A Critical Analysis of Gender and the Role of the Research Assistantship in Development of Higher Education Faculty.

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A CRITICAL ANALYSIS OF GENDER AND
THE ROLE OF THE RESEARCH ASSISTANTSHIP
IN DEVELOPMENT OF
HIGHER EDUCATION FACULTY

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Educational Leadership, Research, and Counseling

by

Stephen Charles Scott
B.A., University of Southwestern Louisiana, 1992
M.A., University of New Orleans, 1995
May 1999

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DEDICATION

To Alison — my friend, my love, my confidante
ACKNOWLEDGMENTS

Some of the things that I hold closest to my heart are the educational opportunities that I have been afforded throughout my life. This milestone, the completion of my Ph.D. at LSU, marks the end of my formal educational journey. Now is an opportune time for me to express to the many people that have assisted me in achieving this milestone, the deep and sincere appreciation that I owe them and the high regards that I hold them in. This list of people that I thank below is certainly not exhaustive as there have been numerous others who have touched and helped me in very special ways.

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that I have done. Personally, one of the best things about LSU has been Dr. Barbara Fuhrmann. Since my matriculation as a doctoral student, Dean Fuhrmann has been an important player in my educational experience. Not only did she afford me practical experience by allowing me to serve as an intern in her office several years ago, she guided me academically by continually offering importance advice on coursework, research, and most important, this dissertation. I am pleased to call her a colleague through my work at the Board of Regents, but I am dually pleased that I can call her a friend. And finally, I thank Dr. Becky Ropers-Huilman. It has been an honor and certainly a privilege to have not only been advised by Dr. Ropers-Huilman for the past three years, but I also was lucky enough to work as her research assistant for a year and a half. I cannot begin to express how important my experiences and interactions with Dr. Ropers-Huilman have been. So much of what I learned from her I have not only chosen to weave into this dissertation, but most importantly into my life. I hope that future doctoral students are afforded the opportunity to work with her and that his experience touches them in the special way that it has touched me. For that, and so much more, Becky, I thank you.

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ABSTRACT

This research is a mixed model study that explores the relationship between the research assistantship and development as a researcher for individuals serving as professors of higher education in Research I institutions. Also of interest in this research are the ways that research assistantship experiences vary based on gender and other identity characteristics such as rank, age, and race. Critical inquiry is used as the theoretical framework for this study given that it incorporates the use of both quantitative and qualitative means of data collection.

A major quantitative finding from this study demonstrates that there were significant differences in the sample’s responses based on age and race to the survey items which asked respondents to indicate how they felt that their research assistantship influenced their development as a researcher. Qualitative findings highlight the ways in which the research assistantship influences the decision of individuals to enter the professoriate, as well as informants’ varying perspectives on the purposes, advantages, and disadvantages of the research assistantship. Suggestions for future research include: a) broadening the scope of the research to include institutional types other than Research I institutions; b) exploration of this topic in disciplines or areas other than higher education; c) expanding the term “faculty development” to include teaching and service; and d) investigation of the research assistantship experience for individuals who chose a career route other than that of academe.
CHAPTER 1 — INTRODUCTION

Gender and racial inequality permeate every aspect of our society, and higher education is certainly not immune. While several movements, like the Feminist and Civil Rights movements, have had some success in moving toward racial and gender equality (Trent, 1991), efforts to promote justice for ethnic minorities and women in this country will face further challenges in the coming years given recent dismantling of affirmative action policies aimed at promoting equality in schools and in the workplace. It is not surprising that whites as a group dominate the administration of academe and white males represent the largest group in the faculties of colleges and universities (The Chronicle of Higher Education, 1999). Given these facts, the quest to ensure equal representation and opportunity in higher education for all participants is far from over.

Research has shown that the entire educational system, from elementary to graduate school, does not provide girls and women the same opportunities for learning as it does boys and men (Sadker & Sadker, 1994). For example, in elementary classrooms, Sadker and Sadker found that teachers more often solicited responses from boys than girls, and oftentimes when girls were allowed to respond, they were often interrupted by the teacher. Based on teachers’ proclivities to limit girls’ participation in class discussions, the authors concluded, “The lessons were insidious but devastating: If you are a young male, you are entitled to talk; and if you are a female, no matter your age, your words are worth less and can be cut short” (p. 272). Gender inequality studies span the educational spectrum and seek to discover discrimination at the highest levels of learning. For instance, graduate education can be a very rewarding experience for many,
yet some individuals benefit more than others from opportunities awarded during this crucial time of learning, training, and socialization into careers.

In this study, I consider how some research has shown that women have unequal chances of obtaining assistantships during graduate education (Baird, 1990; Johnson, 1994; MacDonald, 1995; Steiger & Kimball, 1978; Wong & Sanders, 1983). Assistantships will be discussed in detail in Chapter Three, yet I note two distinct advantages of such positions for graduate students: 1) graduate assistants are more likely to complete their degrees (Abedi & Benkin, 1987; Bowen & Rudenstine, 1992; Cook & Swanson, 1978; Givres & Wemmerus, 1988; Sheridan & Pyke, 1994; Valentine, 1987); and 2) graduate assistantships are important precursors for the professoriate and assist in the socialization of graduate students into this role (Baird; Givres & Wemmerus; Hunter & Kuh, 1987; Johnson; Perna & Hudgins, 1996; Short, Twale, & Walden, 1989; Twale, Short, & Walden, 1990; Wong & Sanders; Worthen & Gardner, 1988). Inquiry focusing on graduate education has accentuated research assistantships, as compared to other types of assistantships, in that they are more often positively linked to higher completion rates of the doctorate (Ehrenberg & Mavros, 1995) and higher levels of professional development (Ethington & Pisani, 1993; Solmon, 1976). Other research focusing on gender and education has shown that in some disciplines women are underrepresented in the roles of research assistants and subsequently have fewer opportunities for careers in academe (Johnson; MacDonald; Wong & Sanders).

There has been a considerable, although certainly not exhaustive, amount of research regarding the role of the assistantship in graduate education. Many studies focus
on traditional disciplines, where comparisons are made between the numbers and types of assistantships in the natural and social sciences and the impact of these awards on various factors, e.g., degree completion rates, length of time required to complete the degree, and persistence decisions. For education as a discipline, the distinctiveness of the many areas is often overlooked, and research regarding both assistantships and gender equity is addressed under the sole rubric, “education.”

One area of education that lacks specific inquiry focusing on assistantships is educational programs in the field of higher education or “higher education programs,” as they are commonly referred to. These are graduate degree programs where higher education is the main area of study. Curricula typically center on the many aspects of higher education—how colleges and universities operate, governance, curriculum, finance, race and gender issues. I emphasize that I am not referring to all graduate programs in a college, university, or any other higher education institution. Research on assistantships and educational programs in the field of higher education is needed to further investigate issues and trends related to gender (in)equity and educational opportunities since these are topics that remain relatively unexplored. This exigency served partially as the impetus for my study.

Some research has examined the role of the assistantship during graduate education for individuals who serve as faculty in higher education programs. For example, Twale, Short, and Walden (1990) focused on women in the higher education professoriate and documented the importance of assistantships, in general, for this specific group. Yet, these authors did not differentiate between the various types of
assistantships and the differing experiences that each provides. Newell and Kuh (1989) focused on comparing men and women who were professors in higher education programs on certain areas such as personal characteristics, professional activities, and career satisfaction. Yet, they did not provide information regarding the role of assistantships in the training of the aforementioned groups. The Hunter and Kuh (1987) study appears to be the only one which intersected the concepts of gender and the assistantship, specifically research assistantships, yet it focused only on one area, scholarly production and contributions to higher education literature.

In this dissertation, I explored the relationship between the research assistantship and faculty development as a researcher for women and men who are currently serving as faculty members in higher education programs at Research I institutions. The often accentuated faculty role as a researcher is especially important for individuals serving on faculties in research institutions, particularly Research I institutions. Additionally, the ways in which these experiences vary based on gender and race was of particular interest to me. I view my study as a combination of the areas covered in the three previously mentioned studies (Hunter & Kuh, 1987; Newell & Kuh, 1989; Twale, Short, & Walden, 1987).

1 A broader construct of “faculty development” would include teaching and service in addition to research; however, for purposes of this study, I focus specifically on development as a researcher. Subsequently, whenever I refer to the concept of “development of a higher education faculty member,” I am referring to development as a researcher unless otherwise specified.

2 As reflected in the title of my study, my primary focus in this research is gender.
1990) as well as an in-depth exploration of the role of the assistantship in the training and development of higher education faculty.

**Critical Inquiry: The Framework**

While social justice issues have been part of my research and personal agenda for some time now, many of my interests have centered on racial equity. My concerns have broadened considerably to include other areas such as gender equity in light of my exposure to theories such as postmodernism, poststructuralism, feminism, and critical theory. I often find my own epistemologies and philosophies in line with what is referred to as critical theory, and this approach seems apropos to research regarding assistantships and gender equity. Sirotnik and Oakes (1986) tell us that “both the process and aim of critical theory are consistent with what we most often claim to be the fundamental aim of education itself—that of cultivating the best in all human beings so that they may create a just society” (p. 37). Capper (1993) adds to this idea by explaining that “a critical view is defined as one that determines whether past and current practices address social justice and empowerment and whether those practices have a commitment to oppressed persons” (p. 13). Critical theory is an integral part of what Sirotnik and Oakes have termed “critical inquiry,” which is used as the framework for this study. Critical inquiry uses both quantitative and qualitative means of data collection to effectively strive for change in education. I find it worthwhile to use critical inquiry in my study because it employs differing methods of data collection, and it incorporates critical theory which I find to be compelling.
In explaining critical inquiry, Sirotnik and Oakes (1986) state:

We will attempt a methodological alignment of apparently diverse visions of inquiry such as reflected in:
1) empirical analytic methods that place a premium on explanation through predictive relationships between quantified constructs;
2) naturalistic/phenomenological methods that place a premium on understanding through qualitative interpretations of social settings;
3) critical/dialectical methods that place a premium on the clarification of values and human interests through informed discourse and action. (p. 19)

Put in more simple terms, Capper (1993) describes the three areas covered in Sirotnik and Oakes' construct of critical inquiry as three major paradigms typically used in research: 1) structural functionalism; 2) interpretivism; and 3) critical theory. Chapter Two of my study, entitled "Research Methodology," provides an in-depth explanation for each of the components of critical inquiry.

**Purpose of the Study**

In looking at scholarship focusing on research assistantships and their role in future career decisions, Worthen and Gardner (1988) tell us that:

Knowledge of specific assistantship variables and their relationship to subsequent career development in research is needed badly to enable research trainers to determine the extent to which the assistantship provides genuine and useful research apprenticeship experience. (p. 3)

Central to the purpose of the study is the belief that research assistants who acquire valuable experience are better able to function as faculty especially in their capacity as researchers (Worthen & Gardner). Therefore, the purpose of this study was to explore the relationship between the research assistantship and development of a higher education faculty member as a researcher. Additionally, I examined the ways that these experiences
varied based on gender. Racial differences (as well as differences by age and race) in experiences are also noted throughout my research.

My review of literature and my experiences have helped me operationalize my definition of “faculty development as a researcher.” As noted previously, my definition of this construct is not comprehensive in that it focuses solely on development of a faculty member as a researcher. While teaching is an integral part of being a faculty member, research assistants in higher education programs are not typically assigned teaching duties. Focusing primarily on research experience, I explored individual interpretations of how the various activities/assignments of research assistantships shaped development as a faculty member. These areas that I have identified relative to faculty development as a researcher are certainly not carved in stone. Instead, I hope to uncover other areas that may help craft a much more solid meaning of this construct. For this study, I proposed that development of a higher education faculty member as a researcher entails socialization into the role of the professoriate in the following areas: 1) being a competent researcher (constructing and enacting various quantitative and qualitative research designs, executing statistical analyses, and analyzing qualitative data); 2) writing scholarly works; 3) making formal presentations of research at professional meetings; and 4) training and collaborating with graduate students on research projects.

Research Questions

Through my research, I have shown the perspectives of men and women in higher education faculty positions regarding their experiences as research assistants. I also explored the varying opportunities during graduate education for men and women and the
various racial/ethnic groups. Using critical inquiry as the scaffolding of this research, my study will unite theory and practice and uncover needed change in structures if they oppress women and minorities and preclude their opportunities.

I constructed the research questions for this study to follow the three major paradigms of critical inquiry: structural functionalism, interpretivism, and critical theory. My study was conducted in two phases: Phase I focused on the quantitative data collection by surveying higher education professors to determine their assessment of the research assistantship and other factors which may (or may not) have influenced their development; and Phase II is the qualitative interview portion of my study where I asked individuals who were surveyed during Phase I to elaborate on responses from the survey and to address other areas associated with their research assistantship and development. These two phases are described in detail in Chapter Four, which focuses on my study’s methods. The research questions are as follows:

**Structural Functionalist Questions**

1. What is the frequency distribution of professors of higher education in Research I institutions based on gender and rank?

2. What is the frequency distribution of professors of higher education in Research I institutions who served as research assistants during their graduate education?

3. How do faculty (who held a research assistantship) of higher education programs in Research I institutions differ in their assessment of the
contribution of the research assistantship to the various areas associated with faculty development as a researcher?

Interpretivist Questions

1. In what ways does the research assistantship influence the decision of higher education faculty to enter the professoriate?
2. How do higher education faculty who served as research assistants vary in their assessment of the purposes, advantages, and disadvantages of the research assistantship?

Critical Theory Questions

1. What role does gender play in the research assistantship experience?
2. What groups currently benefit most from existing opportunities?

Significance of the Study

My study has multiple contributions to various areas. First, it contributes to higher education literature by focusing on the various ways that men and women become higher education professors, as well as establishing a better understanding of how the research assistantship is a part of that process. In a broader sense, the study assesses the role of the assistantship in the development of higher education faculty as researchers. Research on higher education programs, as well as research focusing on the faculties of these programs has not been conducted recently. As I mentioned earlier, there is limited research focusing on the role of the research assistantship for higher education faculty. My research was needed to explore trends and issues among the faculties of these programs regarding gender equity and research assistantships.
Second, this study contributes to literature on gender and education. It is important to keep an accurate account on efforts to promote gender equity in academe, and it is crucial to make sure that these trends are well documented in the literature. While the social sciences, as a whole, have addressed gender equity to varying degrees, I posit this has not been done extensively regarding the role of research assistantships and their role in faculty development as researchers. I believe that my study suggests a framework for other disciplines to view the importance of the research assistantship in their respective areas and disciplines.

Third, this study contributes to the body of research focusing on critical theory. Critical theory is an integral part of this research because it attempts to uncover discriminatory practices against certain groups. This is a shared goal of social justice research which is focused on bringing about change and improving the lives of oppressed peoples (Fine, 1994; Lather, 1986a, 1986b, 1991; Rhoads, 1994; Tierney, 1994; Tierney & Rhoads, 1993). While some of the studies mentioned in my literature review may implicitly allude to certain aspects of critical theory, such as women being oppressed by the current structure of the awarding of research assistantships, none explicitly uses a critical theoretical framework for exploring this issue.

Finally, this research could be used as an example of a mixed model study (as defined by Tashakkori & Teddlie, 1998) which incorporates the use of quantitative and qualitative data collection and analyses in different phases of the research process. As mentioned earlier, a mixed model study is described in Chapter Four.
Not only do the areas of gender, research assistantships, and higher education programs merit exploration, but this line of inquiry provides updated demographic information regarding the higher education faculties since current information is nearing ten years old. Furthermore, I have yet to discover recent research focusing on higher education faculty at Research I institutions.

In summary, my study was needed because there is a dearth of literature focusing on the various ways men and women become higher education professors, as well as an exigency for research regarding the role of the research assistantship in training higher education faculty members to become researchers. My work could also be used as a framework to view the role of the assistantship in other areas and disciplines. In practice, this study could be used to potentially inform/shape policies regarding the awarding of research assistantships with the hope of increasing equity in opportunity and experience for all persons.

Description of Dissertation Chapters

Chapter One provides the reader with an introduction to gender equity and assistantships, as well as a brief introduction of research to date that has been conducted on assistantships and faculty in higher education programs. Additionally, the purpose of the study, research questions, and significant contributions of the study are presented.

Chapter Two focuses on my study’s methodology and gives the reader a description of the distinction between methodology and methods. As part of the components of critical research, I provide the reader with my educational background information and the factors that have influenced me to pursue this area of inquiry for my
dissertation topic. The chapter also gives a thorough explication of critical inquiry, and I offer my interpretation of how the reader might conceptualize its components and other research paradigms as well.

In Chapter Three, I present my analysis of the topical literature focusing on assistantships, gender differences and equity issues in educational opportunities, and the relationship between the research assistantship, higher education programs, and faculty positions. This review of topical literature also includes a critical analysis to illustrate how extant research has helped to construct the conceptual framework of my dissertation.

In Chapter Four, I outline the study's methods, or the procedures used to collect data. In explaining the design of the study, I introduce the quantitative/qualitative dichotomy and provide a rationale as to why critical inquiry requires the use of both methods. I give an explanation of mixed model studies (Tashakkori & Teddlie, 1998) which use qualitative and quantitative data collection and analysis in various phases of research. The research questions following critical inquiry's various research paradigms are restated in this chapter. Also, I provide information regarding the sample of my study and give the rationale as to why these individuals were chosen. Viewing my study as phases I and II (the quantitative and qualitative data collection, respectively), I provide a discussion as to how data was collected and analyzed. Finally, I conclude with a discussion regarding issues of validity and reliability in this study, and how scholars have recently reconceptualized these notions.

Chapter Five details the results of phase I of this study, specifically addressing the research questions in the structural functionalist paradigm. The data analyzed in this
Chapter come from the survey that was sent to professors of higher education in Research I institutions. An in-depth explanation of the survey is provided and of particular interest are the four segments of section III of the survey which feature the responses by faculty who served as research assistants on how they rate their research assistantship experience in various areas.

Chapter Six features the qualitative results from phase II of this study and deals with the interpretivist and critical theory research questions. Data in this chapter came from 14 interviews with selected informants conducted in 1997 and 1998. The interpretivist research questions were designed to determine the ways in which the research assistantship experience influences the decision of higher education faculty to enter the professoriate, and how higher education faculty members vary in their assessment of the purposes, advantages, and disadvantages of the research assistantship. Critical theory research questions sought to determine the role that gender plays in the research assistantship experience, and to also determine if certain groups were at an advantage given their opportunities in their research assistantship.

The final chapter, Chapter Seven, summarizes the study’s main purpose, its conceptual and theoretical frameworks, and the major findings from the different phases of this research. Suggestions for future research are also provided.
CHAPTER 2 — RESEARCH METHODOLOGY

As described in the previous chapter, the purpose of this study was to explore the relationship between the research assistantship and development of a higher education faculty member, as well as to examine the ways that these experiences varied based on gender. In this chapter, I focus on the study's methodology, defined as the philosophy behind research, while Chapter Four focuses on the study's methods, or the procedures followed in the research process to "collect data" or "gather evidence" (Harding, 1987; Morrow & Brown, 1994). Though the terms methodology and methods are used interchangeably, I concur with authors who advocate making a distinction between the two (Harding; Melia, 1997; Morrow & Brown). At the same time, I note that the two concepts are intertwined, in that methodology drives the methods. In this study, interviews and surveys serve as the methods, and critical inquiry serves as the methodology.

Critical Research

Critical research promotes the philosophy that our research agendas are driven by our own ideologies and beliefs (Fine, 1994; Lather, 1986a, 1986b, 1991; Rhoads, 1994; Tierney, 1994; Tierney & Rhoads, 1993). Michelle Fine tells us:

Some researchers fix themselves self-consciously as participatory activists. Their work seeks to unearth, disrupt, and transform existing ideological and/or institutional arrangements. Here the researcher's stance frames the texts produced and carves out the space in which intellectual surprises surface. The writers position themselves as political and interrogating, fully explicit about their original positions and where their research took them. (p. 17)
Similarly, Tashakkori and Teddlie (1998) explore axiological issues in research and tell us that "pragmatists [individuals who maintain that both quantitative and qualitative methods are compatible in research] decide what they want to research, guided by their personal value systems; that is, they study what they think is important to study" (p. 26). Accordingly, I believe that it is important for researchers to position themselves in their work and inform the reader as to why they are examining their respective areas of inquiry. Gloria Ladson-Billings (1995) informs us, "I too, share a concern for situating myself as a researcher—who I am, what I believe, what experiences I have had all impact what, how, and why I research" (p. 470). Concurring with Ladson-Billings and all others who contest the use of what Michelle Fine labels "ventriloquy," I find it useful to provide some background information as to why I have chosen this area of inquiry for my dissertation. It is also my intention to share my experiences with the reader in further detail throughout this dissertation as I focus the discussion on the stories and experiences of research assistants who eventually assumed a position as a higher education faculty member. The ways in which I will do this are described in Chapter Four.

3 Qualitative researchers Lincoln and Guba (1985) define axiology as the role that values play in research. They argue that inquiry is "value-laden," while positivists contend that research should be "value-free."

4 Ventriloquy is similar to the positivistic notion of "researcher neutrality" or "objectivity." Fine (1994) tells us that it "means treating subjects as objects while calling them subjects. And ventriloquy requires the denial of all politics in the very political work of social research" (p. 19).
Background

I am a Caucasian male who was born, raised, and educated in the South. Upon completing my undergraduate education, I spent two years as a middle school language arts teacher. As an undergraduate student, I developed an affinity with higher education by serving in a variety of extracurricular activities whereby I decided that my ultimate goal was to return to school to pursue an advanced degree to work in university administration. Upon completion of my sojourn as a teacher, I enrolled in a master’s program at the University of New Orleans in educational administration with a concentration in higher education. While I applied for and was denied an assistantship in the university’s campus activities office, I knew there were other options for assistantships through which I could obtain experience and financial assistance. The department in which I enrolled had research assistantships available when I began my studies. I was granted one, and began an appointment under the supervision of a leading scholar in the field of higher education. While I knew that my duties would be “research,” I was not sure as to all that entailed, yet my experiences in that role changed my career aspirations and, in some ways, my life.

Upon completing the master’s degree, I enrolled at Louisiana State University in the Educational Leadership and Research Ph.D. program, again with a concentration in higher education. From the time of my matriculation as a doctoral student in August

5 I will refer to myself as a research assistant throughout my dissertation even though I have served in teaching and administrative assistantship capacities for brief periods of time.
1996 until October 1998, I served as a research assistant in the Department of Educational Leadership, Research, and Counseling. Based on my diverse experiences as a research assistant, I developed a strong desire to explore the relationship between the research assistantship and development of a higher education faculty member. And secondly, I was particularly curious to explore the ways that gender does (or does not) influence this relationship.

A personal goal of my research is aligned with what Patti Lather (1991) defines as the goal of feminist research:

The overt ideological goal of feminist research in the human sciences is to correct both the invisibility and distortion of female experience in ways relevant to ending women’s unequal social position. (p. 71, emphases in the original)

She continues to state that “very simply, to do feminist research is to put the social construction of gender at the center of one’s inquiry” (p. 71). Becky Ropers-Huilman (1998) adds:

Feminist thinkers and actors believe in equality. They recognize that women and men in a wide variety of situations have not experienced equality in either public or personal relationships. More recently, feminists have also recognized that many other groups of individuals share a marginalized status, one which relegates them to positions “outside” the norm. As a result, feminism today is a philosophy that seeks equality for women as well as other oppressed persons. (p. 11)

Ropers-Huilman advocates expanding the concept of feminism to include constructs other than gender to strive to uncover additional forms of oppression in order to promote equality for all social groups.
Conceptualizing Critical Inquiry and other Research Paradigms

As mentioned in Chapter One, critical inquiry, as developed by Sirotnik and Oakes (1986), is defined as “an ongoing, knowledge-production process of reflection, discourse, and action that forms the basis for school renewal and change” (p. x). Though their discussions refer implicitly and explicitly to elementary and secondary education, the concept of school renewal and change is certainly applicable to higher education. These authors issue “a challenge to educational researchers and evaluators to seriously consider multiparadigmatic approaches that explicitly recognize and incorporate values and human interests” (p. ix). Critical inquiry incorporates the use of quantitative and qualitative data through three paradigms: structural functionalism, interpretivism, and critical theory. I have provided an explanation of these three main components in the following sections.

Prior to explaining the components of critical inquiry, I provide the reader with an in-depth explanation of the philosophical differences behind some research paradigms. Burrell and Morgan (1979) describe these different paradigms as four quadrants divided by a subjective-objective axis and a radical change-regulation axis. Their four paradigms are: 1) functionalist; 2) interpretivist; 3) radical humanist; and 4) radical structuralist. The functionalist (also known as structural functionalist) and interpretivist paradigms are explained in detail below. Gioia and Pitre (1990) report that the goal of radical humanism, which they equate with critical theory, is “to free organization members from sources of domination, alienation, exploitation, and repression by critiquing the existing social structure with the intent of changing it” (p. 588). Radical structuralism differs
from radical humanism in that the former views structures as objective in nature and the latter views them as being subjectively created (Gioia & Pitre). In other words, radical structuralism may examine constructions or "structures" like race, class, and gender and seek to emancipate individuals oppressed on the basis of these structures. Likewise, radical humanism seeks to alleviate oppression of individuals based on the aforementioned structures but it also examines issues regarding oppression at a much deeper level.

In a similar vein, I offer the reader an explication of how I conceptualize four major paradigms commonly used in educational research today. I position these paradigms on a "research continuum," as shown in Table 2.1. I use a left/right distinction in the political sense of liberal/conservative because I find it useful to conceptualize these research paradigms in the same way that individuals may often view social and political ideologies. Logically, as one moves from right to left, more liberal approaches to research are presented.

Structural functionalism, which I consider to be a very conservative approach to research, is situated on the right end of the continuum, and feminist poststructuralism sits opposite this paradigm at the left end as one of the more liberal ideologies. While I recognize that there are other approaches to conducting research, I encourage readers to

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craft their own continua which would entail including additional research paradigms and even rearranging those that I have used to frame my continuum. I hope this explanation has helped readers understand critical inquiry and its components at a much deeper level.

**Critical Inquiry and Structural Functionalism**

A basic principle of structural functionalism, as I have come to understand it, is merely to explain situations “under investigation.” I associate structural functionalism with what is often referred to as “the scientific method” or “positivism.” Researchers using solely a structural functionalism paradigm would adhere to “objectivity” and merely report situations “as they appear.” Capper (1993) tells us:

Structural functionalists in educational administration tend to view the existing social order and its institutions as legitimate and desirable. While they often seek to make improvements in the operation of education, they accept its basic structures and roles and the nature of the societal context schools serve. They are interested in understanding how institutions work and how they might work more efficiently and smoothly, assuming that various forms of social injustices can be corrected while maintaining existing systems intact. (p. 11)

In reference to the importance of quantitative information collected in research, Sirotnik and Oakes (1986) tell us that:

Information gained in this way [quantitative data collection methods] is from a common, rather than an individual perspective, resulting from the aggregation of data within and across groups about contextual features . . . inquiry grounded in this fashion permits the comparison of the perceptions of many different groups of participants about the same stimulus referent in addition to the determination of the central tendencies and variation within groups. (p. 34)

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6 For another example of various research paradigms and their components, see Tashakkori and Teddlie (1998).
They continue by stating that “the payoff, therefore, of the empirical analytic perspective is the serving up of a continuing common base of explicit descriptive material which can serve as a catalyst for further inquiry” (p. 34, emphasis in the original).

The structural functionalist research questions that I presented in Chapter One are primarily aimed at quantification of certain constructs, e.g., the number of men and women who are professors of higher education in Research I institutions, the number of professors of higher education who have served as research assistants during their graduate education, etc. This information is particularly useful in this study because it indicates if men and women are equally represented in the various ranks of the professoriate and how they were represented (in numbers) in the roles of research assistants. I believe that data collected in a structural functionalist paradigm is useful when used in conjunction with other forms of data. However, strictly a structural functionalist study would be ineffective for answering certain types of research questions couched in critical inquiry.

Critical Inquiry and Interpretivism

Interpretivists seek to understand the ways that people experience certain situations or how they “interpret” them. The interpretivist paradigm is synonymous with what is commonly referred to in naturalistic research as phenomenology. Marshall and Rossman (1995) define phenomenology as “the study of experiences and the ways in which we put them together to develop a worldview” (p. 82). Bates (1980) also tells us that “the phenomenological tradition insists that understanding of social situations (and organizations are clearly social situations) can only be achieved when the meanings and
intentions of the individuals involved in them are taken into account" (p. 7).

