Very dissatisfied.
 - f. Other. Explain: _____

31. How do you feel about your present level of academic productivity and professional contributions?
- a. Very pleased.
 - b. Somewhat pleased.
 - c. Indifferent.
 - d. Somewhat disappointed.
 - e. Very disappointed.
 - f. Other. Explain: _____
32. Comments:

Appendix B

Phone Contact to Establish Participation

I'm Charlotte Miller, a graduate student of psychology under the supervision of Dr. Lois Layne. Do you have a few minutes?

Lately there has been a lot of interest in the stages of development that adults go through, and I am doing my thesis, with Dr. Layne, about the period in early adulthood in which a person is beginning his or her profession. It appears that some people have a relationship with another person -- a mentor -- that may affect their personal and professional development.

Most of the research is primarily with limited select samples from large cities, so I hope to learn whether the phenomenon exists among WKU professors, and further explore this aspect of professional development. I am calling to see if you would be willing to participate in a study of this area by answering a questionnaire, which will only take 10 to 15 minutes to complete. Your name will not be on the questionnaire so that your responses will remain confidential, and your participation would be very helpful.

Would you be willing to participate?

I think you may find this subject interesting, so I will provide you with the results of this research when the study is completed.

Appendix C

Cover Letter for Questionnaire

Dear Dr.

Enclosed is the questionnaire about mentor relationships we discussed recently on the phone. Your willingness to participate in this research is greatly appreciated.

The questionnaire will take you about 15 minutes to complete, and I would appreciate it if you could return it to me by campus mail no later than September 12, 1979. Please put your name on the campus mail envelope so I will know that you have returned the questionnaire. Please do not put your name on the questionnaire itself, so that your responses will remain anonymous. The questionnaires will not be individually analyzed, and every precaution will be taken to assure the confidentiality of your answers.

A summary of the findings will be provided via campus mail at the completion of the study. Thank you very much for your participation.

Sincerely,

Charlotte B. Miller
Graduate Student of Psychology

Supervised by,

Lois Layne, Ph.D.
Associate Professor
Psychology Department

Appendix D

Feedback Letter to Participants

Dear

The study of mentor relationships in which you participated has been completed, and a summary of the findings is enclosed. If you have questions, please contact Dr. Lois Layne.

Your contribution to the study is greatly appreciated. One hundred percent of the faculty who were sent questionnaires responded promptly. This level of cooperation is extraordinary, and, again, thank you for your participation.

Sincerely,

Charlotte B. Miller
Graduate Student of Psychology

Supervised by,

Lois Layne, Ph.D.
Associate Professor
Psychology Department

Characteristics of Mentor Relationships in Male and Female University Professors

The results of this study support the notion that mentor relationships are an integral part of professional development as suggested by Levinson, et al. (1978). Over three-fourths of the professors who participated had such a relationship; (39.3% stated they definitely had a mentor; 37.5% stated they had a relationship that filled some, if not all, of the functions of a mentor; 3.6% stated they had a model which they emulated, but no relationship existed; and only 19.6% stated they did not have a mentor).

While some authors have suggested that mentors are less available for women, in the WKU sample men and women were equally likely to report mentor relationships. Women, however, were significantly more likely than men to have mentors of the opposite gender (42.7% of the women had cross-gender mentors compared to 13.6% of the men). Previous research in this area suggests that female mentors may be less available than male mentors.

For the professors who had mentor relationships, there was considerable agreement on the characteristics and functions of that relationship. The following characteristics and functions were found to be present in over 80% of the relationships (presence defined as 1 or 2 on the 1 to 5, present to absent, scale): was a model of professional behavior; counseled me regarding professional decisions; was someone I admired professionally; was someone I liked personally; acquainted me with the values, roles, customs, and resources of my profession; facilitated the realization of my professional goals;

provided me with moral support; enhanced my intellectual and professional development; and, was my teacher in structured situations such as classes. The characteristics and functions that were less prevalent were: counseled me regarding personal problems, helped me in shaping my adult lifestyle, and, was someone with whom I shared affectional regard and comraderie.

The mentor relationships of males and females did not differ, but there were some differences between those who reported that they definitely had mentors and those who reported that their relationships did not fill all the functions of a mentor. The professors who stated they definitely had mentors were more likely to endorse the following characteristics as being part of their relationships: was a model of personal lifestyle, and, was someone with whom I shared affectional regard and comraderie. This difference suggests that perhaps a closer personal relationship existed for those who stated they definitely had mentors.

For those professors who did not have mentors, over half (53.8%) reported that some of the mentor functions were provided by their graduate faculty. Others received similar support from their spouses (7.7%) and from peers (7.7%), but 23.9% stated that no one provided these functions to them.

The hypothesis that those who had mentors would be more productive and satisfied with their professional positions than those who did not have mentors was not supported. Most professors (76.8%) reported a productivity level of between one and four works per year. Four professors (7.2%) reported a higher productivity of five or more

works per year, however, and it was interesting to note that all four of these professors had mentors.

Of those professors who had mentors, 88.4% reported that they were either very satisfied or somewhat satisfied with their professional position, compared to 84.7% of those who did not have mentors. The benefits of having a mentor relationship are thus not reflected in productivity and professional satisfaction, but may exist in other ways.

There was a tendency for those who had mentors to become mentors more often than those who did not have mentors. The percentages reflect this trend since 72.1% of those who had mentors became mentors while 46.2% of those who did not have mentors became mentors.

Generally the findings of this study tend to be in agreement with other research and theories in this area of investigation. There are limits to the generalizability of the results presented here, however, since a relatively small sample was used ($n=56$), and since WKU professors may not be representative of doctoral faculty in other locations.