Interpretivists embrace the structural functionalist ideology that the status quo is acceptable, yet they are primarily concerned with peoples' experiences in specific situations (Capper, 1993; Gioia & Pitre, 1990).

As interpretivism relates to critical inquiry, Capper (1993) tells us that "critical inquiry uses interpretivist epistemologies and methodologies to provide participant meaning and understanding to the characteristics, patterns of behavior, and feelings of persons" (p. 12). Interpretivism is an important part of social justice research aimed at changing discriminatory practices that perpetuate oppression. The following quote by Sirotnik and Oakes (1986) reflects the importance of individuals' interpretations of situations (written in their specific case of school personnel) and how these meanings bring about change:

Without this level of understanding of the meanings of structures and events, school people cannot become self-conscious about their parts in creating the learning context and are less likely to take responsibility for changing it so that it conforms with what they see as ideal. This process, then, adds to the knowledge base about the context, clarifies the connections between persons, things, and events, and illuminates alternatives. In this way, decisions for change become informed ones; they can be made with an understanding of the meanings that school participants assign to the way things are now. (p. 35-36)

Implicit in this quote is also the concept of catalytic validity (Lather, 1986a, 1986b, 1991) which is discussed in detail in Chapter Four. Catalytic validity purports that the research participants in a study become aware of how the research process has changed them as well as prompting them to act toward change.
Critical Inquiry and Critical Theory

Based on the literature that I have reviewed, I often find my own epistemologies and beliefs in line with what is called critical theory (Capper, 1993; Giroux, 1993; McLaren & Lankshear, 1993; Morrow & Brown, 1994; Rhoads, 1994; Rhoads & Black, 1995; Sirotnik & Oakes, 1986, 1990; Tierney, 1994; Tierney & Rhoads, 1993). I firmly believe that society perpetuates domination of certain groups over others and that this inequality often follows various class, race, and gender lines. While I recognize that some strides have been made toward equity on various levels, all of society’s groups are certainly nowhere near equality. For example, it is clear to me that the majority of women have been oppressed by what are commonly referred to as “institutional norms” in colleges and universities. Overall, women are unequally represented on university faculties (Schneider, 1998), and the higher education environment has been accused of limiting women’s educational growth (Sadker & Sadker, 1994). Another of those norms that is of fundamental interest to me is that, typically, men are research assistants and women are not; thus men are afforded more positions in academe than women (Baird, 1990; Johnson, 1994; MacDonald, 1995; Solmon, 1976; Wong & Sanders, 1983). Second, situations where oppressive structures exist may be dismissed by conservative approaches to research, e.g., structural functionalism, in that such a paradigm seeks only description and quantification. A critical theory approach would strive to not only uncover these discriminatory systems but also attempt to advance social change (Capper; Giroux; Sirotnik & Oakes, 1986, 1990; Tierney & Rhoads).
In describing critical theory, Capper (1993) tells us, “The cause-and-effect determination of critical theory is straightforward: If we take this action, then empowerment, transformation, and, indeed, revolution will occur” (p. 14). Critical research in higher education calls on its participants to constantly seek ways to “reframe” and “deconstruct” certain aspects of the academy that reinforce oppression and domination of one group over the others (Bloland, 1995; Rhoads & Black, 1995; Tierney & Rhoads, 1993). This has been recognized as difficult given that higher education is consistently built upon hierarchies, and challenging this system is defying and/or contesting higher education’s historically entrenched tenets of oppression (Bloland).

Tierney and Rhoads (1993) tell us that “critical research is also praxis oriented” (p. 325). They continue, “We define praxis as research efforts that seek to unite theory with practice in a manner that is emancipatory and transformative” (p. 325). Lather (1991) adds to the notion of “research as praxis,” by telling us:

We who do empirical research in the name of emancipatory politics must discover ways to connect our research methodology to our theoretical concerns and political commitments. At its simplest, this is a call for critical inquirers to practice in their empirical endeavors what they preach in their theoretical formulations. (p. 172)

Michelle Fine (1994) adds to this idea by stating:

Researchers [in activist research projects] critique what seems “natural,” recast “experience,” connect the vocal to the structural and collective, spin images of what’s possible. In such work, the researcher is clearly positioned (passionate) within the domain of a political question or stance, representing a space within which inquiry is pried open, inviting intellectual surprises to flourish (detachment). (p. 23)
My research questions have implications for practice, and it is in that light that I frame them. The association with critical theory is that my research, focusing on research assistantships and development of higher education faculty, explores the potentially oppressive structures in academe that prohibit opportunities on the part of various groups and work toward creating discourse as to how this can be changed.

Chapter Summary

I began Chapter Two by providing the reader with a definition of the distinction between research methodology and research methods. As critical research calls researchers to do, I have also positioned myself within my study and have given some background as to why and how I came about my dissertation topic. Also, I describe how some of the goals of my research align with the philosophy behind some types of feminist research in that my study seeks to promote equality for all oppressed groups.

I propose my interpretation to the reader as to how to conceptualize the various research paradigms which I believe dominate educational research today. In this conceptualization, I offer an explication of how the reader may come to understand the critical inquiry framework and the major components that comprise it (structural functionalism, interpretivism, and critical theory).
CHAPTER 3 — REVIEW OF TOPICAL LITERATURE

This chapter is devoted to the literature that I have collected which has helped identify my specific dissertation topic. I found it particularly useful to separate the theoretical literature (presented in Chapter Two) from what I call the “topical literature” presented in this chapter. Yet I attempt to weave the theory throughout the topical literature and note the voids in the literature that my study will fill.

Various areas of the literature are brought into focus to explore the relationship between the research assistantship and development of a higher education faculty member as a researcher. Other areas are examined when the issue of gender (in)equity is introduced. This chapter focuses on the following areas of my topical literature:

1. The role of assistantships in graduate education, with special emphasis on the research assistantship
2. The issues of gender and equity in educational opportunities and experiences, various factors contributing to gender differences and their impact on subsequent career opportunities
3. The relationship between the research assistantship, higher education programs, and faculty positions

As noted in the first chapter, the role of the research assistantship in graduate education has been explored to a degree; however, we have yet to conduct an extensive examination regarding its role in the development of faculty in higher education programs as researchers.

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Assistantships

The various nomenclatures of assistantships, typically categorized as teaching, research, or administrative, reveal the essence of duties associated with such positions. Various departments and administrative units on a university campus allocate resources to fund a certain number of assistantships to be filled by students usually interested in a career in the respective discipline or area. Students perform various duties under the supervision of a faculty member or administrator for a specified number of hours per week.

While assistantships vary by department or area in the university where it is located, one thing is generally uniform, in that assistantships often require students to be enrolled in a degree program full-time. Some universities are generous in their awards for graduate assistants where they not only provide a financial stipend but other incentives such as tuition waivers, health care benefits, in-state resident fees (for out-of-state and international students), and discounts on purchases made from various campus retailers. Other institutions are more parsimonious in that the benefits associated with assistantships are very limited. Not only is there great variability in the financial stipends for graduate assistants among institutions, but these stipends may differ considerably within institutions.

While requirements and benefits of assistantships vary by institution and discipline, there are some similarities and/or consistent patterns relating to assistantships

7 St. John and Andrieu (1995) classify aid that graduate students receive as either need-based (loans), merit-based (fellowships), or labor-based (assistantships).
that have been the focus of numerous studies. One similarity is that assistantships provide graduate students with invaluable experiences and opportunities. Many students could not pursue advanced degrees without such positions, and the importance of the assistantship is well documented in the literature (Abedi & Benkin, 1987; Andrieu & St. John, 1993; Berg & Ferber, 1983; Bowen & Rudenstine, 1992; Cook & Swanson, 1978; Ehrenberg & Mavros, 1995; Ethington & Pisani, 1993; Givres & Wemmerus, 1988; Heiss, 1970; Johnson, 1994; MacDonald, 1995; Malaney, 1987, 1988; Perna & Hudgins, 1996; St. John & Andrieu, 1995; Sheridan & Pyke, 1994; Steiger & Kimball, 1978; Twale, Short, & Walden, 1990; Valentine, 1987; Wong & Sanders, 1983; Worthen & Gardner, 1988). The assistantship is also an important form of financial aid among the nation’s doctoral clientele, as approximately 60% of the aid received comes from this single source (Hauptman, 1986). Just as Pell grants and student loans are an integral part of financing undergraduate education, so are assistantships in graduate education.

**Assistantships and Socialization**

Through the various duties that graduate students perform during their assistantship, they are socialized into and trained for a profession of which they aspire to be a part (Baird, 1990; Clark & Corcoran, 1986; Givres & Wemmerus; Johnson, 1994; Perna & Hudgins, 1996; Wong & Sanders, 1983; Worthen & Gardner, 1988). As mentioned in Chapter One, graduate students who hold assistantships are more likely to complete their degrees (Abedi & Benkin, 1987; Bowen & Rudenstine, 1992; Cook & Swanson, 1978; Givres & Wemmerus, 1988; Sheridan & Pyke, 1994; Valentine, 1987).
Clark and Corcoran provide a concise definition of socialization into academe when they tell us that:

Formal preparation of the faculty member takes place through graduate education in the departments of research-oriented universities. The department inducts students into the discipline, transmitting skills, knowledge, and a structure of values, attitudes, and ways of thinking and feeling. (p. 30)

Additionally, graduate assistantships provide students more opportunities to intermingle with faculty where personal and professional relationships are developed as well (Baird; Berg & Ferber, 1983; Givres & Wemmerus; Nettles, 1990; Perna & Hudgins; Worthen & Gardner).

Mentoring is oftentimes a part of the professional relationships between a graduate assistant and his/her supervising professor. Baird (1990) states that “faculty members have the greatest impact on the socialization of students in graduate and professional schools. They do this by serving as role models, acting as mentors or ‘coaches’ . . . ” (p. 368). If a graduate assistant or student aspires to become a faculty member, then it is imperative that the student learns “the tricks of the trade” for employment in the professoriate. In his efforts to explain the purpose of the role model in graduate education, Baird tells us:

Most important is the unfortunate truth that although faculty members can potentially serve as role models, many do not. Hartnett and Katz (1977) found evidence that many graduate students have little contact with their professors and such contact as they did have was often unsatisfactory. Sorenson and Kagan (1967) found no consensus among faculty about the role of doctoral sponsors... (p. 368)

While researchers such as Baird note the importance of the mentor, other researchers have devised ways to define the duties and role of the mentor (Clark & Corcoran, 1986;
Clark and Corcoran devise a definition of the process of working with a mentor that spans what is commonly referred to as “sponsorship,” “mentorship,” and “role modeling.” They state:

Although “sponsorship,” “mentorship,” and “role modeling” have not been defined with precision, for our purposes, sponsorship will include advancement of a favored protege, mentoring and/or coaching a novice through the informal norms of the workplace and/or discipline. This process is thought to be important for upward mobility and career success in adult development generally, in business, in the professions, and specifically, in academic settings. (p. 26)

I believe that this definition is very comprehensive and also succinct, and certainly provides a more thorough indication as to what being a mentor (or sponsor) entails.

Berg and Ferber (1983) note that same sex advising relationships are more common, yet Heinrich (1995) tells us that women doctoral students choose men faculty more often for their dissertation committees given the influences of “power, influence, and professional connections” (p. 448). If the same sex advising relationship preference holds true, then men have an advantage over women at finding mentors given the fact that the number of men who serve as faculty is greater than the number of women faculty.

In their research focusing on women professors of higher education, Twale, Short, and Walden (1990) recognize that “career success for women correlates with their ability to become affiliated with a sponsor, guide, or coach” (p. 84). As mentoring relates to my study, individuals featured in the Twale et al. study who were graduate assistants during their education were more likely to have a mentor and were more likely to attain a faculty position in academe once they completed their degree. The authors tell us that women graduate students (in this case, higher education graduate students) with mentors “have
easier entry and greater success in the field than women without mentors” (p. 88). Also
from the Twale et.al (1990) study, it was concluded that it is important for women
studying higher education who are interested in academic positions to not only have a
mentor but also a graduate assistantship and attend full-time.

The Twale et al. (1990) study and my experiences confirm for me the importance
of the mentor for graduate students studying higher education. Not only are experiences
in assistantships with mentors valuable in many ways, they may persuade students to
make a career choice to enter the professoriate. If this holds true, this relationship is
especially important for women and minorities given their being underrepresented in the
faculty roles. While the Twale et al. study sheds light on the importance of the
assistantship in general, it may be beneficial to examine the various types of
assistantships individually. It is important to question whether or not Twale et al. would
have reached similar conclusions had they compared the responses of individuals who
served as research assistants to individuals who served as teaching assistants. I address
the distinction between the various types of assistantships in the following section.

Teaching and Research Assistantships

Research has shown that both teaching and research assistants were more likely
than other students to complete the terminal degree (Bowen & Rudenstine, 1992; Givres
& Wemmerus, 1988) and in a shorter amount of time (Abedi & Benkin, 1987; Sheridan
& Pyke, 1994). Furthermore, research assistants are even more likely to complete their
doctoral degrees (Bowen & Rudenstine; Cook & Swanson, 1978; Ehrenberg & Mavros,
1995; Sheridan & Pyke) and take less time to complete their doctorates (Ehrenberg & Mavros).  

While there is not a uniform list of responsibilities for the research assistant, some “typical” duties have been linked to better outcomes for the student who holds this type of assistantship. For example, students who work closely with a faculty member and take a prominent role in research projects are subsequently more productive in their own careers once they complete their degree, as opposed to research assistants who spend their time conducting fewer specialized tasks such as library searches (Worthen & Roaden, 1975, as cited in Worthen & Gardner, 1988). When considering the effects of the research assistantship on students’ academic work and progression toward the terminal degree, Heiss (1970) reported that for some students serving in an assistantship capacity, their dissertation may be a product of such an experience.

Hauptman (1986) reported that only about 15% of students in education who received their doctorate in 1983 claimed that they had a research assistantship during graduate school. A larger percentage, approximately 25%, reported having a teaching assistantship, yet the importance and the role of the research assistantship for education students should not be undermined for its importance in preparing individuals to become researchers has been demonstrated (Worthen & Gardner, 1988). Research assistantships

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8 To further problematize the importance of one type of assistantship over the other, it is important to understand that this importance will be contextual depending on the type of institution where the individual is trained, and the respective discipline from which the individual obtains his or her degree.
are also advantageous to education graduate students in other ways because research has shown that these awards are an important part of financing graduate education (Perna & Hudgins, 1996).

What types of careers typically follow the experience of an assistantship? Are individuals who serve as graduate assistants more prone to selecting certain types of occupations? While the responses to these questions would vary by discipline, in most disciplines, it is clear that research and teaching assistantships are important precursors for the professoriate. Givres and Wemmerus (1988) tell us:

Support as research or teaching assistants is an important part of a graduate student's educational experience. In those assistantship roles, a student is given the opportunity to apprentice in the academic profession. Students learn the norms and expectations of the department as they become part of the instructional or research team. (p. 170)

Worthen and Gardner (1988) also link the experience gained from a research assistantship with faculty positions when they query:

But if RAs [research assistants] do not receive training in these tasks [writing research proposals, conducting statistical analyses, writing scholarly articles, presenting research papers, etc.] as RAs, how will they master them as junior faculty members when they complete their graduate training? At some point the apprentice must learn the master's art. (p. 14)

The authors were distraught over the types of tasks that research assistants in their study reported that they were performing. Many research assistants identified that they reviewed literature and collected data, yet the authors were advocating that research assistants needed to be engaged in "a complete package of research training" (p. 14) where the aforementioned skills (e.g., conducting statistical analyses, presenting research papers, etc.) are acquired.
The Impact of Assistantships on Persistence Decisions

While the majority of the literature reviewed on assistantships focuses primarily on experience gained from such positions, some persistence literature notes that there are some instances when assistantships serve as encumbrances. Andrieu and St. John (1993), using NPSAS-87 (National Postsecondary Student Aid Study) data, found that assistantships were negatively associated with within-year persistence, particularly for graduate students in public institutions and in programs where there were low expected earnings once students completed their degrees. A follow-up of this study (St. John & Andrieu, 1995) revealed the same finding, yet the authors also found that when used in combination with other forms of aid (specifically grants and loans), assistantships were positively associated with persistence. In reference to their findings regarding assistantships, St. John and Andrieu tell us:

We do not interpret this finding [assistantships are negatively associated with persistence] to mean that assistantships were ineffective. Instead we suspect that the cause of this negative association was related to the financial capacity of graduate students to persist. (p. 163)

While these studies focus on the role of assistantships in persistence decisions, I feel they exclude the role that the assistantship plays in terms of students acquiring experience. Additionally, both of the aforementioned studies clustered all assistantships into one category; therefore, this may be problematic given that one type of assistantship may have varying effects on persistence than other types of assistantships.

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These authors define within-year persistence as the choice to reenroll in the spring semester after being enrolled in the fall semester.

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In efforts to illuminate the phenomenon of persistence at the doctoral level, Tinto (1993) analyzed the distinction between fellowships and assistantships. Fellowships are often considered prestigious accolades for graduate students; however, these awards often come in the form of a stipend without a requirement for students to perform any duties. Tinto argues that fellowships and research assistantships should be given at specific times during doctoral training. For example, fellowships awarded at matriculation may not be beneficial for persistence since students fail to acquire research experience, something that they could achieve if they are awarded a research assistantship at the initial stages of their enrollment into a graduate program. In their study, Wong and Sanders (1983) found that women received more fellowships overall, yet they issue the caveat:

Fellowships may not enhance students’ integration into ongoing departmental activities and likely do not contribute to long-term scholarly performance. Fellowship awards may actually reduce involvement in productive work because they limit financial need, and therefore students may be less apt to seek research or teaching positions. Hence, it appears to be important for women to be integrated into the entire departmental reward system (not just fellowship awards) in order to increase their opportunities to publish prior to graduation. (p. 43-44)

Fellowship awards at the latter stages of a student’s studies may be more beneficial since they provide students with funding for their own research without the additional commitment of a research assistantship (Tinto). Similar suggestions for funding graduate students were also reported in Bowen and Rudenstine (1992) when they tell us that “the timing of various forms of graduate student support is itself of great importance” (p. 191, emphasis in the original).

It is important to note from a theoretical perspective, almost all of the studies featured in this literature review thus far have been conducted mainly through a structural
functionalist, or positivist paradigm. Much of the literature only describes or explains, using numbers, the role of assistantships in graduate education. However, some studies implicitly allude to other theoretical frameworks when they raise questions regarding the ways in which assistantship experiences affect certain groups (e.g., Berg & Ferber, 1983; Ehrenberg & Mavros, 1995; Givres & Wemmerus, 1988). A more recent study (Perna & Hudgins, 1996), however, looks at the role of assistantships through an interpretivist lense via qualitative inquiry. Studies explicitly using multiple paradigms to view the role of assistantships in degree completion rates or in any other capacity are nonexistent.

Gender Differences

While I deem it important to include the literature regarding the benefits of graduate assistantships, and of research assistantships in particular, I also emphasize that it is equally important to present literature that has documented the ways in which individuals experience research assistantships differently. As revealed from my review of literature on gender and education, the factors which may help explain gender inequity are certainly complicated. Though complex, there are some themes and patterns that have emerged from this literature review that may contribute to explaining the phenomenon of gender equity.

Over time, women have achieved increasing representation in the student populations of higher education, yet they are seriously underrepresented in the upper administrative levels (presidents, vice presidents, and deans) and full-professor ranks (Chliwniak, 1997). The number of women receiving the doctorate degree in all fields nearly tripled from 1965 to 1983 (Hauptman, 1986), yet women appear to be
underrepresented in the roles of research assistants and subsequently have fewer opportunities at male-dominated careers in the professoriate. Blum (1991) reported that in 1989, 39% of assistant professors in all of higher education were women, a 15 percentage point increase from 1972. Chliwniak also concluded that women and men were equally represented at the instructor and assistant professor ranks but not at higher levels. For example, while the assistant professor rank witnessed marked increases in the number of women, the same cannot be said of full professors, as women made up only 13.6% of this particular group in 1989 (Blum), and 15% in 1995 (Schneider, 1998).

Chliwniak tells us that:

The causes for the perpetuation of the gender gap are many. Each persistence factor can be studied independently to gain a perspective of the impact on the gender gap in higher education. When combined, however, these institutional persistence factors seem like insurmountable barriers for some women. (p. 14)

Some of the factors identified by Chliwniak are: 1) the resistance to affirmative action has placed women at a disadvantage; 2) curriculum and scholarship is, for the most part, focused on the experiences of men; 3) women are unequally represented in the roles of faculty and are less likely to have tenure; 4) women's and feminist studies in higher education promote divisiveness; 5) some pedagogy challenges the traditional didactical approach; 6) personal, family, and career issues negatively affect women more so than men; 7) sexual harassment is viewed differently by men and women; and 8) women academics are paid a considerable amount less than men.

Clark and Corcoran (1986) gave reasons as to why they believe women are underrepresented on the faculties of research institutions and in tenured professor ranks.
when they assert that “possible explanations include overt and subtle sex discrimination, differential interests and preferences for teaching rather than research, lack of sponsorship and collegial networks, and others suggesting accumulative disadvantage in the structure of the occupational career” (p. 20). In their qualitative study, these authors explored the experiences of women faculty to determine how they were socialized during graduate school and the effects of this socialization on their career choices. These authors coined the term “accumulative disadvantage” to entail an indepth process which has negative consequences for women graduate students. According to Clark and Corcoran, accumulative disadvantage occurs because women less often apply to prestigious graduate programs, they often do not receive financial aid in amounts equal to those of men, and they do not have access to collegial relationships with academics who are well-known in their respective fields.

Some women informants in the Clark and Corcoran (1986) study recounted the difficulties that they encountered with men professors. These individuals reported that men professors did not take them seriously, they gave preferential treatment to men graduate students when they were applying for employment, and they were sometimes discouraged to get married and have children. One informant noted that men in her department were often encouraged to apply for positions in research institutions, while women were encouraged to apply in liberal arts colleges, a trend that negatively impacts women’s reputations as scholars and researchers. While this study explores gender differences in opportunities in academe and their impact on career decisions, the authors note that more research on the phenomenon of accumulative disadvantage is needed.
They also note the strength of qualitative methods for exploring this area when they explain, “Qualitative data richly illustrate the utility of theoretical conceptualizations of professional socialization for understanding the quantitatively based sex differences in academic careers that have been established in numerous empirical studies” (p. 39).

In a similar frame, the reasons women receive fewer research assistantships than men are muddled by numerous factors. Steiger and Kimball (1978) examined the discrepancies in awarding of various financial aid packages to graduate students, and found that fellowships and assistantships were more frequently awarded to men. The findings of Wong and Sanders (1983) contradict a portion of these findings given in their study women received more fellowships than men. Steiger and Kimball concluded that women were not applying for fellowships equal to rates of men, and from using two studies (Attwood, 1972; Nies, 1974) they derived the following list of factors that could explain why women were less frequently applicants, and thus recipients, of fellowships: 1) men were more often inclined to tell other men as opposed to women about fellowships; 2) women were not encouraged to apply by men professors; 3) fellowships require full-time status, and women were more often part-time students; and 4) other roles, primarily that of mother, led women to pursue graduate education at a later age thus disqualifying them because of age limits imposed by fellowship qualifications (I posit that it is illegal today in many cases to use age limits/restrictions in determining recipients of fellowships). It is likely that these factors, in many situations, could help explain why women hold fewer research assistantships as well. In discussing gender equity in
academe and in an attempt to summarize the literature relative to this topic, Baird (1990) surmises some of the same conclusions when he states:

Although Solmon (1976) found that admitted women received financial aid as often as men, and that the stipend was approximately the same, men received research assistantships more often and women teaching assistantships more often, a finding also reported by Wong and Sanders (1983). This finding is important, since as noted earlier, and shown by Wong and Sanders, the research assistantships were associated with success in graduate school. Overall, then, for whatever reasons and despite superior grades, women less often apply to graduate school, tend to apply to less prestigious disciplines and programs, tend to study full time less often, and are less often involved in research projects. Although each of these differences may be small, they add together to form a pattern of hindrances. (p. 379)

As mentioned previously, some research noting gender differences in research assistantships considers that there are discrepancies in the opportunities that men are afforded as compared to women (Johnson, 1994; Solmon, 1976; Wong & Sanders, 1983). Other studies refute this claim and note that opportunities for research assistantships are equal (Worthen & Gardner, 1988). In their sample which was 56% men and 44% women, Worthen and Gardner tell us that “there does not appear to be a gender bias in opportunities for research assistantships” (p. 10). I posit that what exactly constitutes gender bias is not only contextual but also open to subjective interpretation. Additionally, there are other factors present that appear to influence the distribution of awards. Some additional factors are explained below and make understanding why women appear to be research assistants less often than men complex. For example, women typically choose fields where there are fewer possibilities for research assistantship appointments (Johnson). At the University of Washington (the subject institution of the Johnson study), more research assistantships were available in the sciences and in engineering as
compared to other disciplines, while the number of women in these programs was minimal. Subsequently, women were less likely to hold appointments in research assistantship positions at this university. Johnson noted that when the aggregate number of research assistantships offered by the university was divided by gender, women received fewer research assistantships than men. Yet when the gender distributions were looked at by college (humanities, sciences, and engineering, specifically), the differences were no longer evident.

Similar findings were reported in Wong and Sanders (1983) when they looked at doctoral graduates over a six-year time span, 1972-1978, from the University of California at Santa Barbara. Interestingly, their sample consisted of nearly five times as many men as women, 599 and 112, respectively. In an attempt to explore the “graduate school experience” on inequality in academe, the authors note that:

Few human capital differences [differences in credentials and qualifications] between women and men were present at the onset of graduate study. By graduation, however, within-discipline differences in the attainment of departmental rewards and opportunities and scholarly production sometimes reflected large differences between the sexes. (p. 37-38)

Research assistantships were more beneficial to women in this study than men in terms of their scholarly production (defined as the number of manuscripts that were accepted for publication by the time that the student graduated); however, women published less than men and were less likely to publish in the natural sciences and the arts. The authors also noted that at this institution, women received more fellowships than men which may have limited their chances of becoming research assistants.
Johnson (1994) found that there was a statistically significant relationship between the gender of professors and their research assistants, in that women professors tended to hire women graduate students while men professors tended to hire men graduate students. She also noted that women continued to be disadvantaged with this process since the number of men faculty far outweighs the number of women faculty, thus limiting opportunities for women graduate students (a similar finding reported in Berg & Ferber, 1983).

Research at Southern Illinois University at Carbondale (MacDonald, 1995) found that men graduate assistants often did more work involving teaching, research, and administrative tasks, while women frequently did more clerical assignments. These findings reinforced the notion that men are oftentimes provided more opportunities than women during their graduate training, thereby increasing their marketability to the professoriate upon graduation (MacDonald). At the same time, this phenomenon hinders future publication productivity for women and consequently their entrance into the professoriate (Johnson, 1994; Solmon, 1976; Wong & Sanders, 1983). In various instances, it is clear that the structures of awarding opportunities in academe did not provide women the same options as men thus disallowing their chances for equality in numerous contexts.

Once again, it is important to mention from a theoretical perspective, that almost all of the studies featured in this literature review under the subheading “Gender Differences” have been conducted mainly through a structural functionalist, or positivist paradigm. While in some studies there may be innuendos to different theoretical
frameworks, only Clark and Corcoran (1986) used qualitative inquiry as the focus of their research. As noted earlier, only several studies employ methodologies and methods of theoretical approaches other than positivism. No topical studies featured in this chapter for this particular area of research embrace methodologies that use multiple methods.

Equity

As I mentioned in Chapter One, a significant contribution of my study is to make suggestions and recommendations as to how equity can be achieved in opportunities for research assistantships and the professoriate. In my mind, there are experiential and numerical facets of equity, where the latter entails that men and women should be equally represented in various roles, e.g., research assistants and faculty. The former means that men and women should have similar experiences as research assistants that present men and women with equal career opportunities upon completion of their graduate education.

Kenneth Sirotnik (1991) gives an excellent definition of equity when he states:

Equity, then, can be indicated when there are no systematic differences in the distribution of conditions, practices, and outcomes based on race, ethnicity, sex, economic status, or any other irrelevant grouping characteristic. An evaluation system, therefore, would be on the lookout for (a) increasingly favorable information on the conditions, practices, and outcomes and (b) decreasing differences based on this information between gender, racial, ethnic, and economic status groups. (p. 263)

On a similar note, Grant and Ladson-Billings (1997) define educational equity as:

Justice and respect for individual and group rights, which actively promotes the view that all persons are equal, personally and socially, although living within a fundamentally unequal, stratified, and biased dominant culture. Thus, the pursuit of equity in education is a dynamic process that recognizes contextual realities (e.g., institutionalized racism and sexism) and barriers to the achievement of a
truly just distribution of power and opportunity, and works constantly to name, address, and dismantle systems of oppression which keep inequality in place. (p. 103)

I emphasize that my understanding of equity is not just in terms of numbers. As demonstrated in the above quotes, equity should also materialize in the form of opportunity and experience as well.

In the final section of this literature review, I focus the discussion on higher education programs and how variances in educational awards and opportunities for men and women, similar to the earlier discussions, may explain the gender differences in representation on the faculties of higher education programs.

**Research Assistantships, Higher Education Programs, and Faculty**

The majority of higher education programs in U.S. colleges and universities, as we know them today, had their origins within universities during the 1960s (Cooper, 1986; Crosson & Nelson, 1986), yet courses with higher education as a main theme date back even further to a century ago (Dibden, 1965; Palmer, 1930; Townsend, 1990) when Granville Stanley Hall, president of Clark University, organized and taught a course with higher education as the focus of study (Goodchild, 1996). Higher education programs have an assortment of identities and characteristics but often share a common mission to train most of their graduate students to become either university/college administrators or professors. The most recent student profile of higher education programs stratified by gender revealed that the numbers of men and women enrolled were nearly equal, where 2,452 men and 2,500 women comprised 49.5% and 50.5% of the population, respectively (Crosson & Nelson) when these programs were surveyed in 1983. However, the
percentages of men and women in the higher education professoriate were not equal. Nelson (1991) reported that men made up 78% of higher education faculties in 1989, and women made up 22%.10

Extant literature is scant regarding research assistantships, higher education programs, and their faculties. More research documenting gender differences in the higher education program faculties is needed since it has been only superficially explored. Hunter and Kuh (1987) reported that only 16% of the higher education faculty who participated in their study and were identified as “prolific contributors to the higher education literature” were women. They also reported the importance of the graduate research assistantship on future research production levels in that faculty members who held research assistantships during their graduate education were more likely to have outstanding careers as contributors to higher education literature. Newell and Kuh’s (1989) study is the only one to date which focuses on comparing men and women professors of higher education in certain areas such as personal characteristics, professional activities, and career satisfaction. My study focuses on men and women higher education professors, as well, yet it explores different areas, specifically the role of the research assistantship in the development of higher education faculty as researchers.

10 Crosson and Nelson (1986) reported that women made up 13% of the faculties of higher education programs based on figures from 1983 (similar figures were reported in Newell and Kuh, 1989). While Nelson’s 1991 percentages represent an increase, they are nowhere near parity with the number of men in faculty positions in higher education programs.
As noted earlier, Twale, Short, and Walden (1990) examined the importance of assistantships for women higher education faculty. In this study, nearly 73% of the women higher education faculty reported that they had a graduate assistantship (the type of assistantship is not specified), and the authors concluded that the women who held graduate assistantships were more likely to enter the professoriate upon completion of their degrees. Also noted in the findings of this study, women professors of higher education noted that they were more comfortable with their teaching skills vis-a-vis their research capabilities (Twale et al.). It is plausible that this is so because women graduate students in higher education programs are either not being allowed or not seeking the opportunities of research assistantships, thus inhibiting their research expertise. Occasions where women can enhance their research skills should be maximized (Twale et al.), and one potential method that can incorporate use of these skills is the research assistantship.

Several studies (Campbell & Newell, 1973; Newell & Kuh, 1989; Newell & Morgan, 1983) show a growing concern throughout the 1970s and 1980s from the professoriate of higher education programs regarding the lack of women and minorities in the faculty ranks. Mason and Townsend (1988) revealed that women only made up 10.5% of the graduates of higher education programs in 1972, while the numbers increased to 60% by 1987. Crosson and Nelson (1986) found that minorities made up 21.8% of the student population in higher education programs based on data collected in 1983. Other studies reported that the percentage of women faculty members of higher education increased from 4.5% in 1972 to 11.5% in 1980 (Newell & Morgan) to 13% in
1983 (Crosson & Nelson)\textsuperscript{11} and then to 22\% in 1989 (Nelson, 1991). Newell and Kuh predicted that approximately half of the higher education professoriate of the 1980s would retire by the end of the 1990s. These authors tell us that “given the market for doctoral recipients generally . . . higher education appears to remain a promising field of study” (p. 70). If this is true, then there are some exciting possibilities for women and minorities to assume these ranks provided that the gatekeepers to these positions are committed to progression of opportunities for these historically underrepresented groups in the higher education professoriate. There is often times the perception that women dominate, in number, the field of education, yet when looking specifically at higher education programs, occasionally there is parity (or near parity) when looking at men/women student populations. Still, women are underrepresented in the roles of faculty in academe (Blum, 1991; The Chronicle of Higher Education, 1999; MacDonald, 1995; U.S. Department of Education Office of Educational Research and Improvement, 1991), including, at last count, the faculties of higher education programs (Crosson & Nelson, 1986; Nelson, 1991; Newell & Kuh, 1989; Newell & Morgan, 1983).

\textbf{Chapter Summary}

When looking at the research that I have presented in this review, it is almost as if there is a singular approach to research on graduate education, assistantships, and higher education programs. As I have critiqued the other sections of this literature review and noted how positivism has dominated the research methods employed, almost the same can be said for the final section of my topical review entitled “Research Assistantships, \textsuperscript{11} Very similar figures were reported in Newell and Kuh (1989).
Higher Education Programs, and Faculty." Only one study, Hunter and Kuh (1987), employs a mixed methods approach using surveys and telephone interviews with higher education faculty to identify characteristics of those individuals who made significant contributions to higher education literature. It is important to note that research focusing on higher education programs, faculties, and assistantships, has made minuscule attempts to move beyond mere quantification. Some research has sought to examine the effects of the experiential aspects of assistantships on individuals who hold such positions. While the methods have for the most part remained the same, the scope of research in these areas has broadened.

The role of the research assistantship in other disciplines has been explored, however, we have yet to conduct an extensive examination in higher education programs. Moreover, we have not broken the hegemonic boundaries of traditional scholarship in our area, in that most inquiry on these programs and assistantships has not employed research methods other than those associated with positivism. I recognize and emphasize that researchers must strive to keep an accurate account on trends to promote gender equity in academe and assure that these trends are documented in the higher education literature. If men and women are to be equally represented in the roles of higher education faculty, then part of the solution to gender inequality lies in the opportunities for professional growth and development during their doctoral education.
CHAPTER 4 — RESEARCH METHODS

I employ a mixed model approach for this study using methods from what are traditionally referred to as quantitative and qualitative schools of research. Tashakkori and Teddlie (1998) categorize research into one of three following types of studies: monomethod studies, mixed method studies, and mixed model studies. Scholars who exclusively use one type of method in their research would find that many of their works fall into the first group. Mixed method studies use both quantitative and qualitative research methods, while the last group uses both procedures in various phases of research. For example, a researcher who constructs his or her study to use surveys which contain both closed-ended (sometimes referred to as objective) questions and open-ended (or subjective) items and analyze this data in various ways would consider his/her work to be a mixed model study. Since similar circumstances exist in my research, I consider my research to be a mixed model study.

Quantitative and Qualitative Research

Frequently in academe, researchers display a preference for either qualitative or quantitative research given their own epistemologies or ideologies. Sociologists Raymond Morrow and David Brown (1994) explain the chasm between the two schools of research quite well:

Those who identify themselves with one category [qualitative or quantitative] appear to assess the other negatively on the grounds of some inadequacy. Notwithstanding any efforts at synthesis, quantitative sociologists often tend to view qualitative research as imprecise, biased by researcher subjectivity, and effective for neither prediction nor generalization. At the same time, qualitative sociologists tend to view quantitative research as grounded in a naive objectivity,
ineffective for the interpretation of insider actions, and generally unable to
describe the social construction of reality. (p. 202)

Tashakkori and Teddlie (1998) refer to researchers who use both qualitative and
quantitative methods as "pragmatists." They tell us that "pragmatists . . . believe that
either method is useful, choosing to use the dazzling array of both qualitative and
quantitative methods" (p. 24). They continue:

It [pragmatism] presents a very practical and applied research philosophy: Study
what interests and is of value to you, study it in the different ways that you deem
appropriate, and use the results in ways that can bring about positive
consequences within your value system. (p. 30)

These authors note that researchers who adhere to one specific type of research (either
solely quantitative or qualitative) often promote the "either-or" ideology or the
"incompatibility thesis" which both reject the union of mixed methods in scholarship.

When examining the framework for my study, critical theory lends itself to
quantitative methods more so than quantitative methods; however, the use of latter is not
prohibited in research framed in critical theory (Morrow & Brown, 1994; Tierney &
Rhoads, 1993). Morrow and Brown provide a credible rationale as to why they believe

critical theory endorses both quantitative and qualitative methods:

With respect to specific techniques, critical theory is in principle much more open
and innovative than empiricist social science. Not only does it embrace the
possibility of all empiricist techniques, but it also introduces a number of others
associated with interpretive social science. As a point of principle, therefore,
critical theory is eclectic with respect to methodological techniques. (p. 227)

Moreover, quantitative and qualitative methods are integral parts of research where
critical inquiry serves as the theoretical underpinning. It is in this light that I have chosen
a framework that embraces the use of both methods. I feel that qualitative methods add

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richness and depth to this area of research, yet for reasons articulated previously I also believe that quantification of certain constructs is also important. Additionally, qualitative research provides description and interpretation of phenomena that is oftentimes limited and sometimes nonexistent in quantitative research.

While some researchers may work exclusively with either quantitative or qualitative methods, I believe that diverse types of research questions lend themselves to various types of inquiry that can be strictly quantitative or qualitative, or in the case of my research, a combination of both.

Research Questions

As mentioned in earlier chapters, the research questions for this study have been constructed to follow the various paradigms that compose critical inquiry. It may be possible for readers to more easily conceptualize the data collection process for my study if they view it as being collected in two phases: 1) Phase I will focus mainly on the quantitative data collection (the structural functionalist paradigm); and 2) Phase II will focus primarily on the qualitative data collection (the interpretivist and critical theory paradigms). Following the various paradigms associated with critical inquiry, the research questions are as follows:

Structural Functionalist Questions

1. What is the frequency distribution of professors of higher education in Research I institutions based on gender and rank?
2. What is the frequency distribution of professors of higher education in Research I institutions who served as research assistants during their graduate education?

3. How do faculty (who held a research assistantship) of higher education programs in Research I institutions differ in their assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher?

**Interpretivist Questions**

1. In what ways does the research assistantship influence the decision of higher education faculty to enter the professoriate?

2. How do higher education faculty who served as research assistants vary in their assessment of the purposes, advantages, and disadvantages of the research assistantship?

**Critical Theory Questions**

1. What role does gender play in the research assistantship experience?

2. What groups currently benefit most from existing opportunities?

**Phase I • Quantitative Methods**

The initial portion of my study was conducted in late 1997 when I surveyed all of the higher education doctoral programs at Research I institutions. Sixty-eight \( n = 68 \) surveys were sent out to the higher education program coordinators at their respective institutions. My compilation of programs was derived from a list that was provided to me by the Association for the Study of Higher Education (ASHE) and from the higher
education programs listed in the Peterson's Guide to Graduate Programs. Additionally, from a list of Research I institutions in The Chronicle of Higher Education, I compiled an additional roster of institutions that did not have a program identified either by ASHE or Peterson's in the event that a program was not registered by either of these entities. For instance, Louisiana State University, a Research I institution, did not have a higher education program identified by either ASHE or Peterson's; however, the university does have a fairly large higher education program (for a complete listing of higher education programs at Research I institutions, please see Appendix A).

A total of 42 surveys was returned (a follow-up letter was issued in February 1998), yielding a 62% response rate; however, 26 (38%) were usable. Some surveys were rejected for use because some universities no longer had higher education programs or their programs did not meet the criteria of the survey (e.g., programs had to offer a doctorate where higher education is the main area of study, and faculty had to be individuals who were exclusively higher education faculty). Coordinators were asked to list the types of degrees that they award in higher education, the mission of their program, the numbers of doctoral students, and the number, gender, and ethnicity of their research assistants and faculty. Additionally, the coordinators were asked to list the names of the higher education faculty, their rank, and total years in the professoriate. This faculty listing has served as the population of interest for a latter portion of Phase I and for Phase II of my study. In June 1998, in lieu of a second follow-up letter, I obtained relevant information needed for my study from the web sites of universities that had not responded.
to my initial survey. From the initial survey and information obtained from the worldwide web, I began my data collection with 210 potential informants to this study.

Sample

The next part of Phase I entailed surveying the higher education faculty in doctoral higher education programs at Research I institutions ($n = 210$) generated in the initial part of Phase I. The survey was sent to prospective informants via email given the convenience of this type of communication which the vast majority of potential respondents have access to. For various reasons, e.g., they did not meet sample criteria, they did not have time, they were on leave, etc., 70 individuals informed me that they could not participate in my study. Eighty-one (81) individuals' surveys were returned and deemed usable, yielding a 58% response rate. I did not receive any response and/or communication from the remaining individuals who were surveyed.

Of the 81 individuals who responded to the survey, 47 (58%) were male, and 34 (42%) were female. By rank, there were 44 full professors in the sample, representing the largest group at 54.3%. Associate professors were the second to largest group with 20 individuals comprising 24.7% of the sample. Lastly, there were 16 assistant professors who completed a survey, representing 19.8% of the sample. Out of the entire sample, 58 (71.6%) individuals held a Ph.D., while 22 (27.2%) held the Ed.D. There was one individual (1.2%) who held another type of degree. By major, 82.2% of the sample indicated that their major in their doctoral studies was higher education or an education related field.
Four individuals (4.9%) indicated that they were between 20 and 29 years of age; eight (9.9%) were between 30 and 39 years of age; 19 were (23.5%) between ages 40 and 49; 28 (34.6%) were between ages 50 and 59 and made up the largest age group in the sample; and 20 individuals (24.7%) were age 60 and over.\textsuperscript{12}

I have determined that I must collapse all minorities into one group given that the cell size for some of the ethnicities is so small (in some cases \( n = 1 \)) that I run the risk of revealing the identity of some of my respondents. While I personally do not like this approach of describing respondents’ ethnicities given that it evades the uniqueness of various racial groups, I think it is necessary to do so in this case. There were 61 Caucasians (75.3%), making up the largest racial group in the sample, while there were 18 minorities (Asian Americans, African Americans, Hispanics, and individuals who classified themselves as “other” race) which made up 22.2% of the sample.

Research Assistants

Of the individuals who returned the survey, 58% indicated that they were research assistants, while 42% never served in this capacity. Approximately 57% of the faculty respondents who indicated that they were research assistants are men, and 42.6% are women. For the entire sample of women (\( n = 34 \)), 58.8% were research assistants while 41.2% were not. Similarly for men (\( n = 41 \)), 57.4% were research assistants while 42.6% were not.

By age, four individuals (8.5%) indicated that they were 20-29 at the time that they completed this survey; seven (14.9%) reported that they were 30-39; 12 (25.5%)

\textsuperscript{12} Figures will not always total 100% due to missing values.
were 40-49; 19 (40.4%) were 50-59; and five (10.6%) were at least age 60. All of the individuals in the 20-29 age group were research assistants, while 87.5% of the 30-39 age group were research assistants and 12.5% were not. Twelve of the 19 individuals in the 40-49 age group (63.2%) were research assistants and the remaining 36.8% (7 out of 19) were not. For the 50-59 age group, 67.9% were research assistants, while 32.1% did not serve in a research assistantship. The majority of the eldest group, age 60 and over, did not have a research assistantship (75%), while 25% (5 out of 20 individuals) did serve in this capacity.

For race, Caucasians made up 78.7% of faculty who were research assistants, while minorities made up only 17% (two individuals did not indicate their race). As noted earlier, I have collapsed all minorities into one group given that the cell size for some of the ethnicities is so small that I run the risk of revealing the identity of some of my respondents. Approximately, 61% of the Caucasians (37 out of 61) were research assistants, yet 39.3% (24 out of 61) were not. The larger portion of minorities (55.6%) was not research assistants, while 44.4% did serve as research assistants.

At the time of the survey, 46 individuals indicated that they were research assistants in graduate school. Of these, 22 (46.8%) were full professors, 13 (27.7%) were associate professors, and 11 (23.4%) were assistant professors. Out of all of the full professors, half were research assistants and half were not, while 65% of the associate professors served as research assistants and 35% did not. Approximately 69% of the assistant professors had research assistantships, yet approximately 31% did not.
Sampling Techniques

Purposeful sampling was used to select individuals to participate in this study. Taskakkori and Teddlie (1998) define purposeful sampling as “selection of individuals/groups based on specific questions/purposes of the research in lieu of random sampling and on the basis of information available about these individuals/groups” (p. 76). The population of interest for this study comprised all higher education faculty in higher education programs at Research I institutions. I chose to focus on Research I institutions for two reasons: 1) the larger higher education programs which are located in these institutions are the ones that produce the most higher education faculty (Newell & Kuh, 1989); and 2) the often accentuated role as a researcher is especially important for individuals on faculties in these types of institutions. Inclusion of other institutional types would certainly provide a more extensive analysis of this area of research, yet for now it is beyond the scope of my research.

Survey Instrument

The survey instrument focused on several areas including how higher education faculty have assessed the research assistantship and its role in faculty development (see Appendices B and C for copies of the introductory letter and survey instrument, respectively). Many of the questions on the survey instrument were objective (closed-ended) in nature; however, in some cases, I provided opportunities for individuals to furnish subjective (open-ended) responses. Some of the objective survey questions were as follows:
1. The research assistantship was a very influential factor in my entering the professoriate (1=strongly disagree, 5=strongly agree)

2. Please rate the level of contribution that you feel your research assistantship had on your development in the following areas:
   (1= poor, 4 = excellent)
   a. Being a competent researcher (constructing various quantitative and qualitative research designs, executing statistical analyses, and analyzing qualitative data)
   b. Writing scholarly works
   c. Making formal presentations of research at professional meetings
   d. Training and collaborating with graduate students on research projects

Data Analysis

The data from this phase of the study were quantitatively analyzed using SPSS (Statistical Package for the Social Sciences) for Windows. Descriptive statistics on the sample as well as their responses were calculated. Also, Chi Square, t-tests, tests of proportions, Multivariate Analysis of Variance (MANOVA), and Analysis of Variance (ANOVA) were computed in order to test for significant differences based on the survey variables between certain groups identified in the sample.

Phase II • Qualitative Methods

Sample

A total of 21 interviews with selected informants was conducted. However, for purposes of this study, I am only using data from the interviews with informants who
served as research assistants (n = 14). Once all potential informants were identified, I randomly selected individuals based on rank, race, and gender. Undergirding the selection process for who was to serve in the interview sample was my intention for the sample to be as diverse as possible. By diverse, I mean where both men and women, numerous races, and the various ranks of the professoriate are represented. I halted the interview process when I felt that the interviews had reached the point of theoretical saturation and when I felt that the sample was diverse enough. Interestingly, all of the assistant professors, 10 out of the 13 associate professors, and 11 out of the 22 full professors agreed to be interviewed. All of the individuals who agreed to participate in an interview signed my consent form (see Appendix D). Eighteen (18) of these interviews were done via telephone and three (3) were done in person. Two of the interviews were conducted in October 1997 and the remaining interviews were held in the months of September, October, and November 1998. Of the select 14 informants, 7 (50%) were men, and 7 (50%) were women. Nine (64%) were Caucasians, and the remaining five (36%) were minorities. By rank, there were five full professors, four associate professors, and five assistant professors. Table 4.1 shows the interview participants:

<table>
<thead>
<tr>
<th></th>
<th>Research Assistants</th>
<th>Non Research Assist</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>7</td>
<td>21</td>
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Table 4.1 — Phase II Informants
Interview Protocol

I developed the interview protocol (see Appendix E) for this research as part of a pilot study of this dissertation which was conducted for one of my general examination questions in 1997.13 Every informant in Phase II completed a survey during Phase I, and I used this survey to guide some of my questions to them during the interview process (a strength of mixed methods and mixed model approaches). Some questions from the interview were as follows:

1. How did you acquire your research assistantship—were you recruited to serve in it or did you specifically seek it?
2. What's your philosophy of the purpose of the research assistantship?
3. How do you feel that your experience as a research assistant played a part in your becoming a higher education faculty member?

Data Analysis

Initially, when I thought about all of the potential ways to analyze the qualitative data from my study, I wrestled with several approaches. First and foremost, for the bulk of my graduate training I have commonly used what is referred to in qualitative research analysis as the grounded theory approach (Glaser & Strauss, 1967; Strauss & Corbin, 1990). Yet, I questioned its use in critical, emancipatory research when I read the work of Patti Lather (1991). In her chapter entitled “Research as Praxis,” Lather notes what she

13 In this study, I interviewed two higher education faculty members, one man and one woman, who both serve on the faculty of a Research I institution. These individuals were research assistants during their graduate education.
believes to be the difference between generating grounded theory and emancipatory theory. I quote her at length:

In grounded theory-building the relationship between data and theory, according to Glaser and Strauss (1967), is that theory follows from data rather than preceding it. Moreover, the result is a minimizing of researcher-imposed definitions of the situation, which is an essential element in generating grounded theory. Given the centrality of a priori theory in praxis-oriented research, it is evident that emancipatory theory-building is different from grounded theory-building. Understanding those differences requires a probing of the tensions involved in the use of a priori theory among researchers who are committed to open-ended dialectical theory-building that aspires to focus on and resonate with lived experience and, at the same time, are convinced that lived experience in an unequal society too often lacks an awareness of the need to struggle against privilege. (p. 54-55)

While Lather sees the two concepts of grounded theory and emancipatory theory as different, I see them as compatible with one another. In my mind, both grounded theory and emancipatory theory offer something to my area of research and all research, for that matter. While certain a priori theories may shape research in numerous ways, I believe that it is important to acknowledge those theories (that emancipatory theory is built upon) and also adhere to creativity and openness that grounded theory building espouses.

Lather goes on to say that “theory adequate to the task of changing the world must be open-ended, nondogmatic, speaking to and grounded in the circumstances of everyday life” (p. 55). In that regard, grounded theory is similar to emancipatory theory in that it is open-ended as well. In reference to activist, social justice research, Michelle Fine (1994) tells us that “inquiry is pried open, inviting intellectual surprises to flourish” (p. 23). In my mind, grounded theory accommodates these “surprises.” While I recognize that my
goal in research for the "researched" is indeed emancipatory, grounded theory can certainly help shape emancipatory theory.

I will also use the constant comparative approach developed initially by Glaser and Strauss (1967) yet later modified for qualitative research by Lincoln and Guba (1985). Four stages of Glaser and Strauss' constant comparative method include: 1) comparing incidents applicable to each category; 2) integrating categories and their properties; 3) delimiting the theory; and 4) writing the theory. In part one, the researcher is called to place the data into categories or units either on index cards or into a computer database. Lincoln and Guba note that the categories can be generated using the researcher's own terminology and/or the respondents' vernacular. In "integrating categories and their properties," the researcher is asked to compare the data that has been grouped under each category, or to uncover any "category properties." In "delimiting theory," the authors purport that as more and more data are entered into the various categories, the categories become more detailed and defined. As for "writing the theory," the authors devote a chapter of their "Naturalistic Inquiry" toward writing theory for research which they note should include "substantive considerations" (e.g., statement of the problem, outcomes, etc.) and "methodological considerations" (e.g., methods, steps to ensure trustworthiness, etc.).

Validity and Reliability Issues

Although their denotative meanings may be used interchangeably at times, in research for a study to be "valid" it must be "accurate," and for it to be "reliable" it must be "consistent," based on how I have come to understand these terms. One of the
preeminent concepts regarding validity and reliability issues in qualitative research is trustworthiness. Lincoln and Guba (1985) tell us:

The basic issue in relation to trustworthiness is simple: How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of? What arguments can be mounted, what criteria invoked, what questions asked, that would be persuasive on this issue? (p. 290)

I find it useful to look at trustworthiness as both an “external” and “internal” issue. External trustworthiness issues are similar to the contributions of this study that I have outlined in the section of Chapter One entitled “Significance of the Study.” These issues, in my mind, partially establish the trustworthiness of the study. There are very limited amounts of research focusing on higher education faculty and the role that the research assistantship has played in their development as a researcher. Also, since gender is a main component of this study, this research will contribute to the literature that promotes and explores ways that gender equity in academe could possibly be achieved. This work could also be viewed as a contribution to critical inquiry in that it proposes another way to research a relatively unexplored yet important line of inquiry through this particular lense. In essence, my mixed model study “fills the gap” in the literature (that I have identified earlier in regard to methods and methodologies) where assistantships, gender, and higher education faculty development intersect. For example, positivism dominates the methods found in extant literature on my topic; however, my study will feature qualitative inquiry as well allowing examination of the topics mentioned throughout my literature review (e.g., assistantships, gender, and education). My work could also be used as a framework to view the role of the assistantship in other areas and disciplines. In
practice, this study could be used to potentially inform/shape policies regarding the awarding of research assistantships.

As for what I term "internal" trustworthiness, it is established in four ways. First, my experience as a research assistant and my involvement with this line of inquiry for sometime now is foremost in establishing my study’s internal trustworthiness. Second, the multiparadigmatic approach that I use in this study also contributes to the study’s internal trustworthiness. Gioia and Pitre (1990) note the importance of multiparadigmatic approaches in research when they tell us that “using different theory-building approaches to study disparate issues is a better way of fostering more comprehensive portraits of complex organizational phenomena” (p. 587). They continue, “Given our multiparadigm perspective, we believe it would be useful for theory building to be viewed not as a search for the truth, but as more of a search for comprehensiveness stemming for different worldviews” (p. 587, emphasis in the original). Additionally, my thorough review of topical and theoretical literature advances the internal trustworthiness of my study. In my mind, these significant “internal” and “external” issues all serve as contributions to my study’s trustworthiness.

Researchers in qualitative research must also take into account the notion of credibility and determine whether or not their study is credible or “believable.” One primary technique of ensuring credibility is executed through triangulation (Lather, 1991; Lincoln & Guba, 1985). More specifically, researchers “triangulate” or confirm their findings using various data sources and analytical techniques. For example, if a researcher uses participant observation as the only method of data collection in a study,
then the study’s credibility may be called into question. Other methods of collection, document analysis and interviews, are two possible methods that the researcher can use to triangulate his/her findings. In my research, I triangulate my findings by using two data sources: interviews and surveys. Multiple data sources (or methods) are not the only means by which credibility can be established, as the use of multiple theories is also appropriate (Denzin, 1978). Accordingly, I believe that the credibility of my study is further established by my use of multiple theories. In summary, I triangulate my data via method (or source) and theory.

The quantitative construct of external validity is synonymous with the qualitative construct of transferability or what is commonly known as “generalizability.” How well can the researcher “transfer” or “generalize” his/her findings to another context? In their chapter entitled “The Only Generalization Is: There Is No Generalization,” Lincoln and Guba (1985) maintain using the idea of a “working hypothesis,” developed by Lee Cronbach (1975, as cited in Lincoln & Guba). They tell us:

There are always factors that are unique to the locale or series of events that make it useless to try to generalize therefrom. But, he [Cronbach] notes, inquirers are in a position to appreciate such factors and take them into account. And, as the inquirer moves from a situation, “his task is to describe and interpret the effect anew,” [quoting Cronbach] that is, in terms of the uniqueness found in each new situation. Generalization comes late, Cronbach avers—and, we might echo, if at all. For, “when we give proper weight to local conditions, any generalization is a working hypothesis, not a conclusion.” [quoting Cronbach once again] (p. 123-124, emphases in the original)

In that light, the decision regarding transferability and/or generalizability of my research will have to be made by those who read my work and want to make such appropriate connections. In an effort to help the reader do this, I plan on presenting indepth
information on data collection procedures that researchers can either duplicate or modify to suit the specific context in which they research. I caution the reader about making generalizations based on the findings from this study, yet I encourage the use of this study as a framework for other disciplines or areas to conduct a critical examination of gender and the role of the research assistantship in development of faculty for that respective discipline.

Researchers often question the degree to which their surveys are reliable, i.e., how their scale measures what they are studying. For example, in my research, a reliability analysis was conducted to provide an indication as to how reliable my survey was on measuring the impact of the research assistantship in numerous areas. A reliability analysis (conducted in SPSS) provides a score that is indicative of the level of reliability. I conducted two reliability analyses on two groups of survey items: 1) Likert scale and semantic differential items; and 2) yes/no questions. Scores on the reliability analysis range from 0 to 1—when the score approaches 1, then the greater the degree of reliability. For the first group of survey items in my research, the reliability analysis score was .9230, indicative of a high degree of reliability for the Likert scale and semantic differential items. The second group of survey items, the yes/no questions, had a reliability score of .4004 which indicates that this group of items has a higher degree of error in them than the previous items.

The construct validity of my study is established by the use of both quantitative and qualitative methods of data collection. Lather (1991) claims that construct validity is confirmed when the research is building new theory and changing extant theory.
"Systematic self-reflexivity" is also part of construct validity in that it calls the researcher to "reflect" on the ways that his/her attitudes and perceptions have all changed in the research process (also a part of catalytic validity, to be discussed shortly). In that regard, my study is "construct valid" since I continually attempted to craft theory at the same time calling into question existing theory, its purpose, and effectiveness in critical research. Also, I noted throughout the study when findings either contradicted previous research or surprised me as a researcher.

Catalytic validity is a relatively new area in research that Lather (1986a, 1986b, 1991) supports establishing. She defines it and situates it within the quantitative/qualitative dichotomy as follows:

Catalytic validity represents the degree to which the research process reorients, focuses, and energizes participants toward knowing reality in order to transform it... Of the guidelines proposed here, this is by far the most unorthodox; it flies directly in the face of the positivist demand for researcher neutrality. The argument for catalytic validity lies not only within recognition of the reality-altering impact of the research process, but also in the desire to consciously channel this impact so that respondents gain self-understanding and, ultimately, self-determination through research participation. (1991, p. 68)

In other words, how does the research process affect the "researched" and the "researcher" as well? Lather does not mention researchers in her construct of catalytic validity, but I posit she includes them in her definition of participants. This seems to be one of the strengths of qualitative inquiry, particularly critical research, in that the respondents or the "researched" can engage in activities such as sharing their feelings regarding the topic and the research process. It would appear that the duty of the researcher is to share not only the respondents' feelings and/or viewpoints with the...
reader, but also the researcher's as well. For example, in my study I share my experiences with the reader, when questions are applicable to me, given that I have served in a research assistantship and those experiences may shape my interpretation of issues being explored in this research.

Reframing Validity and Reliability

All of the reliability and validity issues that I have addressed are for the most part components of traditional quantitative and qualitative research. Gitlin and Russell (1994) propose the creation of an additional methodology, what they term "educative research," where traditional definitions of validity and reliability are abandoned. In explaining their new concept of validity, the authors state:

Questions of validity, however, must go beyond the truthfulness of the data. The influence of the research process on who produces knowledge, who is seen as expert, and the resulting changes at the level of school practice are also part of an expanded and political view of validity. For example, one criteria of validity could be the degree to which the research process enables disenfranchised groups to fully participate in the decision-making process; to examine their beliefs, actions, and the school context; and to make changes based on this understanding. (p. 187)

As I explained earlier, "reliable" research (based on traditional terms) is deemed "consistent," generating similar conclusions in a subsequent study using methods employed in the original work. Gitlin and Russell take issue with this notion as well. These authors believe that reliable research is inquiry that generates voice: 14

14 "Voice" as defined by Gitlin and Russell (1994) is more than just the act of speaking. They use this term to mean the active participation of individuals in challenging existing ideologies to promote change in oppressive situations.
When the aim is the development of voice, it is not expected and is indeed undesirable that independent researcher-subject teams come to the same conclusions. It is also undesirable for the procedures to remain unchanged from context to context. Procedures should be allowed not only to evolve within a specific research study but also to change given the needs and priorities of a particular population. Reliability, therefore, cannot be based on duplicating procedures, but rather must center on attempts to satisfy the underlying principle of voice and its relation to a desired type of school change. (p. 188)

Validity in their research was established by attempting to foster more involvement of teachers and parents in the educational decision making process. Reliability was created by attempting to give voice to those individuals so that they may act in a more involved capacity toward change.

My research may be considered valid (by Gitlin and Russell's definition) if participants, particularly individuals who have been silenced or excluded in multiple ways, are given the chance to tell their stories regarding this area of research. In some areas of the field of education, particularly higher education programs, women and minorities have not been given the chance to reveal their accounts as to why they chose the professoriate and the role that the research assistantship played in this decision. On that same note, I would consider my research to be reliable in that it gives voice to those individuals who have typically been excluded from scholarship on faculty development.

Chapter Summary

In this chapter, I have outlined the study's methods, or the procedures used to collect data. As noted in Chapter Three, I have made a distinction between methods and methodology given my understanding of these two concepts. While methods and methodology are different, in my mind, they are intertwined. In my section of the chapter
explaining the design of the study, I introduced the quantitative/qualitative dichotomy and provided a rationale as to why critical inquiry requires the use of both methods. The research questions following critical inquiry's various research paradigms are restated. Also, I provided information regarding the sample of my study and gave a rationale as to why these individuals were chosen. Viewing my study as phases I and II (the quantitative and qualitative data collection, respectively), I provided a discussion as to how data was collected and analyzed. I concluded the chapter with a discussion focusing on issues of validity and reliability.
CHAPTER 5 — STRUCTURAL FUNCTIONALIST ANALYSIS

In this chapter, I present the results of the analyses for the structural functionalist research questions which examine: 1) the frequency distribution of professors of higher education in Research I institutions by gender and rank; 2) the frequency distribution of professors of higher education in Research I institutions who served as research assistants during their graduate education; and 3) higher education professors' assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher. In particular, the null hypotheses addressed in this paradigm are as follows:

Null Hypothesis 1: There is no difference in the distribution of men and women who serve the various ranks of the professoriate in higher education programs.

Null Hypothesis 2: There is no difference in the distribution of men and women professors of higher education who either served or did not serve as a research assistant in graduate school.

Null Hypothesis 3: There is no difference in higher education professors' assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher.

I also present the responses to other items of the survey which was sent to professors of higher education at Research I institutions, and conduct between-group comparisons based on gender, rank, and the interaction of gender and rank.
The Survey Instrument

All individuals who were sent a survey were asked to complete section I, which had questions regarding demographic characteristics of the survey respondent and section II which asked them questions concerning their graduate education (for a copy of the survey instrument, please see Appendix C). Part of that section asked respondents to list all assistantships that they held during their graduate education along with other information concerning their responsibilities in that position. Section III of the survey was used strictly for individuals who served as research assistants; therefore, respondents who did not meet this criterion were asked to omit this section and go on to section IV. The data for this chapter of my dissertation come from the individuals' responses to the items in section III. Section IV of the survey consisted of two open-ended questions for all survey respondents which asked them to list the factors which influenced their decision to enter the professoriate and what factors prepared them for their duties in this role. Lastly, section V asked whether or not the respondent was interested in participating in Phase II of my research, the qualitative interviews.

The Four Segments of Section III

Faculty in higher education programs who had held a research assistantship were asked to select one research assistantship that they held and use it to guide their responses to the questions in section III regarding their experience in that position. As noted in Chapter Four, the statistical procedures used to analyze the data from the survey were MANOVA (Multivariate Analysis of Variance), ANOVA (Analysis of Variance), Chi Square, and tests of proportions (used in the place of Chi Square when the expected value
for some cells used in the analyses was less than five). In some instances I had to conduct multiple ANOVAs without the accompanying MANOVA procedure given that the cell size for some of the comparison groups was less than the number of the dependent variables. When that is the case, it is recommended that MANOVA not be used (Hair, Anderson, Tatham, & Black, 1992). Therefore, multiple ANOVAs were conducted in those instances and a Bonferroni adjustment was made to the significance level to keep the Type I error rate at a minimum. When statistical significance was found in the MANOVA and ANOVA procedures, further analysis in the form of a post hoc test, Fishers LSD, was conducted to make pairwise comparisons.

For all of the analyses, a .10 significance level is used to report the results of statistical tests. It is important that I use a more liberal standard for detecting significance given the fact that this area of research is relatively unexplored and allowing an increase in the number of significant findings provides more information on this topic. Also, given that I constructed the survey instrument and the sample size is relatively small, it seems appropriate to use a more generous significance level.

**Dependent Variables**

Questions on the survey instrument in section III are grouped into four segments: 1) the influence of the research assistantship on the academic career; 2) faculty development; 3) research assistantship in general; and 4) the respondent’s supervising professor of the research assistantship. It is these four groups that serve as the dependent variables of the analyses. The first group of questions consists of two Likert scale items that asked the respondent to agree or disagree with whether or not the research
assistantship was an influential factor in their entering the professoriate, and whether or not the research assistantship prepared them for their duties in the professoriate.

The second segment is entitled "Faculty Development" and consists of four semantic differential items which asked the respondent to rate on a scale of 1 to 4 (1 being poor and 4 being excellent) their response to the question. It is this portion of the survey that will be used to answer the third research question in the structural functionalist paradigm. Respondents who served as research assistants were asked to rate the level of contribution that they felt their research assistantship had on their development in the following areas: 1) being a competent researcher (constructing various quantitative and qualitative research designs, executing statistical analyses, and analyzing qualitative data); 2) writing scholarly works; 3) making formal presentations of research at professional meetings; and 4) training and collaborating with graduate students on research projects.

Segment three entitled "Research Assistantship in General" comprises two semantic differential items regarding the financial stipend and overall value of their research assistantship. There is also one yes/no question asking the respondent, in retrospect, if they would choose their research assistantship again. The final segment, segment four "Supervising Professor," is made up of 10 semantic differential items and five yes/no questions regarding the respondents experience working with the supervising professor of their research assistantship.
Independent Variables

Given the research questions, the independent variables of primary interest are gender, rank, and the interaction effect of these two variables. I also grouped the survey respondents by other independent variables, age and race, to determine other main effects, and the results of these analyses are presented in the sections of this chapter entitled “Additional Group Comparisons.”

The Wilks’ lambda is used as the multivariate test of significance and provides an indication of the differences between or among groups on at least two dependent variables (Hair, Anderson, Tatham, & Black, 1992). The value for the Wilks’ lambda ranges from 0 to 1. As a value would approach 0, this would be an indication that the means of the groups in comparison would be different, and as the value would approach 1 this would indicate that the means are more similar. When there is a significant multivariate value, then further exploration of the significant univariate values is warranted. When multivariate analysis is non-significant, univariate analysis is deemed irrelevant.

I begin the results of the analysis by testing the first and second hypotheses. Next, I provide the results of the analyses by each segment of section III of the survey beginning with segment two given that it addresses the third hypothesis. I then follow with the analysis of segment one, segment three, and segment four. For each segment, first, I restate the survey items and then give the results of the tests of significance followed by the descriptive statistics of the independent variables of interest—gender, rank, and the interaction of gender and rank. I then conclude each segment with a section entitled
“Additional Group Comparisons,” where the responses to the survey items are grouped by independent variables age and race. In that section, I also begin with the results of the significance testing and present descriptive statistics for age and race.

Structural Functionalism Questions

1. What is the frequency distribution of professors of higher education in Research I institutions based on gender and rank?

Table 5.1 — Professors of Higher Education by Gender and Rank

<table>
<thead>
<tr>
<th></th>
<th>Full Professor</th>
<th>Assoc. Professor</th>
<th>Assist. Professor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>33 (75%)</td>
<td>8 (40%)</td>
<td>6 (37.5%)</td>
<td>47 (58.8%)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>11 (25%)</td>
<td>12 (60%)</td>
<td>10 (62.5%)</td>
<td>33 (41.3%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>44</td>
<td>20</td>
<td>16</td>
<td>80</td>
</tr>
</tbody>
</table>

* Percentages may not total 100% due to rounding.

Above, Table 5.1 shows the frequency distribution of professors of higher education stratified by gender and rank who were sampled from Research I institutions. As noted in chapter 4, 47 (58.8%) men and 33 (41.3%) women made up the entire sample. Overall, there were 44 full professors (55%), 20 associate professors (25%), and 16 assistant professors (20%).

Thirty-three full professors were men (75%), making up the largest group in the sample, while 11 (25%) were women. This resulted in a total of 44 full professors, comprising 55% of the sample. At the associate professor rank, there were eight (40%) men and 12 (60%) women, with women associate professors constituting the second largest group in the sample. In aggregate, associate professors were 25% of the sample.
Assistant professors made up 20.0% of the sample, with six men (37.5%) and 10 women (62.5%).

The majority of men in the sample were found in the full professor rank (70.2%), while 17% of the men were associate professors and 12.8% were assistant professors. Women were fairly equally distributed in the various ranks of the professoriate with 33.3% at the full professor level, 36.4% at the associate level, and 30.3% at the assistant level.

The results of a Chi Square test of independence reveal that there are significant differences among the distributions of men and women in the various ranks of the professoriate, $\chi^2 (2, n = 80) = 10.68, p < .10$. It appears that while women may represent a majority at the assistant and associate professor ranks, accounting for 62.5% and 60% respectively, the same cannot be said at the full professor rank where women account for only 25% of this particular group. Therefore, Null Hypothesis 1 is rejected. This finding is similar to findings of other studies (Blum, 1991; Chliwniak, 1997; Schneider, 1998) mentioned in Chapter Three which note that for all disciplines, women are underrepresented at the ranks of full professor.

2. What is the frequency distribution of professors of higher education in Research I institutions who served as research assistants during their graduate education?

Table 5.2 shown above presents the percentages of sample respondents who served as a research assistant during their graduate education. Fifty-eight percent of the sample served as a research assistant at some point during their graduate education, while
Table 5.2 — Professors of Higher Education who held Research Assistantships

<table>
<thead>
<tr>
<th></th>
<th>Research Assistant</th>
<th>Not a Research Assistant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>27 (57.4%)</td>
<td>20 (58.8%)</td>
<td>47 (58.0%)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>20 (42.6%)</td>
<td>14 (41.2%)</td>
<td>34 (42.0%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>47</td>
<td>34</td>
<td>81 (100%)</td>
</tr>
</tbody>
</table>

42% did not. As noted in the previous chapter, 58% of the sample was comprised of men (47 out of 81 individuals), and 42% (34 out of 81) were women. Interestingly, the percentages of men and women who served as research assistants nearly parallels the overall sample percentages by gender. Twenty of the 34 individuals who were not research assistants were men (58.8%), and 14 (41.1%) were women. The results of a Chi Square test indicate that there are no significant differences in the distributions of men and women who either served or did not serve as a research assistant, $\chi^2 (1, n = 81) = .02, p > .10$. Therefore, Null Hypothesis 2 is not rejected.

Table 5.3 below provides a more thorough indication of the number of research assistantships that survey respondents reported that they held throughout their graduate education. Nineteen men reported that they held only one research assistantship while eight noted that they had at least two research assistantships. Ten women reported that they had only one research assistantship; equally so, ten other women noted that they held at least two research assistantship appointments. The number of assistantships that survey respondents held was of particular interest in this research given the literature had
numberous references to the fact that men, as compared to women, more often served as research assistants. One of my goals in this research was to determine if this was also true for individuals who currently serve the faculties of higher education programs. Once again, the results of a Chi Square test indicate that there was not a significant difference in the distribution of the number of research assistantships for men versus women, $\chi^2 (2, n = 80) = 2.018, p > .10$. The third research question in the structural functionalism paradigm is discussed below in segment two of the survey, entitled “Faculty Development.”

**Segment Two — Faculty Development**

This segment of questions consisted of semantic differential items, where on a scale of 1 to 4 (1 being poor and 4 being excellent), respondents who served as research assistants were asked the following:

Please rate the level of contribution that you feel your research assistantship had on your development in the following areas:

---

15 Given that segment two addresses the third hypothesis, I have chosen to present it first followed by segment one, segment three, and segment four.

79
3.1: Being a competent researcher (constructing various quantitative and qualitative research designs, executing statistical analyses, and analyzing qualitative data)
3.2: Writing scholarly works
3.3: Making formal presentations of research at professional meetings
3.4: Training and collaborating with graduate students on research projects.

It is these four areas that I have termed "faculty development" and serve as a point of interest for the third research question in the structural functionalist paradigm, stated as follows:

3. How do faculty of higher education programs (who served as research assistants) in Research I institutions differ in their assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher?

**Multivariate Test for Significance**

When MANOVA was run on the second group of dependent variables, the results of the analysis did not yield any significant multivariate effects for the independent variables of interest—gender [Wilks’ lambda = .98, $F(4,41) = .23, p = .92$], rank [Wilks’ lambda = .81, $F(8,78) = 1.08, p = .39$], and the interaction of those two variables [Wilks’ lambda = .90, $F(8,72) = .47, p = .87$]. Therefore, Null Hypothesis 3 is not rejected and it is concluded that there are no differences in the various groups’ assessment (based on
gender, rank, and the interaction of gender and rank) of the contribution of the research assistantship to their development as a researcher.

**Descriptive Statistics of Segment Two Items**

Table 5.4 — Mean Scores to Segment Two Items by Gender

<table>
<thead>
<tr>
<th>Item</th>
<th>X for Men (n=27)</th>
<th>X for Women (n=19)</th>
<th>Overall X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.3</td>
<td>3.0</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.4</td>
<td>2.8</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.5</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Q3.6</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Research assistants were asked to rate the level of contribution that they felt that their research assistantship had on their development in the following areas:

- Q3.3 - being a competent researcher
- Q3.4 - writing scholarly works
- Q3.5 - making formal presentations of research at professional meetings
- Q3.6 - training and collaborating with graduate students on research projects

(1 = poor, 2 = fair, 3 = good, 4 = excellent)

Approximately 70% of the men in the sample, as compared to 75% of the women, rated their research assistantship as either "good" or "excellent" in the level of contribution that it had on their development as a competent researcher. Approximately 67% of the men reported that their research assistantship had either a "good" or "excellent" contribution to their ability to write scholarly works. Similarly, 68.4% of the women reported the same. Men and women had very similar responses to items 3.5 and 3.6 as indicated by their identical means presented in Table 5.4.

The mean scores for the various ranks of the professoriate to the various items in segment two “Faculty Development” are presented in Table 5.5. One of the greatest differences in means is on item 3.5 between full professors and assistant professors. By
Table 5.5 — Mean Scores to Segment Two Items by Rank

<table>
<thead>
<tr>
<th>Item</th>
<th>Full $\bar{x}$ (n=21)</th>
<th>Assoc. $\bar{x}$ (n=13)</th>
<th>Assist. $\bar{x}$ (n=11)</th>
<th>Overall $\bar{x}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.3</td>
<td>2.8</td>
<td>3.2</td>
<td>3.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.4</td>
<td>2.7</td>
<td>3.0</td>
<td>3.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.5</td>
<td>2.2</td>
<td>2.7</td>
<td>3.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Q3.6</td>
<td>2.4</td>
<td>2.3</td>
<td>3.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Research assistants were asked to rate the level of contribution that they felt that their research assistantship had on their development in the following areas:
Q3.3 - being a competent researcher
Q3.4 - writing scholarly works
Q3.5 - making formal presentations of research at professional meetings
Q3.6 - training and collaborating with graduate students on research projects
(1 = poor, 2 = fair, 3 = good, 4 = excellent)

examining the responses to this item, it is evident that assistant professors reportedly had more opportunities to develop their skills as a researcher by presenting their research at professional meetings and conferences than did full professors when they were in graduate school. This accounts for assistant professors’ higher rating of this area to their development. Moreover, the overall increase in scores on all items when comparing full professors to associate professors and assistant professors (with the exception between associate professors and full professors on item 3.6) may be indicative of increased opportunities in more recent academic training through research assistantships for socialization and preparation for the role in the professoriate.

Table 5.6 gives the mean scores to the various items in the “faculty development” section by the interaction of gender and rank. Interestingly, women full professors had the lowest rating of the research assistantship’s contribution to their being a competent researcher with a mean score of 2.6, while women assistant professors had the highest
Table 5.6 — Mean Scores to Segment Two Items by Gender and Rank

<table>
<thead>
<tr>
<th>Gender &amp; Rank</th>
<th>n</th>
<th>Q3.3</th>
<th>Q3.4</th>
<th>Q3.5</th>
<th>Q3.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men Full Professor</td>
<td>16</td>
<td>2.9</td>
<td>2.7</td>
<td>2.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Men Associate Professor</td>
<td>6</td>
<td>3.3</td>
<td>3.2</td>
<td>3.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Men Assistant Professor</td>
<td>5</td>
<td>3.2</td>
<td>2.8</td>
<td>3.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Women Full Professor</td>
<td>5</td>
<td>2.6</td>
<td>2.8</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Women Associate Professor</td>
<td>7</td>
<td>3.1</td>
<td>2.9</td>
<td>2.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Women Assistant Professor</td>
<td>6</td>
<td>3.7</td>
<td>3.3</td>
<td>3.0</td>
<td>3.2</td>
</tr>
<tr>
<td><strong>Entire Sample</strong></td>
<td>45</td>
<td>3.1</td>
<td>2.9</td>
<td>2.6</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Research assistants were asked to rate the level of contribution that they felt that their research assistantship had on their development in the following areas:
- Q3.3 - being a competent researcher
- Q3.4 - writing scholarly works
- Q3.5 - making formal presentations of research at professional meetings
- Q3.6 - training and collaborating with graduate students on research projects
(1 = poor, 2 = fair, 3 = good, 4 = excellent)

rating at 3.7. All of the women assistant professors reported that their research assistantship was either “good” or “excellent” when it came to the contribution that this experience had on their development as a competent researcher. Men associate professors and women assistant professors had the highest mean score to item 3.4 ( \( \bar{x} = 3.2 \) and \( \bar{x} = 3.3 \), respectively) regarding their development in writing scholarly works. Men assistant professors had the highest rating on the level of contribution that their research assistantship had on their ability to make formal presentations of research at professional meetings ( \( \bar{x} = 3.4 \)), while women assistant professors and men associate professors also had a high mean rating to this item at 3.0. Similarly, men and women assistant professors had the highest rating on the level of contribution that their research assistantship had on their ability to train and collaborate with graduate students on research projects.
Additional Group Comparisons

Multivariate Test for Significance

The results of MANOVA revealed significance in responses on the items in segment two using age [Wilks’ lambda = .55, $F(16,116) = 1.60, p = .08$] and race [Wilks’ lambda = .81, $F(4,40) = 2.32, p = .07$] as the independent variables. Therefore, the third null hypothesis would be rejected in both cases, and it would be concluded that there are significant differences among the various age groups, and between Caucasians and minorities, in their assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher.

Univariate Tests for Significance

Age

Both items 3.3 [$F(4,41) = 2.10, p < .10$] and 3.5 [$F(4,41) = 2.14, p < .10$] had significant univariate values indicating a significant difference among the various age groups of the sample on these two items. In Table 5.7, the mean scores for each age group is reported. The results of the post hoc tests on item 3.3 revealed that the mean score for the 50-59 age group is significantly different from the mean scores of all the other four age groups given that the 50-59 age group ranked this item considerably lower than other groups. Interestingly, the oldest group in the sample, age 60 and over, had the highest rating on item 3.3 ( $\bar{x} = 3.6$), yet the 50-59 age group had the lowest mean rating for this item ( $\bar{x} = 2.7$). Given that most of the full professors are in the 50-59 age group (54.5%), the low overall mean for full professors ( $\bar{x} = 2.8$) is a likely result of this.
Table 5.7 — Mean Scores to Segment Two Items by Age

<table>
<thead>
<tr>
<th>Item</th>
<th>20-29 (n=4)</th>
<th>30-39 (n=7)</th>
<th>40-49 (n=12)</th>
<th>50-59 (n=18)</th>
<th>60+ (n=5)</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.3</td>
<td>3.5</td>
<td>3.4</td>
<td>3.2</td>
<td>2.7</td>
<td>3.6</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.4</td>
<td>3.3</td>
<td>3.0</td>
<td>2.9</td>
<td>2.8</td>
<td>2.6</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.5</td>
<td>4.0</td>
<td>2.7</td>
<td>2.8</td>
<td>2.2</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Q3.6</td>
<td>3.3</td>
<td>2.9</td>
<td>2.3</td>
<td>2.2</td>
<td>2.8</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Research assistants were asked to rate the level of contribution that they felt that their research assistantship had on their development in the following areas:

- Q3.3 - being a competent researcher
- Q3.4 - writing scholarly works
- Q3.5 - making formal presentations of research at professional meetings
- Q3.6 - training and collaborating with graduate students on research projects

(1 = poor, 2 = fair, 3 = good, 4 = excellent)

Overall, 72.3% of the respondents gave item 3.3 either a “good” or “excellent” rating, where 27.7% indicated that their research assistantship was either a “fair” (23.4%) or “poor” (4.3%) experience at preparing them to be a competent researcher. All of the 20-29 year old respondents gave either a “good” or “excellent” rating to this item, while all but one of the 30-39 year old group did the same (this individual gave their research assistantship a “fair” rating on this item). Seventy-five percent of the 40-49 year old respondents gave either a “good” or “excellent” rating to item 3.3, yet 25% of this group gave it a “fair” rating. The majority (42.1%) of the 50-59 age group gave this item a “good” rating, while only 15.8% gave it an “excellent” rating and 31.6% gave it a “fair” rating. This group was the only one to indicate that their research assistantship was poor (10.5%) in regard to the level of contribution that it had on their development as a competent researcher. As noted earlier, the group age 60 and over, had the highest mean
response on this item, with 80% giving this item an "excellent" rating, and only 20% giving it a "fair" rating.

The results of the univariate analysis also revealed significant differences in the responses of the various age groups on item 3.5 which asked respondents to rate the level of contribution that their research assistantship had on their development in the area of presenting research at professional meetings and conferences \[F (4, 41) = 2.14, p < .10\]. The results of the post hoc tests revealed that the mean score of the 20-29 year old group is significantly different from mean scores of the other four age groups. The 20-29 age group has a mean score of 4.0 on item 3.5 while the mean responses for the other groups are significantly lower. The mean of 4.0 for the 20-29 group indicates that all of the individuals in that group gave an "excellent" rating to this item. In the 30-39 year old group, 28.6% responded "excellent," 28.6% responded "good," and 28.6% responded "fair" to this particular item. Only 14.3% of the respondents in the 30-39 year old age group responded that their research assistantship was "poor" when it came to preparing them to make formal presentations of research at professional meetings.

As the age of respondents increases, so does the frequency of responses in the "poor" category rating of this item. Approximately 33% of the 40-49 year olds, 27.8% of the 50-59 year olds, and 40% of the group age 60 and over, all indicated that their research assistantship experience was "poor" in this area associated with faculty development. For the 40-49 year old group, 66.7% of the respondents gave either an "excellent" (41.7%) or a "good" (25%) rating to this item, while no individuals in this group rated their experience "fair." The majority of the 50-59 year old respondents
(44.4%) gave their research assistantship experience a “fair” rating, while only 27.7% gave it either a “good” (11.1%) or “excellent” (16.7%) rating in this regard. For the group age 60 and over, only 20% of the respondents gave this item a “good” rating, while the remaining 40% rated it as “excellent.” Overall, 52.2% of the sample reported that their research assistantship was either “good” (17.4%) or “excellent” (34.8%) in regard to their development on making formal presentations of research at professional meetings, while 47.8% indicated a “poor” (26.1%) or “fair” (21.7%) rating (equaling a 2.6 mean score).

The 20-29 year-old age group gave either “good” or “excellent” ratings to all of the items in the “faculty development” section, thus accounting for their relatively high mean scores to all of these items as shown in Table 5.7. The 30-39 year-old age group gave, on the average, “good” ratings to all of the items in this section, noting that the research assistantship was best rated for its level of contribution to their development as a competent researcher. On the average, the 40-49 year-old group gave “good” ratings to all the items in this particular segment, with the exception of the last item regarding the level of contribution that their research assistantship had on their development to train and collaborate with graduate students on research projects. For that item, the 40-49 year-old group gave, on the average, a “fair” rating. Similarly, the 50-59 year-old age group, gave “good” ratings to the contribution of the research assistantship to their becoming a competent researcher and writing scholarly works, but they assigned a “fair” rating to items 3.5 and 3.6, their research assistantship’s contribution to their ability to make formal presentations of research and training and collaborating with graduate
students on research projects, respectively. The eldest group, age 60 and over, gave an average rating of “excellent” to item 3.3, and “good” ratings to the rest of the items in this segment.

Race

As was the case with age, the results of the univariate analysis for segment two using race as an independent variable yielded significant differences in responses for item 3.3, \( F(1, 43) = 4.10, p < .10 \) and item 3.5 \( F(1, 43) = 4.52, p < .10 \). The mean scores of Caucasians and minorities are presented below in Table 5.8.

Table 5.8 — Mean Scores to Segment Two Items by Race

<table>
<thead>
<tr>
<th>Variable</th>
<th>Caucasian Mean (n=37)</th>
<th>Minority Mean (n=8)</th>
<th>Overall Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.3</td>
<td>2.9</td>
<td>3.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.4</td>
<td>2.8</td>
<td>3.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.5</td>
<td>2.4</td>
<td>3.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Q3.6</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Research assistants were asked to rate the level of contribution that they felt that their research assistantship had on their development in the following areas:

Q3.3 - being a competent researcher
Q3.4 - writing scholarly works
Q3.5 - making formal presentations of research at professional meetings
Q3.6 - training and collaborating with graduate students on research projects

(1 = poor, 2 = fair, 3 = good, 4 = excellent)

The first semantic differential item, item 3.3, asked respondents to rate the level of contribution that they felt their research assistantship had on their becoming a competent researcher. Minorities had a higher mean score (\( \bar{x} = 3.6 \)) on this item, while Caucasians on the average ranked it lower at 2.9. Approximately 38% of the minorities responded that the research assistantship was a “good” experience in preparing them to be a
competent researcher, while 62.5% rated it as excellent. Five percent of Caucasians said that their research assistantship was a "poor" preparation in this area, while 27.0% responded that it was "fair." The larger percentages, 35.6% and 37.8%, of Caucasians replied that this experience was either "good" or "excellent," respectively. In other words, minorities were more likely to respond that the research assistantship experience was "excellent" in terms of preparing them to be a competent researcher, while Caucasians reported that the research assistantship, on the average, was a "good" experience in this regard. On the average for the entire sample, the research assistantship experience was rated "good" (value of 3) for this particular variable.

The other significant semantic differential item was item 3.5 that asked respondents to rate the level of contribution that the research assistantship experience had on their ability to make formal presentations of research at professional meetings. The average response for Caucasian respondents was 2.4 (fair), while the average response for minorities was 3.4 (good). When examining the descriptive statistics for this variable, 56.7% of the Caucasians said that their research assistantship was either "poor" or "fair" when it came to preparing them to make formal presentations of research at professional conferences or meetings. Also, approximately 43% of Caucasians responded that it was either "good" or "excellent." Approximately 88% of minorities in the sample reported that their research assistantship experience was either "good" or "excellent" in this area of faculty development, yet 12.5% rated it as "poor." Interestingly, with both items that were found to be significantly different between Caucasians and minorities, items 3.3 and 3.5, it appears that for minorities the research assistantship appears to be a more valuable
experience at preparing individuals to become competent researchers and to be able to make presentations of research.

All of the minorities gave either a “good” or “excellent” rating to the role of the research assistantship on their being a competent researcher, while 67.5% of Caucasians gave the same ratings to this particular item. Minorities also had a higher mean response to item 3.4, and there was an entire one-point difference between Caucasians’ and minorities’ mean scores to item 3.5. Minorities felt that their research assistantship experience was more integral in their development to make formal presentations of research at professional meetings than did Caucasians. Both minorities and Caucasians had similar responses to the level of contribution that their research assistantship had on their ability to train and collaborate with graduate students on research projects.

Segment One — The Influence of the Research Assistantship on the Academic Career

As noted earlier in the chapter, the first segment of questions in section III were Likert scale items (ranging from 1 being “strongly agree” to 5 being “strongly disagree”) that asked the following:

3.1: The research assistantship was a very influential factor in my entering the professoriate.

3.2: The research assistantship prepared me for duties required in the professoriate.
Multivariate Test for Significance

The MANOVA on the first group of variables yielded marginally significant multivariate effects only for gender [Wilks’ lambda = .89, $F(2,44) = 2.62, p = .08$]. The other independent variables — rank [Wilks’ lambda = .91, $F(4,84) = .99, p = .42$] and the interaction of gender and rank [Wilks’ lambda = .96, $F(4,78) = .37, p = .83$] — proved to be non-significant.

Univariate Test for Significance

Gender

The mean scores to items 3.1 and 3.2 by men and women are presented in Table 5.9. Only for item 3.1, women ranked their research assistantship as influential in their decision to enter the professoriate significantly different from how men ranked this item [$F(1, 45) = 3.92, p < .10$]. Women were more likely to agree with the statement in item 3.1 on how the research assistantship was a very influential role in their entering the professoriate.

Men had a mean score of 2.3 on item 3.1, while women tended to agree with this statement more often, giving them a mean score of 1.6. No woman disagreed with the statement in item 3.1, however, 33.3% of the men did. Fifteen percent of the women chose “neutral” for this item, while no men selected this particular choice. Therefore, women felt more strongly about how their research assistantship influenced their decision to enter the professoriate. Overall, 74.5% of the survey respondents agreed (either “strongly agree” or “agree”) with the statement in item 3.1 — of this percentage, 38.3% were men and 36.2% were women.
Table 5.9 — Mean Scores to Segment One Items by Gender

<table>
<thead>
<tr>
<th>Variable</th>
<th>( \bar{x} ) for Men (n=27)</th>
<th>( \bar{x} ) for Women (n=20)</th>
<th>Overall ( \bar{x} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.1</td>
<td>2.3</td>
<td>1.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Q3.2</td>
<td>2.0</td>
<td>2.1</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Question 3.1 - The research assistantship was a very influential factor in my entering the professoriate.
Question 3.2 - The research assistantship prepared me for duties required in the professoriate.
(1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree)

For item 3.2, there is little variation in the scores by gender, as women's mean score is 2.1, and men agreed with this statement more often, producing a 2.0 mean. Approximately 81% of the men agreed that the research assistantship prepared them for duties in their faculty position, while fewer of the women (70%) felt the same. Overall, 76% of the respondents agreed with the statement in item 3.2. On the average, respondents replied "agree" (value of 2.0) with the both statements.

Descriptive Statistics of Segment One Items

Table 5.10 — Mean Scores to Segment One Items by Rank

<table>
<thead>
<tr>
<th>Variable</th>
<th>Full Prof. ( \bar{x} ) (n=22)</th>
<th>Assoc. Prof. ( \bar{x} ) (n=13)</th>
<th>Asst. Prof. ( \bar{x} ) (n=11)</th>
<th>Overall ( \bar{x} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.1</td>
<td>2.4</td>
<td>1.9</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Q3.2</td>
<td>2.2</td>
<td>1.8</td>
<td>1.7</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Question 3.1 - The research assistantship was a very influential factor in my entering the professoriate.
Question 3.2 - The research assistantship prepared me for duties required in the professoriate.
(1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree)

The mean responses of the various ranks of the professoriate to the items in segment one are presented in Table 5.10. All of the assistant professors agreed that the research assistantship was a very influential factor in their entering the professoriate, thus accounting for their high rating \( (\bar{x} = 1.5) \) to this item. Fifteen percent of the associate professors disagreed with the statement in this particular item, while approximately 70%
agreed. On the average, associate professors agreed with this item. Approximately 64% of full professors agreed that their research assistantship was an influential factor in their entering the professoriate, while 31.8% disagreed. Full professors agreed with item, just not as frequently as did associate professors and assistant professors.

For item 3.2, 91% of the assistant professors felt that their research assistantship prepared them for the duties required in their faculty positions, while 69.2% of the associate professors felt the same. Approximately 77% of the full professors agreed with item 3.2, yet 18% of this rank did not feel their research assistantship prepared them for duties in the professoriate.

**Table 5.11 — Mean Scores to Segment One Items by Gender and Rank**

<table>
<thead>
<tr>
<th>Gender &amp; Rank</th>
<th>n</th>
<th>Item 3.1 Mean</th>
<th>Item 3.2 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men Full Professor</strong></td>
<td>16</td>
<td>2.6</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Men Associate Professor</strong></td>
<td>6</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Men Assistant Professor</strong></td>
<td>5</td>
<td>1.6</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Women Full Professor</strong></td>
<td>6</td>
<td>1.7</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Women Associate Professor</strong></td>
<td>7</td>
<td>1.7</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Women Assistant Professor</strong></td>
<td>6</td>
<td>1.3</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**Question 3.1** - The research assistantship was a very influential factor in my entering the professoriate.  
**Question 3.2** - The research assistantship prepared me for duties required in the professoriate.  
(1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree)

Table 5.11 shows the mean scores to items 3.1 and 3.2 using the interaction of gender and rank. As shown in the table, there was a one-point difference in the mean responses of men full professors and men assistant professors (2.6 - 1.6 = 1.0) on item 3.1. As the overall trend between full professors and assistant professors suggests, men assistant professors, as compared to men full professors, felt more strongly about how
their research assistantship influenced their decision to enter academe upon the completion of graduate school. While men associate professors also differ from men assistant professors in their responses to this item, the difference is not as great as between men full professors and men assistant professors.

A similar trend is noted among women’s various groups of the professoriate. Women full professors and women associate professors had identical mean responses ($x = 1.7$) to item 3.1, while women assistant professors more often “strongly agreed” with the statement ($x = 1.3$) regarding the research assistantship being an influential factor in their entering the professoriate.

When examining Table 5.11, men associate professors more often strongly agreed with the statement regarding how the research assistantship prepared them for duties required in the professoriate than did men full professors or men assistant professors. For women, assistant professors were more likely to agree with the statement in item 3.2 than were associate professors or full professors. Interestingly, all of the women’s rankings for the items in segment one are higher than men’s rankings.

## Additional Group Comparisons

### Multivariate Test for Significance

The results of the MANOVA for the additional group comparisons on the first group of variables did not indicate any significant multivariate effects for race [Wilks’ lambda = .99, $F(2, 42) = .22, p = .80$] or age [Wilks’ lambda = .86, $F(8, 82) = .80, p = .60$].

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Descriptive Statistics of Segment One Items

Table 5.12 — Mean Scores to Segment One Items by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>Q3.1 Mean</th>
<th>Q3.2 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29 years</td>
<td>4</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>30 - 39 years</td>
<td>7</td>
<td>1.4</td>
<td>1.9</td>
</tr>
<tr>
<td>40 - 49 years</td>
<td>12</td>
<td>2.3</td>
<td>2.0</td>
</tr>
<tr>
<td>50 - 59 years</td>
<td>19</td>
<td>2.3</td>
<td>2.1</td>
</tr>
<tr>
<td>60 + years</td>
<td>5</td>
<td>2.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Entire Sample</td>
<td>47</td>
<td>2.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Question 3.1 - The research assistantship was a very influential factor in my entering the professoriate.

Question 3.2 - The research assistantship prepared me for duties required in the professoriate.

(1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree)

Table 5.12 shows the mean scores to items 3.1 and 3.2 of the various age groups in the sample. Younger respondents (ages 20-39) more often “strongly agreed” with the statement regarding the research assistantship as an influential factor in their entering the professoriate. Older respondents agreed with the statement, just not as frequently as did younger survey respondents.

Once again, the youngest group in the sample strongly agreed with the statement (item 3.2), “The research assistantship prepared me for duties required in the professoriate.” While the next three age groups — 30-39, 40-49, and 50-59 — on the average agreed with the statement, the oldest group, ages 60 and over, did not agree as much as the other age groups. It is plausible that when the age 60 and over age group held their research assistantships, activities were not geared toward socialization and preparation for the role in the professoriate as much as they have been in the recent past.

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Table 5.13 — Mean Scores to Segment One Items by Race

<table>
<thead>
<tr>
<th>Variable</th>
<th>Caucasian $\bar{x}$ (n=37)</th>
<th>Minority $\bar{x}$ (n=8)</th>
<th>Overall $\bar{x}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.1</td>
<td>2.1</td>
<td>1.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Q3.2</td>
<td>2.1</td>
<td>1.9</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Question 3.1 - The research assistantship was a very influential factor in my entering the professoriate.
Question 3.2 - The research assistantship prepared me for duties required in the professoriate.
(1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree)

As indicated in Table 5.13, Caucasians and minorities were similar in their responses to item 3.2, yet they differed somewhat in their responses to item 3.1. The mean response for Caucasians on items 3.1 and 3.2 was 2.1, while minorities on the average “agreed” with both statements ($\bar{x}$ = 1.8, $\bar{x}$ = 1.9, for items 3.1 and 3.2 respectively) as well. For item 3.1, 88% of the minorities agreed with this statement, while 12.5% disagreed. Twenty-seven Caucasians (73%) agreed that the research assistantship was a very influential factor in their entering the professoriate, while eight individuals (22%) in this group disagreed. For item 3.2, 75% of the minorities agreed that the research assistantship prepared them for duties required in their faculty position, with only one person in this group disagreeing. Similarly, 76% of the Caucasians agreed with item 3.2, yet 14.5% disagreed. One minority and four Caucasians chose “neutral” for item 3.2.

Segment Three — Research Assistantship in General

Segment three of the survey consisted of a total of three items which were general questions about the research assistantship experience. Two questions were semantic differential items which asked respondents to rate (on a scale of 1 to 4, 1 being poor and 4 being excellent) the following:

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3.7: The financial stipend provided by the research assistantship

3.8: The overall value of the research assistantship

Additionally, there was also one yes/no question which read as follows:

3.9: If you had to do it all over again, would you choose a research assistantship?  O  Yes  O  No

Multivariate Test for Significance

The results of the MANOVA run on section three revealed significant differences in responses based on rank [Wilks’ lambda = .83, F(4,84) = 1.96, p = .10] and the interaction of rank and gender [Wilks’ lambda = .64, F(10,78) = 1.90, p = .05]. The only other independent variable of interest, gender, did not produce significant results.

Univariate Tests for Significance

Rank

The various ranks of the professoriate had significantly different mean scores to item 3.7 [F(2, 43) = 3.19, p < .10] and item 3.8 [F(2, 43) = 3.35, p < .10]. Post hoc tests conducted on the data revealed that the significant differences are between full professors and assistant professors’ mean scores on both items 3.7 and 3.8, where the latter group has a greater mean score than does the former. Associate professors’ mean score does not differ significantly from either other group’s.

In Table 5.14 when comparing responses of professors, associate professors, and assistant professors, the value of the financial stipend and overall value of the research assistantship were substantially higher. For item 3.7, this is possible because stipends for assistantships have increased over time. None of the assistant professors rated the
financial stipends of their research assistantships as “poor” or “fair,” while 30.8% of the associate professors and 50% of the full professors gave these ratings. Once again, all of the assistant professors reported that the overall value of their research assistantship (item 3.8) was either “good” or “excellent,” while 76.9% of the associate professors and 68.2% of the full professors responded the same.

**Gender and Rank**

The results of the univariate analysis indicate that the various ranks of the professoriate, stratified by gender, differ significantly in their responses to the item 3.7 \(F(5, 40) = 2.51, p < .10\).

As noted earlier when examining the differences in responses by rank regarding the financial stipend of research assistantships, ratings by full professors are lower as compared to the ratings by assistant professors. However, the same is not true when looking at the interaction effects of rank and gender shown in Table 5.15. Men associate professors and full women professors gave the lowest rating to the financial stipend provided by their research assistantship. Men assistant professors and women associate professors reported that, on the average, the stipend that they received for their assistantship was “excellent.” Women and men assistant professors were the two groups
Table 5.15 — Mean Scores to Segment Three Items by Gender and Rank

<table>
<thead>
<tr>
<th>Gender and Rank</th>
<th>n</th>
<th>Mean for 3.7</th>
<th>Mean for 3.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men Full Professor</td>
<td>16</td>
<td>2.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Men Associate Professor</td>
<td>6</td>
<td>2.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Men Assistant Professor</td>
<td>5</td>
<td>3.6</td>
<td>3.8</td>
</tr>
<tr>
<td>Women Full Professor</td>
<td>6</td>
<td>2.3</td>
<td>3.3</td>
</tr>
<tr>
<td>Women Associate Professor</td>
<td>7</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Women Assistant Professor</td>
<td>6</td>
<td>3.3</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Overall: 46 2.9 3.2

Question 3.7 - Financial stipend provided by the assistantship.
Question 3.8 - Overall value of the research assistantship.
(1 = poor, 2 = fair, 3 = good, 4 = excellent)

with the highest rating for the overall value of the research assistantship (\( \bar{x} = 3.8 \) for both groups). Not surprisingly, all members of these two groups gave either a “good” or “excellent” ranking to this item.

Table 5.16 — Post Hoc Test Results for Item 3.7 by Gender and Rank

<table>
<thead>
<tr>
<th>Gender and Rank</th>
<th>Mean for Q3.7</th>
<th>Mean Full Professor</th>
<th>Mean Assoc. Professor</th>
<th>Mean Asst. Professor</th>
<th>Women Full Prof.</th>
<th>Women Assoc. Prof</th>
</tr>
</thead>
<tbody>
<tr>
<td>Σ Professor</td>
<td>2.6</td>
<td>.30</td>
<td>-1.0*</td>
<td>-1.3*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Σ Asc. Prof</td>
<td>2.3</td>
<td>.00</td>
<td>1.3*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Σ Asst. Prof</td>
<td>3.6</td>
<td>-1.0*</td>
<td>-1.3*</td>
<td>.00</td>
<td>-1.3*</td>
<td></td>
</tr>
<tr>
<td>η Professor</td>
<td>2.3</td>
<td>.30</td>
<td>.00</td>
<td>1.3*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>η Asc. Prof</td>
<td>3.6</td>
<td>-1.0*</td>
<td>.00</td>
<td>-1.3*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>η Asst. Prof</td>
<td>3.3</td>
<td>-1.0*</td>
<td>.00</td>
<td>-1.0*</td>
<td>.3</td>
<td></td>
</tr>
</tbody>
</table>

* Difference between means is significant at the .10 level.

Table 5.16 shows the results of the post hoc tests conducted on item 3.7 to make pairwise comparisons between the various ranks of the professoriate stratified by gender.

The values displayed in the chart indicate a mean difference between the comparison
groups. The mean scores for men full professors and men assistant professors are significantly different from one another, where the latter group had a much higher mean to this particular item than did the former. Likewise, men full professors’ responses differ significantly from women associate professors’ responses since women associate professors’ mean score equals that of the men assistant professors. Men associate professors also had a significantly lower mean score to this item as compared to men assistant professors, women associate professors, and women assistant professors. Men assistant professors and women full professors also had significantly different responses on this item, in that men assistant professors had a higher mean score (3.6) as compared to the women full professors (2.3). Women full professors had significantly lower mean scores than those of women associate professors and women assistant professors.

Descriptive Statistics of Items 3.7 and 3.8

Table 5.17 — Mean Scores to Items 3.7 and 3.8 by Gender

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean for Men (n=27)</th>
<th>Mean for Women (n=20)</th>
<th>Sample Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.7</td>
<td>2.7</td>
<td>3.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.8</td>
<td>3.0</td>
<td>3.5</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Question 3.7 - Financial stipend provided by the assistantship.
Question 3.8 - Overall value of the research assistantship.
(1 = poor, 2 = fair, 3 = good, 4 = excellent)

Table 5.17 shows the mean scores to the items in segment three by gender. Approximately, 63% of the men and 75% of the women rated the financial stipend provided by the research assistantship as either “good” or “excellent.” When examining the responses of the entire sample on item 3.7, 68.1% gave an “excellent” or “good”
rating to this item, while 31.9% said that their financial stipend was either “poor” or “fair.”

Ninety percent of the women responded that the overall value of their research assistantship was either “good” or “excellent,” while 70.3% of the men responded in the same way. Overall, 78.7% of the sample reported that the overall value of their research assistantship was either “good” or “excellent,” while 21.3% responded that this experience was of either “poor” or “fair” quality.

Additional Group Comparisons

Multivariate Test for Significance

For the additional groups of comparison, the results of the MANOVA run on section three revealed significant differences in responses based on race [Wilks’ lambda = .89, $F(2,42) = 1.96, p = .08$]. However, the multivariate test of significance for age was non-significant [Wilks’ lambda = .85, $F(8,82) = .87, p = .55$].

Univariate Tests for Significance

Race

The univariate analysis reveals that minorities and Caucasians differ significantly in their responses to item 3.8 which asked them to rate the overall value of the research assistantship [$F(1, 43) = 3.74, p < .10$]. Given that the minority mean score is much higher than the Caucasian mean (as shown in Table 5.18), this significant difference is not surprising.

All of the minorities gave either a “good” or “excellent” rating to the overall value of their research assistantship, while 73% of Caucasians responded in that manner. The
Table 5.18 — Mean Scores to Items 3.7 and 3.8 by Race

<table>
<thead>
<tr>
<th>Variable</th>
<th>Caucasian Mean (n=37)</th>
<th>Minority Mean (n=8)</th>
<th>Overall Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.7</td>
<td>2.9</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.8</td>
<td>3.1</td>
<td>3.9</td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Question 3.7 - Financial stipend provided by the assistantship. Question 3.8 - Overall value of the research assistantship. (1 = poor, 2 = fair, 3 = good, 4 = excellent)*

responses to item 3.7 were very similar (subsequently non-significant), with 68% of Caucasians noting that the financial stipend of their research assistantship was either “good” or “excellent” and 75% of minorities noting the same.

Descriptive Statistics of Items 3.7 and 3.8

Table 5.19 — Mean Scores to Items 3.7 and 3.8 by Age

<table>
<thead>
<tr>
<th>Item</th>
<th>20-29 $\bar{x}$</th>
<th>30-39 $\bar{x}$</th>
<th>40-49 $\bar{x}$</th>
<th>50-59 $\bar{x}$</th>
<th>60 + $\bar{x}$</th>
<th>Overall $\bar{x}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=4)</td>
<td>(n=7)</td>
<td>(n=12)</td>
<td>(n=19)</td>
<td>(n=5)</td>
<td>$\bar{x}$</td>
</tr>
<tr>
<td>Q3.7</td>
<td>3.3</td>
<td>3.3</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.8</td>
<td>4.0</td>
<td>3.7</td>
<td>3.3</td>
<td>3.1</td>
<td>2.6</td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Question 3.7 - Financial stipend provided by the assistantship. Question 3.8 - Overall value of the research assistantship. (1 = poor, 2 = fair, 3 = good, 4 = excellent)*

As shown in Table 5.19, when examining the data by age groups, the 20-29 and the 30-39 year old age groups both had a mean score of 3.3 to item 3.7 which asks respondents to rate the financial stipend provided by their research assistantship. Forty to forty-nine year old individuals averaged a 2.8 on this item as did the 50-59 year old group and individuals age 60 and over. For item 3.8, the mean scores decrease as age increases, with the youngest group in the sample averaging a 4.0 rating on this item and the 60 and above age group, a 2.6.

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Item 3.9

The third item in segment three of the survey was item 3.9 which asked the survey respondents the following:

3.9: If you had to do it all over again, would you choose a research assistantship?  ○ Yes  ○ No

Significance Testing

Given that only one individual responded “no” to this item, logically, there will be no significant difference in the responses based on any independent variables. Therefore, no test for significance was conducted, and I have only presented the descriptive statistics by gender.

Descriptive Statistics of Item 3.9

Table 5.20 — Mean Scores to Item 3.9 by Gender

<table>
<thead>
<tr>
<th>Item 3.9</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>26 (96.3%)</td>
<td>1 (3.7%)</td>
<td>27</td>
</tr>
<tr>
<td>Women</td>
<td>19 (100%)</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>1</td>
<td>46</td>
</tr>
</tbody>
</table>

Question 3.9 - If you had to do it all over again, would you choose a research assistantship?

The responses by gender for item 3.9 in Table 5.20 show that all of the respondents (97.8%) indicated that they would choose a research assistantship again, while only one individual, a man, (2.2%) selected “no.”

Segment Four — Supervising Professor

The final segment of questions in section III asked the respondents about their supervising professor in their research assistantship. There were 10 semantic differential
items (1 being poor and 4 being excellent) followed by five yes/no questions which were stated as follows:

3.10: Please rate your interactions with your supervising professor

3.11: Please rate the quality of supervision and socialization that your supervising professor provided

3.12: Please rate the level or frequency for opportunities for collaboration with your supervising professor

3.13: Please rate your supervising professor:
   3.13a: As a scholar
   3.13b: As a model of professional behavior
   3.13c: As a competent researcher
   3.13d: Overall (as a person)

3.14: How do you feel that this person would have rated you:
   3.14a: As a scholar
   3.14b: As a model of professional behavior
   3.14c: As a competent researcher

3.15: Did your research assistantship and/or interactions with your supervising professor change your research interests?
   ○ Yes    ○ No

3.17: Was your supervising professor your academic advisor/major professor as well?
   ○ Yes    ○ No
Multivariate Test for Significance

The results of the MANOVA revealed no significant differences between/among groups based on gender [Wilks’ lambda = .74, $F(10,31) = 1.10$, $p = .39$], and rank [Wilks’ lambda = .46, $F(20,58) = 1.38$, $p = .17$] In some instances, there were significant differences at the univariate level when the multivariate test showed non-significance; however, when this occurs, the univariate significance is irrelevant.

For the interaction of gender and rank on this particular segment, the MANOVA procedure was not an option given that the cell size of some of the groups used in the analysis is smaller than the number of dependent variables. In this case, multiple ANOVAs were conducted with an appropriate Bonferroni adjustment made to the alpha level, altering it from .10 to .01 (the result of .10 divided by 10 given that there are 10 dependent variables in the segment). The results of the multiple ANOVAs indicated that there are no significant differences in the mean scores among the various groups in the gender and rank interaction categories.

The mean scores to the items in segment four are presented in Table 5.21. Approximately 85% of the women responded that they had either “good” or “excellent” interactions with their supervising professor, as compared to approximately 78% of the
men. No women rated their interactions with their supervising professor as “poor,” while 22.2% of the men indicated that this was true of their interactions. For item 3.11, men and women were very similar in their response to this item, with 74% of the men and 68% of the women rating the quality of supervision and socialization that their supervising professor provided as either “good” or “excellent.” Both groups also gave similar responses to item 3.12, with 65% of the women and 69% of the men giving either a “good” or “excellent” rating to the level of opportunities for collaboration with their supervising professor.

For item 3.13a, women had a higher mean score (3.4) than did men (3.1). Eighty percent of the women said that their supervising professor was either a “good” or “excellent” scholar, and the remaining 20% rated their supervising professor as “fair.” No women rated their supervising professor a “poor” scholar. Similarly, 78% of the men reported that their supervising professor was either a “good” or “excellent” scholar, 14.8% said that their supervising professor was a “fair” scholar, and 7.4% noted that their supervising professor was a “poor” scholar. For item 3.13b, men and women were once again very similar in their responses. Seventy-eight percent of the men and 75% of the women said their supervising professor was a “good” or “excellent” model of professional behavior. A higher percentage of women, 80% as compared to 74% of men, rated their supervising professor as a “good” or “excellent” researcher (item 3.13c). No women rated their supervising professor a “poor” researcher, yet 7.4% of the men did.
Descriptive Statistics of Segment Four Items

Table 5.21 — Mean Scores to Segment Four Items by Gender

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean for Men (n=25)</th>
<th>Mean for Women (n=17)</th>
<th>Sample Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.10</td>
<td>3.1</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.11</td>
<td>3.0</td>
<td>3.1</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.12</td>
<td>2.9</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.13a</td>
<td>3.1</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13b</td>
<td>3.1</td>
<td>3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13c</td>
<td>3.0</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13d</td>
<td>3.0</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.14a</td>
<td>2.8</td>
<td>3.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.14b</td>
<td>3.0</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.14c</td>
<td>3.0</td>
<td>3.5</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Q3.10 - Please rate your interactions with your supervising professor.
Q 3.11 - Please rate the quality of supervision and socialization that your supervising professor provided.
Q 3.12 - Please rate the level or frequency for opportunities for collaboration with your supervising professor.
Q3.13a - Please rate your supervising professor as a scholar.
Q3.13b - Please rate your supervising professor as a model of professional behavior.
Q3.13c - Please rate your supervising professor as a competent researcher.
Q3.13d - Please rate your supervising professor overall (as a person).
Q3.14a - How do you feel that this person would have rated you as a scholar.
Q3.14b - How do you feel that this person would have rated you as a model of professional behavior.
Q3.14c - How do you feel that this person would have rated you as a competent researcher.
(1 = poor, 2 = fair, 3 = good, 4 = excellent)

For the next set of items within segment four, respondents were asked their perceptions of how they believe their supervising professor would have rated them in the areas of being a scholar, a model of professional behavior, and a competent researcher. In all three areas, women had a higher mean score than men. As noted in Table 5.21, the mean score for women on item 3.14a (3.4) was higher than the score for men (2.8).

Ninety percent of the women said their supervising professor would have rated them as
either a “good” or “excellent” scholar, while only 77% of the men said that their
supervising professor would have rated them at that level. No women said that their
supervising professor would have rated them a “poor” scholar, yet 23.1% of the men
responded as such to this item. Ten percent of the women said their supervising professor
would have rated them a “fair” scholar, yet no men responded to this item in the same
way.

As in the previous item, 90% of the women responded that their supervising
professor would have rated them either “good” or “excellent” as a model of professional
behavior. Only 10% of the women said their supervising professor would have rated
them as “fair” in this area. Seventy-three percent of the men responded that their
supervising professor would have rated them as either a “good” or “excellent” model of
professional behavior. Approximately 27% of the men said their supervising professor
would have rated them as a “poor” or “fair” model of professional behavior.

Identical responses were reported by both women and men in the last area of how
they felt that their supervising professor would have rated them as a competent researcher
(as compared to their responses on the previous item). Ninety percent of women said
their supervising professor would have rated them as a “good” or “excellent” researcher,
while the remaining 10% said their supervising professor would have rated them “fair.”
No women selected “poor” for their response to this item. Approximately 12% of the
men reported that their supervising professor would have rated them “poor” in this area,
15.4% said they would have been rated “fair,” and the remaining 73.1% said their
supervising professor would have judged them to be either a “good” or “excellent”
researcher. These descriptive statistics reveal that women felt that their supervising professor viewed them more positively, although they do not differ significantly from men's responses.

For item 3.10, all of the assistant professors rated their interactions with their supervising professor as either "good" or "excellent," while 84.6% of the associate professors and 68.2% of the full professors gave similar ratings. On average, the three

Table 5.22 — Mean Scores to Segment Four Items by Rank

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean for Full Professor (n=19)</th>
<th>Mean for Associate Professor (n=11)</th>
<th>Mean for Assistant Professor (n=11)</th>
<th>Overall Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.10</td>
<td>2.9</td>
<td>3.4</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.11</td>
<td>3.0</td>
<td>3.0</td>
<td>3.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.12</td>
<td>2.7</td>
<td>3.2</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.13a</td>
<td>3.2</td>
<td>3.1</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13b</td>
<td>2.9</td>
<td>3.5</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13c</td>
<td>3.0</td>
<td>3.4</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13d</td>
<td>2.9</td>
<td>3.1</td>
<td>3.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.14a</td>
<td>2.9</td>
<td>3.2</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.14b</td>
<td>2.9</td>
<td>3.4</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.14c</td>
<td>3.0</td>
<td>3.3</td>
<td>3.5</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Q3.10 - Please rate your interactions with your supervising professor.
Q3.11 - Please rate the quality of supervision and socialization that your supervising professor provided.
Q3.12 - Please rate the level or frequency for opportunities for collaboration with your supervising professor.
Q3.13a - Please rate your supervising professor as a scholar.
Q3.13b - Please rate your supervising professor as a model of professional behavior.
Q3.13c - Please rate your supervising professor as a competent researcher.
Q3.13d - Please rate your supervising professor overall (as a person).
Q3.14a - How do you feel that this person would have rated you as a scholar.
Q3.14b - How do you feel that this person would have rated you as a model of professional behavior.
Q3.14c - How do you feel that this person would have rated you as a competent researcher.
(1 = poor, 2 = fair, 3 = good, 4 = excellent)
ranks of the professoriate gave similar scores to item 3.11, asking them to rate the quality of supervision and socialization that their supervising professor provided. Associate professors gave the highest rating to the level or frequency for opportunities for collaboration with their supervising professor.

Assistant professors had the highest mean score (\( \bar{x} = 3.5 \)) when asked to rate their supervising professor as a scholar, while associate professors and full professors ranked their supervising professor as a “good” scholar. Assistant and associate professors had identical mean scores (\( \bar{x} = 3.5 \)) for item 3.13b, and full professors ranked their supervising professors at a lower level when judging them on being models of professional behavior. Assistant professors gave higher ratings to their supervising professors than did the other two ranks in areas of being a competent researcher, and overall as a person.

Associate and assistant professors felt the same when asked how they felt their supervising professor would have rated them as a scholar (\( \bar{x} = 3.2 \)). Additionally, assistant professors had the highest mean score on items which asked how they felt that their supervising professors would have rated them as a model of professional behavior and a competent researcher.

The responses to items in segment four by the interaction of gender and rank are presented in Table 5.23. Interestingly, all of the most noteworthy differences in responses to certain items is between men and women associate professors where the former groups’ mean score is lower than that of the latter group. The largest difference in scores is on item 3.14a where respondents were asked to indicate how they felt that their

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supervising professor would have rated them as a scholar. Men associate professors had a much lower mean score (\( \bar{x} = 2.6 \)), than did female associate professors (\( \bar{x} = 3.7 \)).

Women associate professors, as compared to men associate professors, had a higher mean score (\( \bar{x} = 3.7 \) and \( \bar{x} = 3.0 \) respectively) when asked to rate their supervising professor as a competent researcher. The other noteworthy differences are between men and

**Table 5.23 — Mean Scores to Segment Four Items by Gender and Rank**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean for Full Professors (σ, ρ)</th>
<th>Mean for Associate Professors (σ, ρ)</th>
<th>Mean for Assistant Professors (σ, ρ)</th>
<th>Overall Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.10</td>
<td>2.7, 3.3</td>
<td>3.2, 3.5</td>
<td>3.6, 3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.11</td>
<td>2.9, 3.5</td>
<td>3.0, 3.0</td>
<td>3.4, 3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.12</td>
<td>2.7, 2.8</td>
<td>3.0, 3.3</td>
<td>3.2, 2.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.13a</td>
<td>3.1, 3.5</td>
<td>2.8, 3.3</td>
<td>3.6, 3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13b</td>
<td>2.8, 3.3</td>
<td>3.4, 3.5</td>
<td>3.8, 3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13c</td>
<td>2.9, 3.5</td>
<td>3.0, 3.7</td>
<td>3.6, 3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13d</td>
<td>2.9, 2.8</td>
<td>2.8, 3.3</td>
<td>3.4, 3.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.14a</td>
<td>2.9, 3.3</td>
<td>2.6, 3.7</td>
<td>3.0, 3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.14b</td>
<td>2.8, 3.3</td>
<td>3.0, 3.7</td>
<td>3.6, 3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.14c</td>
<td>2.9, 3.3</td>
<td>2.8, 3.7</td>
<td>3.6, 3.5</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Q3.10 - Please rate your interactions with your supervising professor.
Q3.11 - Please rate the quality of supervision and socialization that your supervising professor provided.
Q3.12 - Please rate the level or frequency for opportunities for collaboration with your supervising professor.
Q3.13a - Please rate your supervising professor as a scholar.
Q3.13b - Please rate your supervising professor as a model of professional behavior.
Q3.13c - Please rate your supervising professor as a competent researcher.
Q3.13d - Please rate your supervising professor overall (as a person).
Q3.14a - How do you feel that this person would have rated you as a scholar.
Q3.14b - How do you feel that this person would have rated you as a model of professional behavior.
Q3.14c - How do you feel that this person would have rated you as a competent researcher.
(1 = poor, 2 = fair, 3 = good, 4 = excellent)
women associate professors’ responses as to how they felt that their supervising professor would have rated them as a model of professional behavior and as a competent researcher. For both items, women associate professors had a mean score of 3.7, while men associate professors had a mean score of 3.0 and 2.8 for items 3.14b and 3.14c, respectively.

**Additional Group Comparisons**

**Multivariate Test for Significance**

Once again, the MANOVA procedure was not an option given that the cell size of some of the groups used in the analysis for age and race is smaller than the number of dependent variables. For the multiple age categories, a series of 10 ANOVAs were conducted with an appropriate Bonferonni adjustment made to the significant alpha level, altering it from .10 to .01. The results revealed no significant differences among the groups based on age.

For race, given that there were only two comparison groups, a t-test was conducted to determine whether or not significant differences existed between Caucasians and minorities on the various items in segment four. As with multiple ANOVAs, multiple t-tests require a Bonferonni adjustment to the significance level. The results of the t-tests revealed no significant differences between the mean scores of Caucasians and minorities on any items in segment four.

Table 5.24 presents the varying responses to the items in segment four by the various age groups in the sample. One of the noteworthy differences in responses among the various age groups is on item 3.14b which asked respondents how they felt their
supervising professor of their assistantship would have rated them as a model of professional behavior. The 30-39 age group had a mean score of 3.9 to this item, while the eldest group, age 60 and over, rated this item, on average, at a 2.8 — a 1.1 difference between mean scores.

**Descriptive Statistics of Segment Four Items**

**Table 5.24 — Mean Scores to Segment Four Items by Age**

<table>
<thead>
<tr>
<th>Item</th>
<th>$\bar{x}$ for 20-29</th>
<th>$\bar{x}$ for 30-39</th>
<th>$\bar{x}$ for 40-49</th>
<th>$\bar{x}$ for 50-59</th>
<th>$\bar{x}$ for 60+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=4)</td>
<td>(n=7)</td>
<td>(n=9)</td>
<td>(n=17)</td>
<td>(n=5)</td>
</tr>
<tr>
<td>Q3.10</td>
<td>3.8</td>
<td>3.6</td>
<td>3.2</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3.11</td>
<td>3.3</td>
<td>3.4</td>
<td>3.0</td>
<td>2.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3.12</td>
<td>3.0</td>
<td>3.0</td>
<td>2.8</td>
<td>2.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3.13a</td>
<td>3.5</td>
<td>3.6</td>
<td>3.2</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3.13b</td>
<td>3.5</td>
<td>3.6</td>
<td>3.1</td>
<td>3.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13c</td>
<td>3.8</td>
<td>3.4</td>
<td>3.2</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3.13d</td>
<td>3.3</td>
<td>3.6</td>
<td>2.9</td>
<td>2.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Q3.14a</td>
<td>3.0</td>
<td>3.3</td>
<td>3.2</td>
<td>3.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3.14b</td>
<td>3.3</td>
<td>3.9</td>
<td>3.2</td>
<td>3.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3.14c</td>
<td>3.3</td>
<td>3.7</td>
<td>3.1</td>
<td>3.2</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Q3.10 - Please rate your interactions with your supervising professor.  
Q3.11 - Please rate the quality of supervision and socialization that your supervising professor provided.  
Q3.12 - Please rate the level or frequency for opportunities for collaboration with your supervising professor.  
Q3.13a - Please rate your supervising professor as a scholar.  
Q3.13b - Please rate your supervising professor as a model of professional behavior.  
Q3.13c - Please rate your supervising professor as a competent researcher.  
Q3.13d - Please rate your supervising professor overall (as a person).  
Q3.14a - How do you feel that this person would have rated you as a scholar.  
Q3.14b - How do you feel that this person would have rated you as a model of professional behavior.  
Q3.14c - How do you feel that this person would have rated you as a competent researcher.  
(1 = poor, 2 = fair, 3 = good, 4 = excellent)
The 30-39 year-old group and the 60 and over group also differed substantially in their responses to item 3.14c where they were asked how they felt that their supervising professor would have rated them as a competent researcher. Again, the age 60 and over group had a lower mean score to this item ($\bar{x} = 2.8$), while the 30-39 year-old group had mean score of 3.7. The 20-29 year-old age group and the 60 and over age group had a 1.0 difference between means on items 3.10 and 3.13c, where the former group gave higher ratings to their interactions with their supervising professor and to the rating that they assigned their supervising professor as a competent researcher, respectively.

Table 5.25 — Mean Scores to Segment Four Items by Race

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean for Caucasians (n=34)</th>
<th>Mean for Minorities (n=7)</th>
<th>Overall Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.10</td>
<td>3.1</td>
<td>3.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.11</td>
<td>3.0</td>
<td>3.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.12</td>
<td>2.6</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3.13a</td>
<td>3.1</td>
<td>3.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13b</td>
<td>3.1</td>
<td>3.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13c</td>
<td>3.2</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.13d</td>
<td>3.0</td>
<td>3.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3.14a</td>
<td>3.0</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>Q3.14b</td>
<td>3.1</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Q3.14c</td>
<td>3.1</td>
<td>3.6</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Q3.10 - Please rate your interactions with your supervising professor.
Q3.11 - Please rate the quality of supervision and socialization that your supervising professor provided.
Q3.12 - Please rate the level or frequency of opportunities for collaboration with your supervising professor.
Q3.13a - Please rate your supervising professor as a scholar.
Q3.13b - Please rate your supervising professor as a model of professional behavior.
Q3.13c - Please rate your supervising professor as a competent researcher.
Q3.13d - Please rate your supervising professor overall (as a person).
Q3.14a - How do you feel that this person would have rated you as a scholar.
Q3.14b - How do you feel that this person would have rated you as a model of professional behavior.
Q3.14c - How do you feel that this person would have rated you as a competent researcher.
(1 = poor, 2 = fair, 3 = good, 4 = excellent)
Item 3.15

Question 3.15 reads as follows:

Did your research assistantship and/or interactions with your supervising professor change your research interests?  ○ Yes  ○ No

Significance Testing

Gender

Chi Square tests revealed that there were no significant differences in the responses of men and women, $\chi^2 (1, n = 47) = .22, p > .10$.

Table 5.26 — Frequency Distribution of Yes/No Responses to Item 3.15 by Gender

<table>
<thead>
<tr>
<th>Item 3.15</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>14 (51.9%)</td>
<td>13 (48.1%)</td>
<td>27</td>
</tr>
<tr>
<td>Women</td>
<td>9 (45%)</td>
<td>11 (55%)</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>24</td>
<td>47</td>
</tr>
</tbody>
</table>

As shown in Table 5.26, 52% of the men noted that their research interests were changed through their research assistantship and/or their interactions with their supervising professor, while 48% said that this was not true of them. Women responded similarly, with 55% responding positively, and 45% responding negatively.

Rank

Chi Square tests revealed that there were no significant differences in the responses among the various ranks of the professoriate, $\chi^2 (2, n = 46) = 1.08, p > .10$.

As Table 5.27 demonstrates, professors and associate professors were more likely to indicate that their research interests changed through their work in their research
Table 5.27 — Frequency Distribution of Yes/No Responses to Item 3.15 by Rank

<table>
<thead>
<tr>
<th>Item 3.15</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full Professor</strong></td>
<td>12 (54.5%)</td>
<td>10 (45.5%)</td>
<td>22</td>
</tr>
<tr>
<td><strong>Associate Professor</strong></td>
<td>7 (53.8%)</td>
<td>6 (46.2%)</td>
<td>13</td>
</tr>
<tr>
<td><strong>Assistant Professor</strong></td>
<td>4 (36.4%)</td>
<td>7 (63.6%)</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23</td>
<td>23</td>
<td>46</td>
</tr>
</tbody>
</table>

*Question 3.15 - Did your research assistantship and/or your interactions with your supervising professor change your research interests?*

Assistantship and/or through their interactions with their supervising professor. Only 36% of the assistant professors noted that their research interests were changed through their research assistantship experience.

**Gender and Rank**

Chi Square was not an option to determine significance for the various groups in the sample based on gender and rank, because the cell size of some of the groups was less than five (5). Therefore, a test of proportions was conducted to determine significant differences in responses to this particular item. No significant differences were found in the proportion of responses to this question among the six groups of the sample when it is stratified by the interaction of gender and rank.

As shown in Table 5.28, men associate professors and women full professors were the only groups where a greater proportion of the respondents indicated that their research interests were changed as a result of their research assistantship and/or their interactions with their supervising professor. A greater portion of the remaining groups noted that this was not true of them, particularly assistant professors.
Table 5.28 — Frequency Distribution of Yes/No Responses to Item 3.15 by Gender and Rank

<table>
<thead>
<tr>
<th>Item 3.15</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Full Professor</em></td>
<td>8 (50%)</td>
<td>8 (50%)</td>
<td>16</td>
</tr>
<tr>
<td><em>Regular Professor</em></td>
<td>4 (66.7%)</td>
<td>2 (33.3%)</td>
<td>6</td>
</tr>
<tr>
<td><em>Assistant Professor</em></td>
<td>2 (40%)</td>
<td>3 (60%)</td>
<td>5</td>
</tr>
<tr>
<td><em>Full Professor</em></td>
<td>4 (66.7%)</td>
<td>2 (33.3%)</td>
<td>6</td>
</tr>
<tr>
<td><em>Regular Professor</em></td>
<td>3 (42.9%)</td>
<td>4 (57.1%)</td>
<td>7</td>
</tr>
<tr>
<td><em>Assistant Professor</em></td>
<td>2 (33.3%)</td>
<td>4 (66.7%)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23</td>
<td>23</td>
<td>46</td>
</tr>
</tbody>
</table>

Question 3.15 - Did your research assistantship and/or your interactions with your supervising professor change your research interests?

Additional Group Comparisons

Significance Testing

Age

For age, the tests of proportions did not reveal any significant differences in the responses to item 3.15.

The 40-49 year-old group was the only group to have a larger proportion of respondents who indicated that their research interests were changed as a result of their research assistantship and/or their interactions with their supervising professor. The majority of the other groups either had their research interests clearly formed or these interests were influenced by other factors. It is also plausible that students' research interests did not change because at the onset of their research assistantship, they initially chose to work with a faculty member who shared research interests that were similar with theirs.
Table 5.29 — Frequency Distribution of Yes/No Responses to Item 3.15 by Age

<table>
<thead>
<tr>
<th>Item 3.15</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29 years old</td>
<td>2 (50%)</td>
<td>2 (50%)</td>
<td>4</td>
</tr>
<tr>
<td>30 - 39 years old</td>
<td>3 (42.9%)</td>
<td>4 (57.1%)</td>
<td>7</td>
</tr>
<tr>
<td>40 - 49 years old</td>
<td>7 (58.3%)</td>
<td>5 (41.7%)</td>
<td>12</td>
</tr>
<tr>
<td>50 - 59 years old</td>
<td>9 (47.4%)</td>
<td>10 (52.6%)</td>
<td>19</td>
</tr>
<tr>
<td>60 + years old</td>
<td>2 (40%)</td>
<td>3 (60%)</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>24</td>
<td>47</td>
</tr>
</tbody>
</table>

Question 3.15 - Did your research assistantship and/or your interactions with your supervising professor change your research interests?

Race

For race, the tests of proportions did not reveal any significant differences in the responses to item 3.15.

Table 5.30 — Frequency Distribution of Yes/No Responses to Item 3.15 by Race

<table>
<thead>
<tr>
<th>Item 3.15</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minorities</td>
<td>3 (37.5%)</td>
<td>5 (62.5%)</td>
<td>8</td>
</tr>
<tr>
<td>Caucasians</td>
<td>19 (51.4%)</td>
<td>18 (48.6%)</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>23</td>
<td>45</td>
</tr>
</tbody>
</table>

Question 3.15 - Did your research assistantship and/or your interactions with your supervising professor change your research interests?

The majority of the minorities indicated that their research interests were not changed as a result of their research assistantship and/or their interactions with their supervising professor, while Caucasians were fairly equally divided in their responses to this item.
Item 3.17

Research assistants were asked the following question for item 3.17:

Was your supervising professor your academic advisor/major professor as well?  ○ Yes  ○ No

Significance Testing

Gender

A Chi Square test conducted on item 3.17 revealed a significant difference in the responses of women and men, $\chi^2 (1, n = 46) = 6.67, p < .10$. As Table 5.31 is examined, it is evident why a significant difference exists.

Table 5.31 — Frequency Distribution of Yes/No Responses to Item 3.17 by Gender

<table>
<thead>
<tr>
<th>Item 3.17</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>19 (73.1%)</td>
<td>7 (26.9%)</td>
<td>26</td>
</tr>
<tr>
<td>Women</td>
<td>7 (35%)</td>
<td>13 (65%)</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>20</td>
<td>46</td>
</tr>
</tbody>
</table>

Seventy-three percent of the men responded that their academic advisor/major professor was also the person who served as their supervising professor in their research assistantship. By contrast, only 35% of the women reported that their academic advisor/major professor was the supervising professor of their research assistantship. Overall, just over half of the sample, 57%, noted that their supervising professor was also their academic advisor.

16 There is no item 3.16 in the analysis because I determined that the question was not apropos to this or any other section.
Rank

A Chi Square test could not be performed on item 3.17 using rank as the grouping variable because the expected frequencies of some of the cell sizes were less than five. Therefore, I conducted tests of proportion in the place of the Chi Square test. There were no significant differences in responses among the various ranks of the professoriate.

Although the $z$ value for the test between full professors and assistant professors is not in the critical region [$z = 1.64, p > .10$], meaning that the difference is non-significant, it should be noted that there is only a .005 difference between this $z$ value and significance.

The critical region for significance at the .10 level begins at approximately 1.645. Therefore, the difference between full professors and assistant professors may be interpreted as marginally significant.

| Table 5.32 — Frequency Distribution of Yes/No Responses to Item 3.17 by Rank |
|-----------------------------|-------|---------|-----|
| Item 3.17                  | Yes   | No      | Total |
| Full Professor             | 14 (66.7%) | 7 (33.3%) | 21   |
| Associate Professor        | 8 (61.5%)  | 5 (38.5%) | 13   |
| Assistant Professor        | 4 (36.4%)  | 7 (63.6%) | 11   |
| Total                      | 26    | 19      | 45   |

Question 3.17 - Was your supervising professor your academic advisor/major professor as well?

Table 5.32 above shows the frequencies of responses to item 3.17 by rank. There were more full professors (approximately 67%) who noted that their supervising professor of their research assistantship was also the same person who served as their academic advisor/major professor, as compared to assistant professors (only 36%). A higher percentage of associate professors (approximately 62%) noted that their
supervising professor of their assistantship and academic advisor were the same person. These proportions possibly suggest a trend that in recent years when the assistant professors in this sample were graduate students, it was increasingly common for them to work with faculty who were not their academic advisors/major professors than in the past when these relationships seemed to be more common.

Gender and Rank

Table 5.33 — z Values from Tests of Proportions by Gender and Rank

<table>
<thead>
<tr>
<th>Item 3.17</th>
<th>o'Full</th>
<th>o'Assoc</th>
<th>o'Asst</th>
<th>o' Full</th>
<th>o' Assoc</th>
</tr>
</thead>
<tbody>
<tr>
<td>o' Full</td>
<td></td>
<td>-.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o' Assoc</td>
<td></td>
<td></td>
<td>1.69*</td>
<td>1.49</td>
<td></td>
</tr>
<tr>
<td>o' Asst</td>
<td></td>
<td>1.69*</td>
<td>1.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o' Full</td>
<td>2.05*</td>
<td></td>
<td></td>
<td>.23</td>
<td></td>
</tr>
<tr>
<td>o' Assoc</td>
<td>1.74*</td>
<td></td>
<td></td>
<td>-.10</td>
<td>-.35</td>
</tr>
<tr>
<td>o' Asst</td>
<td>2.05*</td>
<td></td>
<td>.23</td>
<td>0</td>
<td>.35</td>
</tr>
</tbody>
</table>

* Difference between means is significant at the .10 level.

Tests of proportions were conducted to determine the differences in responses by gender and rank. Table 5.33 shows the z values for the tests indicating those differences between groups which are significant at the .10 level. Men full professors differ significantly in their responses as compared to men assistant professors, and women full, associate, and assistant professors. The responses between men associate professors and women full and assistant professors are significantly different as well.

Table 5.34 below notes that men full and associate professors were the only groups who showed a greater proportion of respondents whose supervising professor of
their research assistantship was also their academic advisor. Women full and assistant professors were more likely not to work in such situations.

Table 5.34 — Frequency Distribution of Yes/No Responses to Item 3.17 by Gender and Rank

<table>
<thead>
<tr>
<th>Item 3.17</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Male Full Professor</em></td>
<td>12 (80%)</td>
<td>3 (20%)</td>
<td>15</td>
</tr>
<tr>
<td><em>Male Associate Professor</em></td>
<td>5 (83.3%)</td>
<td>1 (16.7%)</td>
<td>6</td>
</tr>
<tr>
<td><em>Male Assistant Professor</em></td>
<td>2 (40%)</td>
<td>3 (60%)</td>
<td>5</td>
</tr>
<tr>
<td><em>Female Full Professor</em></td>
<td>2 (33.3%)</td>
<td>4 (66.7%)</td>
<td>6</td>
</tr>
<tr>
<td><em>Female Associate Professor</em></td>
<td>3 (42.9%)</td>
<td>4 (57.1%)</td>
<td>7</td>
</tr>
<tr>
<td><em>Female Assistant Professor</em></td>
<td>2 (33.3%)</td>
<td>4 (66.7%)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>26</td>
<td>19</td>
<td>45</td>
</tr>
</tbody>
</table>

Question 3.17 - Was your supervising professor your academic advisor/major professor as well?

Additional Group Comparisons

Significance Testing

Age

For age, the tests of proportions did not reveal any significant differences in the responses to item 3.17 among the five age groups in the sample.

As shown in Table 5.35, it was more common for individuals in the three oldest groups to work with a faculty member who served as both their academic advisor and their major professor. The 30-39 year-old group had the largest proportion of respondents who were not in situations where they worked with their academic advisor in an assistantship capacity as well. This is similar to the trend noted earlier in the discussion.
Table 5.35 — Frequency Distribution of Yes/No Responses to Item 3.17 by Age

<table>
<thead>
<tr>
<th>Item 3.17</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29 years old</td>
<td>2 (50%)</td>
<td>2 (50%)</td>
<td>4</td>
</tr>
<tr>
<td>30 - 39 years old</td>
<td>3 (42.9%)</td>
<td>4 (57.1%)</td>
<td>7</td>
</tr>
<tr>
<td>40 - 49 years old</td>
<td>7 (58.3%)</td>
<td>5 (41.7%)</td>
<td>12</td>
</tr>
<tr>
<td>50 - 59 years old</td>
<td>10 (55.6%)</td>
<td>8 (44.4%)</td>
<td>18</td>
</tr>
<tr>
<td>60 + years old</td>
<td>4 (80%)</td>
<td>1 (20%)</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>20</td>
<td>46</td>
</tr>
</tbody>
</table>

Question 3.17 - Was your supervising professor your academic advisor/major professor as well?

on rank where full and associate professors were more likely to work in their research assistantship with their academic advisor.

Race

As was the case with age, the results of the test of proportions between Caucasians and minorities did not reveal any significant differences in the responses to item 3.17.

As shown in Table 5.36, minorities were more likely to work with their academic advisor in their research assistantship (62.5%), while the majority of Caucasians (55.6%) were in similar situations as well.

Table 5.36 — Frequency Distribution of Yes/No Responses to Item 3.17 by Race

<table>
<thead>
<tr>
<th>Item 3.17</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minorities</td>
<td>5 (62.5%)</td>
<td>3 (37.5%)</td>
<td>8</td>
</tr>
<tr>
<td>Caucasians</td>
<td>20 (55.6%)</td>
<td>16 (44.4%)</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>19</td>
<td>44</td>
</tr>
</tbody>
</table>

Question 3.17 - Was your supervising professor your academic advisor/major professor as well?

123
**Item 3.18**

Item 3.18 of segment four asked survey respondents the following:

Gender of your supervising professor:  ○ Male  ○ Female

**Significance Testing**

**Gender**

The results of a Chi Square test revealed that there was a significant difference in responses to this question by women and men, $\chi^2 (1, n = 47) = 6.80, p < .10$. The overwhelming majority (85.2%) of men were in working relationships with men faculty, while only 50% of the women respondents indicated that they worked with men faculty in their research assistantship.

**Table 5.37 — Frequency Distribution of Yes/No Responses to Item 3.18 by Gender**

<table>
<thead>
<tr>
<th>Question 3.18 - Gender of your supervising professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 3.18</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td><strong>Men</strong></td>
</tr>
<tr>
<td><strong>Women</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

As shown in Table 5.37, whereas women respondents had equally the same number of men and women supervising professors, overwhelmingly men (85%) were more often in same sex working relationships in their research assistantships. Only four men (15%) indicated that the supervising professor of their assistantship was a woman. This finding is interesting given that in Chapter Three it was noted that in academic working relationships, women doctoral students choose men faculty more often for their dissertation committees for reasons of “power, influence, and professional connections”
(Heinrich, 1995, p. 448). It is plausible that the same trend exists in assistantship working relationships as well.

**Rank**

Tests of proportions were conducted and revealed no significant differences between full professors' responses and associate professors' responses, and associate professors' responses and assistant professors' responses. However, significant differences were found between full professors' responses and assistant professors' responses \(z = 2.14, p < .10\).

**Table 5.38 — Frequency Distribution of Yes/No Responses to Item 3.18 by Rank**

<table>
<thead>
<tr>
<th>Item 3.18</th>
<th>Men Faculty</th>
<th>Women Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full Professor</strong></td>
<td>18 (81.8%)</td>
<td>4 (18.2%)</td>
<td>22</td>
</tr>
<tr>
<td><strong>Associate Professor</strong></td>
<td>9 (69.2%)</td>
<td>4 (30.8%)</td>
<td>13</td>
</tr>
<tr>
<td><strong>Assistant Professor</strong></td>
<td>5 (45.5%)</td>
<td>6 (54.5%)</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32</td>
<td>14</td>
<td>46</td>
</tr>
</tbody>
</table>

*Question 3.18 - Gender of your supervising professor.*

Approximately 82% of the full professors noted that they worked with men, while only 45.5% of the assistant professors noted that their supervising professor of their assistantship was a man. Fifty-five percent of the assistant professors were in working relationships with women faculty. This finding is not surprising given that the number of women faculty has increased since the time when full professors were in graduate school.

**Gender and Rank**

Tests of proportions were conducted to determine significant differences in responses when examining the responses by gender and rank. Table 5.39 displays the \(z\)
values for the differences between the various groups, and the differences that are significant are noted accordingly. There are significant differences in the responses between men full professors and women associate and assistant professors, where men full professors were more likely to work with men faculty when they were in their assistantships. Men associate professors were also more likely to work with men faculty and this group differs significantly from men assistant professors, women associate professors, and women assistant professors in their responses to item 3.18 given that the latter groups had a greater proportion of respondents indicate that they had worked with women faculty.

Table 5.39 — z Values from Tests of Proportions by Gender and Rank

<table>
<thead>
<tr>
<th>Item 3.18</th>
<th>♂ Full</th>
<th>♂ Assoc</th>
<th>♂ Asst</th>
<th>♀ Full</th>
<th>♀ Assoc</th>
</tr>
</thead>
<tbody>
<tr>
<td>♂ Full</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>♂ Assoc</td>
<td>-.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>♂ Asst</td>
<td>1.37</td>
<td>1.71*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>♀ Full</td>
<td>1.13</td>
<td>1.55</td>
<td>-.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>♀ Assoc</td>
<td>2.24*</td>
<td>2.23*</td>
<td>.59</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td>♀ Asst</td>
<td>2.54*</td>
<td>2.45*</td>
<td>.88</td>
<td>1.15</td>
<td>.35</td>
</tr>
</tbody>
</table>

* Difference is significant at the .10 level.

Table 5.40 below gives more breadth to the idea that older respondents were more likely to work with men given that the percentage of men faculty was much greater in the past than it is today. This is reflected in the high percentages of full professors who worked with men in their research assistantships. Since the number of women faculty has increased considerably in the recent past, it is not surprising that women assistant professors were more likely to work with women in their research assistantships.
Moreover, the larger percentage of men assistant professors who worked with men certainly gives credence to the same sex working relationship argument (Berg & Ferber, 1983) that was presented in the topical literature review in Chapter Three.

Table 5.40 — Frequency Distribution of Yes/No Responses to Item 3.18 by Gender and Rank

<table>
<thead>
<tr>
<th>Item 3.18</th>
<th>Men Faculty</th>
<th>Women Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Full Professor</em></td>
<td>14 (87.5%)</td>
<td>2 (12.5%)</td>
<td>16</td>
</tr>
<tr>
<td><em>Associate Professor</em></td>
<td>6 (100%)</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td><em>Assistant Professor</em></td>
<td>3 (60%)</td>
<td>2 (40%)</td>
<td>5</td>
</tr>
<tr>
<td><em>Full Professor</em></td>
<td>4 (66.7%)</td>
<td>2 (33.3%)</td>
<td>6</td>
</tr>
<tr>
<td><em>Associate Professor</em></td>
<td>3 (42.9%)</td>
<td>4 (57.1%)</td>
<td>7</td>
</tr>
<tr>
<td><em>Assistant Professor</em></td>
<td>2 (33.3%)</td>
<td>4 (66.7%)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>14</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>

Question 3.18 - Gender of your supervising professor.

Additional Group Comparisons

Significance Testing

Age

For age, the tests of proportions revealed significant differences in the responses to item 3.18 between several of the five age groups in the sample. The z values for the comparisons between groups are presented in Table 5.41. The responses of the 20-29 year old age group are significantly different from the responses of the 40-49 and the 50-59 year old age groups, whereas 20-29 year olds were more likely to work with a woman.
Table 5.41 — z Values from Tests of Proportions by Age

<table>
<thead>
<tr>
<th>Item 3.18</th>
<th>20 - 29</th>
<th>30 - 39</th>
<th>40 - 49</th>
<th>50 - 59</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 - 39</td>
<td>-1.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 - 49</td>
<td>-1.79*</td>
<td>-0.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 - 59</td>
<td>-1.86*</td>
<td>-0.81</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>60 +</td>
<td>-2.37</td>
<td>-1.69</td>
<td>-1.23</td>
<td>-1.29</td>
</tr>
</tbody>
</table>

The descriptive statistics to item 3.18 presented below in Table 5.42 reiterate the point mentioned earlier regarding the opportunities to work with women. As noted in the youngest age group, the greater proportion of the respondents (75%) indicated that a women was the supervising professor of their research assistantship. When examining the proportions of responses under the column “women faculty,” as age increases these proportions decrease. No individuals in the eldest group indicated that they worked with a woman in their research assistantship.

Table 5.42 — Frequency Distribution of Yes/No Responses to Item 3.18 by Age

<table>
<thead>
<tr>
<th>Item 3.18</th>
<th>Men Faculty</th>
<th>Women Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29 years old</td>
<td>1 (25%)</td>
<td>3 (75%)</td>
<td>4</td>
</tr>
<tr>
<td>30 - 39 years old</td>
<td>4 (57.1%)</td>
<td>3 (42.9%)</td>
<td>7</td>
</tr>
<tr>
<td>40 - 49 years old</td>
<td>9 (75%)</td>
<td>3 (25%)</td>
<td>12</td>
</tr>
<tr>
<td>50 - 59 years old</td>
<td>14 (73.7%)</td>
<td>5 (26.3%)</td>
<td>19</td>
</tr>
<tr>
<td>60 + years old</td>
<td>5 (100%)</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>14</td>
<td>47</td>
</tr>
</tbody>
</table>

Question 3.18 - Gender of your supervising professor.
Race

The results of the test of proportions between Caucasians and minorities did not reveal any significant differences in the responses to item 3.18 regarding the gender of the respondent’s supervising professor.

Table 5.43 — Frequency Distribution of Yes/No Responses to Item 3.18 by Race

<table>
<thead>
<tr>
<th>Item 3.18</th>
<th>Men Faculty</th>
<th>Women Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minorities</strong></td>
<td>6 (75%)</td>
<td>2 (25%)</td>
<td>8</td>
</tr>
<tr>
<td><strong>Caucasians</strong></td>
<td>25 (67.6%)</td>
<td>12 (32.4%)</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>31</td>
<td>14</td>
<td>45</td>
</tr>
</tbody>
</table>

Question 3.18 - Gender of your supervising professor.

When examining the frequencies of responses to this item by race as shown in Table 5.43, both groups were more likely to have a man as the supervising professor in their research assistantship, yet the proportion of minorities who worked with a man is slightly higher than that of Caucasians.

Item 3.19

The final item on the survey in segment four of section III asked respondents the following question:

Did your research assistantship and/or your interactions with your supervising professor change your career goals?

- Yes  - No
Significance Testing

Gender

The results of a Chi Square test revealed that the difference between men and women’s responses is not significant, $\chi^2 (1, n = 46) = .16, p > .10$.

Table 5.44 — Frequency Distribution of Yes/No Responses to Item 3.19 by Gender

<table>
<thead>
<tr>
<th>Item 3.19</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>14 (51.8%)</td>
<td>13 (48.2%)</td>
<td>27</td>
</tr>
<tr>
<td>Women</td>
<td>11 (57.9%)</td>
<td>8 (42.1%)</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>21</td>
<td>46</td>
</tr>
</tbody>
</table>

**Question 3.19** - Did your research assistantship and/or your interactions with your supervising professor change your career goals?

Table 5.44 above shows the frequency of responses by men and women to item 3.19 which asked them if their research assistantship and/or their interactions with their supervising professor changed their career goals. Men and women were similar in their responses to this particular item. Fifty-two percent of the men responded that their research assistantship and/or their interactions with their supervising professor changed their career goals, while a higher percentage of women, 58%, noted the same.

Rank

By rank, a series of tests of proportions was conducted to determine if there were significant differences among the responses of the various ranks of the professoriate. The responses between full professors and associate professors and full professors and assistant professors were not significantly different. However, the responses between associate professors and assistant professors [$z = -1.67, p < .10$] were significantly different. When comparing the responses of individuals in these two categories who
responded “yes” to this item, 38.5% versus 72.7%, it is evident why this difference is significant. This possibly suggests that in recent years, as indicated throughout many of the significant differences in responses among the various groups of interest, activities of the research assistantship have been directed at preparing graduate students for a potential career in academe thus accounting for the larger portion of respondents at the assistant professor level who indicated that their career goals were changed. This topic is explored further in the qualitative interviews featured in the following chapter.

Table 5.45 — Frequency Distribution of Yes/No Responses to Item 3.19 by Rank

<table>
<thead>
<tr>
<th>Item 3.19</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Professor</td>
<td>12 (57.1%)</td>
<td>9 (42.9%)</td>
<td>21</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>5 (38.5%)</td>
<td>8 (61.5%)</td>
<td>13</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>8 (72.7%)</td>
<td>3 (27.3%)</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>20</td>
<td>45</td>
</tr>
</tbody>
</table>

Question 3.19 - Did your research assistantship and/or your interactions with your supervising professor change your career goals?

As shown in Table 5.45, associate professors were the only rank of the professoriate where the greatest proportion of respondents indicated that their research assistantship did not change their career goals (approximately 62%). Fifty-seven percent of the full professors and 72.7% of the assistant professors noted that their career goals were changed as a result of their research assistantship and/or their interactions with their supervising professor.

Gender and Rank

Once again, tests of proportions were conducted to determine significant differences in responses when examining the responses by gender and rank. Table 5.46

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displays the $z$ values for the differences between the various groups, and those differences that are significant are noted accordingly. Women full professors and women associate professors differ significantly in their responses to item 3.19, since women full professors were more likely to indicate that their career goals were changed as a result of their research assistantship and/or their interactions with their supervising professor. Similarly, women associate professors and women assistant professors also differ significantly for the aforementioned reason.

Table 5.46 — $z$ Values from Tests of Proportions by Gender and Rank

<table>
<thead>
<tr>
<th>Item 3.19</th>
<th>$\sigma$ Full</th>
<th>$\sigma$ Assoc</th>
<th>$\sigma$ Assst</th>
<th>$\varphi$ Full</th>
<th>$\varphi$ Assoc</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\sigma$ Full</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\sigma$ Assoc</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\sigma$ Assst</td>
<td>-.39</td>
<td>-.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\varphi$ Full</td>
<td>-1.18</td>
<td>-1.03</td>
<td>-.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\varphi$ Assoc</td>
<td>.95</td>
<td>.79</td>
<td>1.09</td>
<td>1.76*</td>
<td></td>
</tr>
<tr>
<td>$\varphi$ Assst</td>
<td>-1.41</td>
<td>-1.22</td>
<td>-.87</td>
<td>-.14</td>
<td>-1.97*</td>
</tr>
</tbody>
</table>

* Difference is significant at the .10 level.

From examining the descriptive statistics of item 3.19 by gender and rank in Table 5.47, it appears that one of the most obvious differences in responses is between women full, associate, and assistant professors. Women associate professors are the group in the sample with the highest proportion of respondents to indicate that their career goals were not changed as a result of their research assistantship and/or their interactions with their supervising professor, yet many of the women full and assistant professors indicated differently.
Table 5.47 — Frequency Distribution of Yes/No Responses to Item 3.19 by Gender and Rank

<table>
<thead>
<tr>
<th>Item 3.19</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o'Full Professor</td>
<td>8 (50%)</td>
<td>8 (50%)</td>
<td>16</td>
</tr>
<tr>
<td>o'Associate Professor</td>
<td>3 (50%)</td>
<td>3 (50%)</td>
<td>6</td>
</tr>
<tr>
<td>o'Assistant Professor</td>
<td>3 (60%)</td>
<td>2 (40%)</td>
<td>5</td>
</tr>
<tr>
<td>o Full Professor</td>
<td>4 (80%)</td>
<td>1 (20%)</td>
<td>5</td>
</tr>
<tr>
<td>o Associate Professor</td>
<td>2 (28.6%)</td>
<td>5 (71.4%)</td>
<td>7</td>
</tr>
<tr>
<td>o Assistant Professor</td>
<td>5 (83.3%)</td>
<td>1 (16.7%)</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>20</td>
<td>45</td>
</tr>
</tbody>
</table>

Question 3.19 - Did your research assistantship and/or your interactions with your supervising professor change your career goals?

Additional Group Comparisons

Significance Testing

Age

For age, the tests of proportions revealed significant differences in the responses to item 3.19 between several of the five age groups in the sample. The z values for the comparisons between groups are presented in Table 5.48. The responses of the 30-39

Table 5.48 — z Values from Tests of Proportions by Age

<table>
<thead>
<tr>
<th>Item 3.19</th>
<th>20 - 29</th>
<th>30 - 39</th>
<th>40 - 49</th>
<th>50 - 59</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 -29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 - 39</td>
<td>-.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 - 49</td>
<td>1.15</td>
<td>1.88*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 - 59</td>
<td>1.31</td>
<td>2.10*</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>60 +</td>
<td>.18</td>
<td>.26</td>
<td>-1.44</td>
<td>-1.63</td>
</tr>
</tbody>
</table>

*Difference is significant at the .10 level.
year old age group are significantly different from the responses of the 40-49 and the 50-59 year old age groups because the majority of the 30-39 year old age group responded “yes” to item 3.19, and the 40-49 and 50-59 age groups responded “no.”

Table 5.49 — Frequency Distribution of Yes/No Responses to Item 3.19 by Age

<table>
<thead>
<tr>
<th>Item 3.19</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29 years old</td>
<td>3 (75%)</td>
<td>1 (25%)</td>
<td>4</td>
</tr>
<tr>
<td>30 - 39 years old</td>
<td>6 (85.7%)</td>
<td>1 (14.3%)</td>
<td>7</td>
</tr>
<tr>
<td>40 - 49 years old</td>
<td>5 (41.7%)</td>
<td>7 (58.3%)</td>
<td>12</td>
</tr>
<tr>
<td>50 - 59 years old</td>
<td>7 (38.9%)</td>
<td>11 (61.1%)</td>
<td>18</td>
</tr>
<tr>
<td>60 + years old</td>
<td>4 (80%)</td>
<td>1 (20%)</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>21</td>
<td>46</td>
</tr>
</tbody>
</table>

Question 3.19 - Did your research assistantship and/or your interactions with your supervising professor change your career goals?

Table 5.49 above shows that while the majority of the five age groups in the sample indicated that their career goals were changed as a result of their research assistantship and/or their interactions with their supervising professor, two groups, age 40-49 and 50-59, had a majority of their respondents indicate that their career goals were not changed because of these factors. The 30-39 year-old age group had the largest proportion of their respondents (85.7%) indicate that their career goals were changed because of their research assistantship and/or their interactions with their supervising professor.

Race

The results of the test of proportions between Caucasians and minorities did not reveal any significant differences in the responses to item 3.19 when respondents were
asked whether or not their research assistantship and/or their interactions with their supervising professor changed their career goals \([z = .57, p > .10]\).

**Table 5.50 — Frequency Distribution of Yes/No Responses to Item 3.19 by Race**

<table>
<thead>
<tr>
<th>Item 3.19</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minorities</td>
<td>5 (62.5%)</td>
<td>3 (37.5%)</td>
<td>8</td>
</tr>
<tr>
<td>Caucasians</td>
<td>19 (51.4%)</td>
<td>18 (48.6%)</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24</td>
<td>21</td>
<td>45</td>
</tr>
</tbody>
</table>

*Question 3.19 - Did your research assistantship and/or your interactions with your supervising professor change your career goals?*

While there was no major variation in Caucasians' responses to item 3.19 given that 51.4% of this group responded "yes" and 48.6% responded "no," minorities were more likely to indicate that their career goals were changed as a result of their research assistantship and/or their interactions with their supervising professor. These results are displayed in Table 5.50.

**Chapter Summary**

The results of the structural functionalist research questions for this study have led to some interesting findings. Initially, I began the chapter by restating the research questions and the hypotheses in the structural functionalism paradigm. I have also provided an in-depth explication of the four segments of section III of the survey instrument as well as the dependent variables, independent variables, and statistical procedures used to examine the data. Responses to the first research question, which sought to explore the frequency distribution of professors of higher education in Research I institutions based on gender and rank, are similar to the findings of previous research (Blum, 1991; Chliwniak, 1997; Schneider, 1998) which state that women are not equally
represented at the full professor rank, although they have comparable representation (as compared to men) at the assistant and associate levels. Of the individuals in the sample, 58% indicated that they served as a research assistant at some point during their graduate education. Yet, there does not appear to be a significant difference in the number of men and women who served as research assistants nor in the number of research assistantships that these two groups held.

A section of interest in this particular chapter consisted of the items on the survey in segment two, as the third research question sought to determine if professors of higher education differed in their assessment of the contribution of the research assistantship to the various areas in, what I have termed, “faculty development.” There were no significant differences in the responses of the various groups of interest (gender, rank, and the interaction of gender and rank) to these particular items. However, there were significant differences in group responses’ when age and race were used as independent variables. Minorities (as compared to Caucasians) and the 20-29 year old age group (as compared to the four other age groups) had a significantly higher rating on the level of contribution that their research assistantship had on their development as a competent researcher and on their ability to make formal presentations of research at professional meetings.

The results of the analysis on segment one of section III which consisted of questions regarding the academic career of the survey respondent revealed that men and women were the only groups of interest who differed significantly in their responses to item 3.1 which asked if the research assistantship was an influential factor in the
respondent's decision to enter the professoriate. Specifically, women felt more strongly that their research assistantship influenced their decision to enter the professoriate (the difference between men and women's responses to this item was significant). I provided descriptive statistics for the items in segment one by grouping the sample on other independent variables such as race, age, and rank. The 20-29 year-old age group, minorities, and assistant professors were groups that felt more strongly about the statement in section one regarding how the research assistantship influenced their decision to enter the professoriate (although these differences were not significant). Most groups were similar in their responses to the item asking them how their experience as a research assistant prepared them for the duties required in their faculty position (there were no significant differences in responses between any groups on this particular item).

Items in segment three of the survey asked general questions regarding the research assistantship experience. Assistant professors' responses were significantly different from full professors' responses on the satisfaction with the financial stipend provided by the research assistantship and the overall value of the research assistantship, where the former group had higher mean scores on both items than the latter. Only for item 3.7 were the means significantly different among the various ranks of the professoriate stratified by gender. Men full professors' responses differed significantly from men assistant professors' responses and women associate professors' responses to item 3.7 in that men full professors had a lower mean score than the other groups. Men associate professors had a significantly lower mean score than the following groups: men assistant professors, women associate professors, and women assistant professors. Men
assistant professors only differed significantly with women full professors in their responses to the level of satisfaction with the financial stipend of their research assistantship in that the former had a higher mean score than the latter, while women full professors’ responses had a significantly lower mean score than both women associate and women assistant professors’ responses. Approximately 98% of the sample agreed that if they had they had the chance to, they would choose their research assistantship once again.

The final group of items on the survey asked the respondents about their supervising professor. The results of the statistical analyses revealed that there were no significant differences in responses between any of the groups of interest. The proportion of men whose supervising professor and academic advisor were the same person was significantly different from the number of women who were in a similar situation. Of marginal significance was the proportion of assistant professors, as compared to number of full professors and associate professors, who also had an academic advisor who was also their supervising professor in their research assistantship in that assistant professors were less likely to work with their academic advisor in their research assistantship.

Eighty-five percent of the men in this sample indicated that the supervising professor of their assistantship was a man, while 50% of the women noted that this was also true of them. This difference in the gender of supervising professors for men and women was also significant. The proportion of assistant professors who worked with men was significantly different from the proportion of associate and full professors who did the same, in that assistant professors were more likely to work with women.
Also, there was a significant difference in the proportion of associate professors and assistant professors who indicated that their research assistantship and/or their interactions with their supervising professor changed their career goals. Approximately 73% of the assistant professors, as compared to 38.5% of the associate professors indicated that their career goals were changed as a result of their research assistantship and/or their interactions with their supervising professor.

In conclusion, while the quantitative analyses shed light on some of the issues at the focus of this research, through the next chapter I hope to give more breadth to topics explored in this chapter. The following chapter will explore the research questions in the interpretivism and critical theory paradigms by using the data from the qualitative interviews.
CHAPTER 6 — INTERPRETIVIST AND CRITICAL THEORY ANALYSES

In this chapter, the analyses from the interpretivist and critical theory paradigms are presented. The research questions from the interpretivist paradigm are as follows:

1. In what ways did the research assistantship influence the decision of higher education faculty to enter the professoriate?
2. How do higher education faculty who served as research assistants vary in their assessment of the purposes, advantages, and disadvantages of the research assistantship?

The research questions from the critical theory paradigm are:

1. What role does gender play in the research assistantship experience?
2. What groups currently benefit most from existing opportunities?

As noted in chapter two, interpretivism is an ideology that seeks to explore the ways in which individuals experience certain situations. Individual interpretations of experiences are essential in social justice research given that it is these experiences that form the basis for change, if it is determined that change is required. Subsequently, research that is framed using critical theory seeks to disclose discriminatory practices and determines a course of action for change. As expected, the research questions from the interpretivist and critical theory paradigms have much more subjective responses as compared to the structural functionalism research questions (featured in the previous chapter) which were more objective in nature. Moreover, the research questions in the critical theory paradigm are more complex and require much more than an “answer” to the specific question.
Interpretivism Question One

In what ways did the research assistantship influence the decision of higher education faculty to enter the professoriate?

For the first interpretivist question, two interrelated themes emerged from the data. First, I discuss how the research assistantship is a means to enter the professoriate, and second I discuss how some informants thought their socialization into the professoriate was somewhat misleading as to what faculty life would entail at other types of institutions.

The Research Assistantship as a Means to Enter the Professoriate

In the qualitative interviews, numerous informants elaborated on how their research assistantship served to benefit them and, in particular, how their experience as research assistants played a part in their becoming a member of the professoriate. Overwhelmingly, the informants spoke of this experience in a positive light noting that without this experience they would not have entered the faculty role. The following is a discussion that Cecilia,\textsuperscript{17} a Caucasian associate professor, and I had when I asked her if her research assistantship played a part in her becoming a higher education faculty member:

Cecilia: In the act of doing the research through the assistantship I really changed my mind because I really wanted to be an administrator when I went for the degree and for a year and a half, had every expectation that that was going to happen. And then the projects changed, and the work changed and my involvement in the research aspects of it changed and so did my view of what I

\textsuperscript{17} All names of participants, faculty supervisors, and institutions used throughout this document are pseudonyms.
wanted to do. And the activities through the research assistantship definitely made it an attractive option; therefore, put being a faculty member on the plate where it hadn’t been before.

Stephen: Do you think if you hadn’t had such a position that you would be in the professoriate today?

Cecilia: No. I would have somehow had to have gotten into a classroom to otherwise have become a faculty member and I don’t know how that would have happened if I would have continued on the administrative route in my intentions. I do think it is the reason why I became a faculty member, I don’t see it happening any other way.

Ben, a minority assistant professor, shared Cecilia’s sentiments, as did many of the informants. He also stated he felt that the research assistantship experience was important for individuals who went on to be administrators. When I asked him how his experience as a research assistant played a part in his becoming a higher education faculty member, he told me:

Totally and completely. Without it I would not have become a faculty member and I adamantly believe that. I’ve mentioned the socialization and just all the experiences and opportunities. I presented my very first scholarly paper my first year as a graduate student at this conference [the Association for the Study of Higher Education]. To my left was Terenzini and to my right was another big name and I walked out of the conference realizing that the only reason that I’m here at this conference is because I’m working as an R.A. and I have access to that data. That was just like an avalanche, like a snowball that goes down and gets bigger and bigger and I just accumulated a feeling of confidence. By the time that I left Eastern University to go on to Western University, and remember that I still had the dissertation to write, but I had no doubt in my mind that I would not only finish but end up becoming a faculty member somewhere. I know that sounds cocky but that’s the sort of confidence that working in that environment gave us. For other people who chose not to do a faculty route, they would say the same thing. They had no doubt that the experience that they gained would make them better administrators. They were so steeped in research, they knew it so well that they were so comfortable with it that they would be able to pursue an administrative career in ways that other people might not be able to.

Cindy, a minority assistant professor, also shared how she felt that the research assistantship changed her career goals, from planning to become an administrator to a
faculty member. We had the following discussion after I asked her how her experience as a research assistant played a part in her becoming a higher education faculty member:

Cindy: I think it was an integral part. I didn’t want to necessarily be a faculty member when I started. If you would’ve asked me I probably would’ve been pretty resistant to the idea of being a faculty member for a variety of reasons. And I think it’s because I showed some potential in doing research and because I was trained well, in my opinion, that I was encouraged to think about going into the professorate. Yeah, it was absolutely integral.

Stephen: Do you feel that if you hadn’t had this position (the research assistantship) you would still be in the professoriate?

Cindy: Oh no. I think there’s very little chance that I would have been a professor had I not had the extensive research experience that I did.

Informant after informant reacted positively to the question regarding how their experience played a part in their becoming a higher education faculty member. Olivia, a Caucasian assistant professor told me:

It wouldn’t have happened if I hadn’t been a research assistant for a couple of reasons. One, I had John in terms of contacts with the higher ed community, which was good. Also with Mary, I had funding to get to conferences to present my work. Also, I saw them as models, I saw them as people who were writing, who were publishing, whose name was out there, whose name was mentioned in speeches, in keynote things, and so I saw them as people who could do this. And I sort of knew their personal hangups too and so I realized that my personal hangups are not going to prevent me from succeeding in this career... and if they can do it, then I can do it too. When I started my program I didn’t want to do research. I wanted to get out and probably go back to Student Affairs, maybe teach in a smaller college but I did not want to do research. So yeah, I certainly wouldn’t be here unless I had had those experiences.

Michael, a Caucasian associate professor and I had the following discussion when I asked him to discuss how his research assistantship influenced his decision to enter academe:

Stephen: You answered on one of the questions on the survey that the research assistantship was an influential factor on your decision to enter the professorate. You strongly agreed with that statement. Do you want to elaborate on that?
Michael: I had no intention of entering the professorate before my research assistantship or before I entered graduate school. It was just a way for me to learn more, and I went on to do the doctorate and as I found that I was successful in publications and successful in research I realized probably from Tom's influence that there was a research area which was [an area of interest of mine] and there was a potential career there.

As shown in the discussions above for this particular theme, in summary, few individuals entered graduate school with the expectations to become faculty; however, through their research assistantship, it became an option.

Socialization Gone Too Far

While the majority of the informants spoke very positively of their experiences as a research assistant, particularly on how this experience informed their decision to enter the professoriate, there were some instances when informants questioned their experiences as research assistants. Emily, a Caucasian full professor, told me the following when I asked her how her experience as a research assistant played a part in her becoming a higher education faculty member:

Absolutely, there is no question. My background was in student affairs and I went back to graduate school and I had some vague notion that I would get a doctorate in higher ed. and then I would go out and be a dean of students... this is one of the problems with the Northern University program. Depending on your perspective I mean if you’re one of the few who’s lucky enough to go on and be a professor, it’s not a problem. If you’re one of the masses who come out of the program and think they only want to be a professor and can’t get a job [then it’s a problem]. I was completely re-socialized away from the goodness of student affairs administration as a profession into the idea that when I left there, all I could see myself doing was some sort of research position or being a faculty member. Now that has worked out for me but I don’t know if that is a good or healthy sort of strategy. But there is no question, I learned how to do research and I learned by watching my professors and by doing and I learned the ropes of engaging in a long term research project from beginning to end...so there’s no question that it had a tremendous effect. I wouldn’t be where I am now had I not had that research assistantship.
Interestingly, although Emily seemed content in her position as a full professor in a higher education program at a Research I institution, she questioned whether or not being socialized or conditioned into believing that all one could do was either research or teaching at a university was a “good or healthy sort of strategy.” When I asked Emily if her experience as a research assistant either helped or hindered her ability to feel as though she could contribute something to the field of higher education, she told me, “... it [her research assistantship] certainly gave me the confidence and the experience to start out being a professor and to survive in the academy.”

Cecilia, an associate professor who graduated from the same institution as Emily also spoke of a certain disadvantage that graduates may encounter by being trained in a funded research center at a Research I institution. We had the following discussion:

Stephen: Do you feel that this experience either helped or hindered your ability to feel as though you can contribute something to the field of higher education?
Cecilia: It helped, no question, but the model that I experienced at Northern University in a funded research center is so atypical that it sort of hinders in a way. The research ethic and the idea of scholarship when I happened to be there, there were people who were defined as scholars as opposed to researchers, so I got to see both. But they had the financial support to kind of do what they wanted to, so I learned the good principles, the discipline, and the methods and saw large data bases and small projects. But at the same time the faculty who were doing that only taught one class a year and had paid G.A.s [graduate assistants] to help them. It sets up a false expectation of how real life will be when you go and become a faculty member. So it helped in the large sense of the field and sort of hindered in the actual faculty role, post graduate assistantship experience. Then you look at the work that you’re doing when you don’t have a G.A. or when you’re not using a national database or when it’s unfunded and you wonder whether or not it’s making a contribution to the field. And I think it took a while to figure out that you could make contributions in different ways and it was still OK. You could be at a second tier institution or a third tier institution and the work that you would do mattered. And so everybody that I know who’s come out of there with the same experience has had the same feeling like wait a minute... does it matter and can it be worthwhile? So I think when you’re there the
orientation to the field and the dedication to help the field is part of your socialization. You really value it, you see your own role, your potential role in that and then if you don’t get a job in a funded research center you question a lot about whether or not you’re actually making a contribution.

Stephen: So working in that environment really set a pretty high standard?
Cecilia: Yeah it did, and I don’t know if that’s what anyone would have told you if you’re talking to people from Eastern University but knowing the group from Northern University and Western University at the time, the grad students all felt real similarly about that. They had to go to the big places to make a contribution. They never told us that but that’s what you see because that’s what you’re experiencing.

In a similar vein, another informant, Luis, a minority associate professor spoke of a situation where he realized that he was fortunate to be in a Research I institution as a doctoral student given that he had greater access to resources as compared to students in other institutions.

The dialogue with the three individuals discussed above shows that some informants questioned their research assistantship in that it may have been deceptive of what faculty life represents at institutions other than top-tier Research I institutions. While these informants were certainly appreciative of what their experience in a research assistantship taught them, they were discouraged that this experience did not show them the options of what the professoriate might represent at different institutions other than those that they were trained in.

The results of this part of the analysis lead to some suggestions for faculty at Research I institutions. As indicated in the discussions with informants, the research assistantship was a very important part of socializing individuals into the faculty role. However, socializing individuals to believe that they can only serve or “make a difference” at one particular type of institution is probably doing them an injustice.
Given that faculty at Research I institutions must engage in research since it is a major focus of their duties, they play an important role in training future researchers/scholars. However, research should not be the *only* activity that graduate students be exposed to. It is important that graduate students not only observe faculty teaching courses, but also play an instrumental role in such activities as course design and implementation. Since higher education graduate students generally do not teach in higher education graduate programs, the role of the research assistant in course activities is somewhat limited. However, faculty should use their research assistants in such undertakings as devising course syllabi, and assisting students with their writing assignments (as sources of feedback and as an editor, given the research assistant’s ability to do this). Graduate students could also learn administrative duties of faculty by assisting in activities such as grant proposal writing. If they are integrally involved in this type of process, they not only get experience writing a grant, but also in other foundational activities such as literature collection and synthesis. It is important for faculty to keep their research assistants exposed to the various possibilities for careers following the completion of their degrees. It would appear that engaging them in a plethora of experiences and activities would only serve to benefit both the student and the faculty member.

**Interpretivist Question Two**

How do higher education faculty who served as research assistants vary in their assessment of the purposes, advantages, and disadvantages of the research assistantship?
The second question in the interpretivist paradigm is discussed using four themes.

Initially in this section, informants speak of how they believed the research assistantship helped them cultivate a philosophy of the purpose of the research assistantship. The next theme features discussions by informants (all full professors) about how they believed that they were not presented many opportunities for professional development given the time when they had their research assistantship. Lastly, I discuss how different types of working relationships in research assistantships, mainly student/teacher and collegial, work to either the benefit or detriment of the student involved.

Crafting a Philosophy of the Purpose of the Research Assistantship

When I asked Ben, an assistant professor, to tell me what his philosophy of the research assistantship was, he elaborated on what he called the “professionalization” and “socialization” functions of this experience. He told me:

I think first and foremost [the research assistantship should] professionalize students and what I mean by that is professionalization and how I think that differs from socialization is professionalization is the first things that happen in the initial stages of a faculty career. Some people would call it anticipatory professionalization, it’s where you’re learning the rules, the language, the rules. And an R.A.ship [research assistantship] is a safe context where you can practice your understanding of those rules, how to write a paper, how to present a paper, how to engage data, how to interact with colleagues. All of the things in terms of building potential for a research career I think are absolutely crucial, I think you need to know the rules. Once you know those rules then an R.A. ship essentially serves as a socializing function in the sense that it gives you opportunities to carry those things you’ve learned out and it legitimizes your status as an up-and-coming scholar in the field. I owe a lot to the R.A.ship in terms of integrating me into the academic environment and making me feel a part of it. And that’s probably the third thing that I think it did for me and does for students—it shows you that you can be a player in the academic arena. With the right training and the right socialization and professionalization, it gives you the opportunity to test yourself out in the academic arena when it is done right. What I mean by that is we had the expectation whenever we wrote a paper that we would present it to our colleagues,
the 15 colleagues in this unit. They were the toughest critique providers of anybody that we knew. They would slash you apart. You knew that if you could get past those 15 people, you could get past anybody. That’s very reinforcing, to have that sort of environment. Whenever anybody was graduating and was preparing for a job talk, they would set up an arena where a mock job talk could be delivered and once again everybody would react. So the level of support that the R.A.ship provided, I mean I’m just beginning to really truly appreciate how much of an impact, a positive impact, that [the research assistantship] had.

There were also other discussions in the interviews where informants told me that their experiences as a research assistant were instrumental in their completing the dissertation. Cindy, a minority assistant professor, told me:

I would say that the main purpose is two-fold. From the student’s perspective, to help train them in the field of higher education and in the ways to do research and the ways in which questions are answered and to prepare the doctoral student in research techniques that will help him or her to complete a dissertation. Without a research assistantship, I would not have any idea, and I mean that seriously, any idea of how to do a dissertation. It was through my research assistantship that I was able to learn those skills.

Also, in my discussions with Cindy she informed me that her research assistantship was more important to her than any coursework that she had as a graduate student. She said, “My research assistantship experience was much more valuable in almost every regard than my coursework was in graduate school, which I’m sure faculty would be horrified to hear.”

Jane, another minority assistant professor, also made reference to the idea of moving beyond the theoretical, where the research assistantship experience provides an opportunity for students to engage in applied research. She also mentioned that the research assistantship is an important experience which is essential to completing the dissertation. She stated:
I really think that it [the research assistantship] is for the doctoral student to have the opportunity to do hands-on research. I think that students learn very little about methods in methods courses and it’s when they are working on a project or designing a project that they learn how to do research. I think that’s why [research assistantships] are so important. I think for doctoral students who want to enter faculty roles that those experiences are critical to their success in the job market as well. I think it’s also critical for being able to do a successful dissertation. If you have some of that experience conducting research during your assistantships prior to your dissertation, it makes that process [of writing the dissertation] much easier.

There were numerous references in the interviews to the notion that the research assistantship should be an apprenticeship of sorts to learning research in preparation for a career as a scholar, teacher, or researcher. Sue, a Caucasian assistant professor, told me that she preferred to work with students who were in the initial stages of their graduate program, so that they could develop a working relationship as she has done with one of her students. She stated the following when I asked her what her philosophy was of the research assistantship:

That’s a great question. To offer students an opportunity to participate in research projects directly so that they can get their hands wet. I think there is a real apprenticeship type component, so I really see students as developing skills over time. So I see my role as giving them increasing independence as their skills and confidence develop. I think it’s really an opportunity for me to develop a close one-on-one relationship with the students, so I’m pretty picky when I pick students to work with on funded positions. I don’t look for students who are in their last year of their program. I look for students who I can mold and shape, if you will, gosh I sound so Machiavellian, as a budding scholar. There’s one student that I work with now and this is our second year working together, and I feel like our relationship has really developed. We just finished writing a paper together. So I see it as this apprenticeship type relationship that’s both about helping them develop their skills and their thinking and understanding of the academy and the profession and all of those kinds of things.

Marie, who had two research assistantships, often spoke of how her philosophy of the purpose of the research assistantship was formed by observing other research
assistants and through her first faculty position after receiving her doctorate. She felt that she was not given tremendous opportunities, and from what she described to me, it appeared as though she did the professors’ work with no prospects for collaboration. She stated:

Well I guess first of all, that philosophy [of the purpose of the research assistantship] is constantly evolving. I didn’t actually have a lot of apprentice type opportunities as a graduate student myself. Although I nonetheless, I wasn’t deprived. I didn’t have them because I was privileged and that’s because I had two years of pre doctoral fellowship support where I didn’t work for anybody, I just worked on my own stuff. So really much more of my experience regarding research assistantships came from either in graduate school watching other people’s experience because in both of the experiences that I had basically people met with me once at the beginning, said here’s what I want to know about. Go track down everything you can about this topic and then write up a paper. So everything was either from other graduate students, friends, and colleagues who shared what those experiences were like or subsequently now as an adviser. We here at Western University take our commitment to research apprenticeship experiences very seriously and so my philosophy is now one where I believe that students should be apprenticing from the very first days at whatever level they can be useful and productive to research projects and whatever level they can find utility themselves in those research projects. And so my philosophy has been to try to involve students as junior partners depending upon their skill level and to try and make explicit every aspect of the research process and to teach them about research through that process.

In our discussion of the purpose of the research assistantship, Jude, a Caucasian full professor not only told me what activities should be part of the research assistantship but also the drawbacks that research assistants oftentimes face. He stated:

Personally I’ll speak of what I think the research assistantship should be but too often it’s not that. I was lucky that mine were like what I think they should be like. I think that whether or not the person is going to be a faculty member, and most of the assistants that I have are not going to become faculty, they are people who are going to become administrators, policy makers, or support professionals, whatever. Still I think that the idea of the assistantship is to expose people to the process by which faculty frame, gather, and analyze and write up empirical studies. Ideally, it should engage people in a range of features of that process so
they should understand and have a sense of what the questions are, where those questions came from, a whole variety of features of the framing of the research. As well as understanding how that data is gathered and a variety of choices that are made sampling and so on about the gathering of data. And then an understanding and involvement in the analysis of data and then the writing up of it because in the best of both worlds that process is one that teaches people a set of analytical skills for how to come to decisions and conclusions. That’s as useful for a practicing support professional as it is for a faculty member. You have questions, you gather data on those questions, you analyze that data, revise your thinking on the issues because of that data and you write up some conclusions and make some recommendations. So for me the research assistantship should be exposing you to all those, that sort of whole continuum that goes into a research project rather I think it’s probably more typical that people get stuck in isolated parts of that continuum. Maybe they’re copying articles or gathering documents. Maybe they get involved in the analysis but don’t really spend a lot of time talking with the faculty member about what really drives the analysis. In the current climate where we’ve had such a cutback, where we have such a reduced infrastructure in departments for supporting faculty, often times graduate assistants become gophers for faculty members because people often times don’t have a secretary. That’s not a good use of a research assistant.

Noah, another Caucasian full professor, also spoke of the same ideas that Jude did. He told me how his experience as a research assistant, which was positive for the most part, shaped his philosophy of the purpose of the research assistantship:

One point that is interesting is Simon’s theory seemed to be that you use your grad assistants to enable people to do their research work. So he got my dissertation and Tom Smith’s dissertation out of the particular study. I’ve also tried to use that as a model myself. With what little resources we get for grad assistants, I try to get the student to do work that they’re interested in... I came to [the professoriate] with a theory very much like the experience that I described to you. That is to say, the grad assistants in my mind serve two purposes: one is yours and one is theirs or mine. I mean my purpose, I want help on the research and the other thing that I want is for the research to help enable them to grow. I had that experience, I had a wonderful opportunity and I came to Eastern University with that theory in mind. That theory is you use money to get the research job done and you use it to enable the student to build skills.

He continued:
If I see other patterns of using grad assistants in ways that aren't like the images that I'm trying to give from my experiences... I realize how lucky I was. When I see professors treating their grad assistants as gophers, you know I think they must not have been treated nicely as grad assistants... if I didn’t have those early experiences, I do not know if I would be able to do that. There’s no reason why we shouldn’t create opportunities for our grad assistants.

Olivia, a Caucasian assistant professor, spoke of how she felt that research assistants and faculty should be paired according to their research interests. She experienced a dilemma in her first year in the professoriate when her research assistant did not share similar interests as her. She told me the following when I asked her what was her philosophy of the purpose of the research assistantship:

I guess my belief is that a research assistantship should be how to teach people how to do research. To have them actually forming it, learning through experience. And I would hope, to bolster people’s careers, too. I mean, maybe to help them get a publication. Have experiences, either teaching or research, that will help them prepare themselves for what comes next after they graduate. Now that’s the purpose of a research assistantship and how it can benefit a student. Thinking about it from a faculty member’s perspective, I think I spent too much time my first year, worrying about what the student was getting out of it. I mean I changed my entire research agenda to about what she was getting out of it. I’ve gotten some things out of that and I learned some things. I do not think that the professor should change their entire research agenda to try to accommodate students’ interest. I think ideally, the student and the professor should be matched before they even start working together so that they have some common interests, so they are both getting something out of it.

Michael spoke of how he had numerous philosophies of the purpose of the research assistantship—that of a socializing agent, a form of student aid, an opportunity to be mentored, and a medium where students can network with other people in the field. He also noted that these functions of the research assistantship best suit individuals who are relatively young, inexperienced, and recent graduates of master’s programs. He
informed me that the assistantship should probably be tailored to accommodate individuals who have experience and are older. We had the following discussion:

Michael: Well that’s interesting [the question on what is the informant’s philosophy of the purpose of the research assistantship]. I suppose, let’s try category A where the student is a younger student and new to the field and does not have practical experience and is coming right out of a masters program. It’s a lot of socialization in graduate school and academia and is also a way to support the person financially. It is also a way to be mentored and learn how to do research or how to go to the library and look up books and do whatever. In the case of somebody who is in a professional school or in any other school and has come back after many years, it is probably a way of connecting and networking with other people in the field with other people in an institution and in making substantial gains in one’s ability to get the dissertation done. I’m making the distinction between, I don’t know if it’s experience or age but probably experience. And I see it with my students too. If they’re coming right out of a masters program in business administration and they’re 23 years old, they’re different from students of mine who are 45 and 50 years old after they’ve been practitioners or faculty for 15 years or so.

Stephen: So it depends on...
Michael: Experience, yeah.

Eli, a minority full professor, told me that the research assistantship should be a setting where students can apply their research skills learned in courses. He told me:

Well it really is a training... that’s where I learned my trade as a researcher. I had stats courses coming out of my ears, I had methods courses, I had measurement courses all the way to measurement theory... what the project provided for me was the application of all that. That’s where I learned to become a researcher, the other stuff was all the tools. To think like a researcher I learned that on the project, well I had to because that’s what we were doing. When I used to have grants and have doctoral students on my grants, their purpose on the grant was to become practicing evaluators and people who can do research about evaluation. So this is part of your training.

In my discussions with informants on the purpose of the research assistantship, individuals recounted how they believed that their experience was an important form of financial aid, and an avenue where they could craft their own research agenda. As was
the case in the surveys, informants were almost equally divided on how they felt that their research assistantship influenced or shaped their research interests. Other discussions revolved around how the research assistantship experience was instrumental in the informant gaining valuable experience in areas like statistics that contributed to their professional development.

**Different Times, Different Opportunities**

The majority of informants who spoke of how they wished things would have been done differently in their research assistantships were full professors. Many of the informants who were full professors spoke of how they wished that they would have had more opportunities for professional activities, such as conferences and professional associations. Emily, a Caucasian full professor, and I had the following conversation when I asked her if there was anything that she would have changed about her relationship with her supervising professor:

Emily: There are some of us in this profession who have been around since about 85 and feel we have paid our dues because we were sort of slave laborers for two or three years and we didn’t get credit on publications and we had to earn our way ourselves once we completed our degree. I think that’s different now and I guess that’s what I would have changed. I would have liked to have been a little more of a colleague in the sense of writing papers with her and co-authoring published papers with her [my supervising professor]. I guess that’s what I would have changed although I think that was partly the times. My supervising professor was one of the first women in the higher education profession, and I just think that the times were different and she made it the hard way and that’s what she knew even though she believed in mentoring. We weren’t at the point where we are now where graduate students expect more support and co-authorship than they did when I entered the field.

Stephen: But at the time you didn’t feel cheated in terms of publications?

Emily: No, I whined a lot in graduate school, I felt I worked a lot harder than the other graduate students who often didn’t have anything to do. I didn’t feel cheated at all. The professors at Northern University were really well known in
the field of higher education and I got a lot of mileage just being associated with them. She taught me well that what I needed to do if I wanted to survive as a professor if that’s what I wanted to be was to publish and to engage in research. She taught me that that was important, we just didn’t do it. Part of the problem was that she was away on sabbatical during my third year at Northern University, she was in [another country], so we couldn’t do that. After I got [to my current position] we did publish some things from the data that we had.

These discussions corroborate the quantitative findings detailed in the previous chapter where full professors, as compared to the other ranks of the professoriate, gave lower rankings to all areas (with the exception of one) associated with “faculty development.” As also noted in the previous chapter, it is plausible that when full professors were in graduate school, research assistantships did not have as many opportunities as they have had in the recent past.

**Treat Me as an Equal!?!**

When I asked informants to characterize their relationships with their supervising professors either as “student/teacher” or collegial, I often followed up with an explanation on how I defined both of those relationships. “Student/teacher” relationships, I told them, were those where I believed that the graduate student was the only one who was “learning” in the research assistantship experience, while the collegial types of relationships were where both the professor and the student would learn from one another. I must admit that prior to the interviews I had the notion in my mind that the collegial relationships would be “better” in a sense, given that students would probably be regarded more as an equal given in collegial relationships there are probably fewer opportunities for the student to serve as a gopher. My discussions with the informants not only changed this belief, but it also forced me to reflect on my experiences and
relationships that I had with my supervising professors which served me in the most beneficial sense. Cindy, a minority assistant professor, was one of the first people to describe for me how the student/teacher relationship worked best for her given where she was in her own professional development. At a different stage in her doctoral career she felt that the relationship had evolved to something more collegial after she felt that she had something to contribute. We had the following discussion:

Stephen: What about your working relationship with this person?
Cindy: Meaning?
Stephen: Well, was it more of a student-teacher relationship in that you were the only one who was learning or was it more of a colleague type relationship?
Cindy: I think it was more student-teacher, and I think it should have been because there were really huge gaps in my knowledge when I started working with this person. I started working with this person my second year and the person who supervised me my first year I lost contact with. So I really learned the way that she wanted to do things which was fine with me actually because it was good for me to know the kind of way that she wanted to do analyses and write things up and that kind of thing. It took me a while but it probably wasn’t until my third or fourth year when I began to contribute what I thought were good ideas. I might not be giving myself enough credit but that’s what I thought of it.
Stephen: Would you say then that it stayed a student-teacher relationship the entire time you were together or would you say that it evolved into a more collegial type relationship?
Cindy: I guess it was kind of gradual thing. I would say that it was definitely student-teacher relationship my second and third year and then more collegial at the end of the third and the fourth years.

In my personal reflections after this discussion, this was also true of me. When I entered my masters program, I was very much unsure as to what my assistantship would entail. The tasks at hand were very basic, while at the same time providing an excellent foundation to me on the entire process of research. My major professor was involved in a large national study and my involvement in that project where I assisted him with basic, initial tasks for a research project such as literature searches and literature synthesis were
incredibly important to my professional development and understanding of research and what it entails. I quickly learned the importance of publishing, and observed how the relationships that my major professor had with his doctoral students were those where publications were oftentimes products of those working relationships. By the time I got into my doctoral program, despite the fact that I was at a different institution and working with a different faculty member, I felt as though I had developed the necessary skills needed for whatever the task may be—literature searches or writing a scholarly article with my supervising professor.

Olivia told me that she ended up leaving her first assistantship which was working with her major professor because of feelings of inadequacy. When I asked her to describe their working relationship as either student/teacher or collegial, she told me:

With Tom, it was definitely he was teaching me at the beginning. In fact, that's one of the reasons why I ended up leaving that arrangement because I didn't feel like I had anything to offer and we were trying to figure out how I could and he wasn't giving me a lot of feeling like I could. For him it was definitely, he was teaching me at the beginning...

She added at a later point in the interview:

I didn't know enough about the field at that time to suggest that I could teach him anything about the field. I mean, I really didn't know what I was getting in for at all. And that was OK, I'm used to doing those kind of things (laughing). I don't know, I don't think he ever said anything, I think it was the subtle things that reminded me of what our roles were.

In reference to her relationship with the supervising professor in her second assistantship, we had the following discussion:

With Mary, she looked to me as being the expert at [two of my areas of interest] before I knew anything about it. That's not true, not before I knew anything about it... I had read a lot and was using it for my dissertation. She would say something
about [a certain topic] and then look at me as if to say, "Is that right?" ... No she was definitely learning.

Stephen: So from the beginning point of working with her until the end, she treated you as though you were her colleague?

Olivia: Well, it's interesting. With Tom it went where I was the student for sure then I became the co-teacher sort of or colleague at the end. With Mary, it sort of went the other way. At the end, she still thought she was learning from me, I think, she still acted as though what I wrote was good, like I was a valuable part of the research team but she started not treating me like I would treat a colleague. In other words, committing to something and blowing it off.

The manner in which Olivia described these relationships to me illustrated how complex they can be at times given how the student and/or the professor may change. In her first research assistantship with her supervising professor who was a man, it appeared that Olivia was treated like a colleague by the end of her program (even though she was not working with him in an assistantship capacity any longer) and in a personal sense, they got along. It appears as though Olivia respected her supervising professor of her second assistantship who was a woman, yet her interpersonal behaviors eroded Olivia’s trust in her.

Although all of her experiences as a research assistant were not all positive, Marie attested that they worked for her in various ways. We had the following discussion regarding her relationship with her supervising professors in her two assistantships:

Marie: In the first experience there was hardly any relationship. This professor was retired, never around, and somewhat misogynistic. He didn’t really like women. So he needed some help, he needed some library research, he gave me some money but he never told me a thing about what the project was about, what he was going to do with it. So I did the research, gave him a report and never knew what happened. So it was more of a non-event and my relationship with him, there was not any overt problem there just, it was mostly non-existent. The second research assistantship was with my dissertation advisor and that was a really good experience. Professionally, both in this research assistantship and as my advisor of the dissertation [she] was always very supportive, encouraging, sort
of my number one cheerleader. She helped me to see the bigger picture, helped me to understand what I was proposing, and my ideas were bigger picture than I had originally imagined. She gave me feedback on writing as well as ideas. She didn’t micro-manage me ever which worked for me. Personally she was incredibly supportive and I knew that she cared and I knew that she was going to make sure that I got through. She cared about me as a whole person. I experienced a family crisis at one point in the process, and she was very supportive and understanding. And I experienced a health crisis in the process and she likewise was supportive and understanding and accommodating. So it was really quite positive.

Stephen: In reference to your working relationship with these people, would you describe them as student-teacher relationships in that you were the only one who was learning or were they more colleague type relationships?
Marie: The first one was clearly student-teacher. The second one was predominantly student-teacher although my advisor had nothing to do with higher education and I was doing a higher education dissertation. And so she said that she was in unfamiliar terrain on both of those counts and was learning some things, but it clearly was most in the other direction.
Stephen: If you could have changed anything about your relationships with either of those people what would it have been?
Marie: I don’t think that I would’ve. They both worked in different kinds of ways. I guess with the first professor I wish he would have taken more of an interest. In the second one, if something was not working we talked about it.

In all of the aforementioned quotes, there were examples of “student/teacher” relationships and that they worked with the three informants in different ways. In some cases, there were instances of collegiality in research assistantships as well. In this section, I also shared my feelings on how I thought that the student/teacher relationship worked for me at the beginning of my masters program, and how the more collegial type was more feasible during my doctoral education. It appears as though the research assistantship may be more beneficial for both faculty and students if there is an assessment conducted at the beginning of the assistantship. An assessment of the student’s goals, talents, and areas of expertise, and an assessment of what the faculty member is expecting out of the student and the assistantship. As indicated in the quotes
above, it may be more beneficial for a new entering masters student who is relatively inexperienced to be assigned some foundational tasks such as literature searches and synthesis, along with organization of course materials for the classes that the supervising professor instructs. However, a doctoral student who has done some work with statistical analyses and grant writing may serve a faculty member in a different role. I strongly encourage faculty to conduct this assessment and make realistic conclusions about what it is that they expect out of their research assistants and what, in turn, the faculty member can provide to the students.

Effects of the Research Assistantship on Faculty Supervisory Role

Part of my discussions with informants centered on how the research assistantship experience (whether positive or negative) shaped or influenced current relations that informants have now as faculty members with their research assistants. Sue told me that her interactions with one of her supervising professors was very positive and she tried to emulate their relationship with her current research assistant. Also she spoke of the negative aspects of working with her faculty member and how she uses that negative experience to do something positive:

A lot of times when we met weekly. We would just sit around and just yack about the students, the program, the university, life, what’s going on with me, what’s going on with him, and in a way we really became friends and colleagues in a really positive way. I really feel like he trusted me and I felt that we could talk really candidly about politics, the school of ed., all kinds of stuff. So I really try and do that. I don’t hesitate to push students to work and push out some work because I know there were times when I was pushed to crank out some work and I was kind of resentful at the moment because there was always competing demands, but I learned that was more productive and this was to everyone’s benefit. Those are some positive things. There were some things like the time with faculty, I vowed that I would be more available. I try and copy the things
that were positive for me or do them differently if it was things that I used to
complain bitterly about.

Marie had an interesting response to my question regarding how her experience as
a research assistant shaped her relations with her research assistants. She told me:

My experience shaped it a lot, although in sort of diametrically opposed ways. I
didn’t get a lot of direct experience as a graduate student so I’ve tried to provide
more direct experience. And since I didn’t have it, it’s been a learn-as-you-go
construction of that relationship. I’m in my eighth year now at Eastern University
and I think I’m a heck of a lot better now than I was in the beginning. In the
beginning I really had no clue how to use assistants and what I’m engaged in at
this very moment is a six week project from start to finish where I’ve got
something on the order of eight or nine graduate students working with me. Every
once and a while they will do interview kinds of basics, and there are four of them
who are working full-time with me now on this research project. So I’ve learned
a lot about care and nurturing of graduate students and kind of filling in the
context for them about why something is happening in a given kind of way. On
the other hand I learned probably more from successful and unsuccessful practices
in the early years than I did in my own graduate experience. And occasionally I
will contact a colleague and say I’m having this problem tell me what you think
and what’s your experience been? My graduate experience worked for me. I
mean I got my dissertation done, I got support when I needed it. It taught me
research but it didn’t teach me the process of teaching researchers and it didn’t
teach me the process of colleagueship in research. Those I had to learn post-
graduation.

One of the most lengthy and interesting discussions was with Olivia, when she
discussed her relationships with her supervising professors. When I asked her how her
relations with her supervising professors influenced her relations with her research
assistants, she told me:

Well, unfortunately I think I went overboard during my first year in the
professoriate because I felt that I was treated pretty crapily toward the end of my
program. I wanted to make sure that [my first research assistant] got everything
out of the experience as she possibly could and so I did whatever she wanted to
do. We talked about it and went with that, not totally out of my realm of interests
but in a different way than I would have gone otherwise. I didn’t want to do to her
what I felt had been done to me because I did not leave either one of them feeling
good about it. I left the second one, with Mary, feeling good about the work that I had done but not about the whole arrangement, and I didn’t want [my research assistant] to leave with those same feelings. I try to see people as real people but I think I almost went overboard with that in the first year. It was almost like we switched roles. My productivity during my first year was lessened because I was trying to make sure that she was doing OK. And that’s something that I am trying hard not to do [again], and I think I’m doing OK (laughing). I don’t feel like I’m bending over backwards for my GA at all.

She continued with an anecdote on how one of her supervising professors committed to writing letters of recommendation for her but she continually delayed doing so. The professor had even gone so far as to not send in a letter causing Olivia to miss a deadline for a position and subsequently not be considered as a candidate for a job. When she mentioned this to her supervising professor, Olivia said she was told the following:

She said, “Oh, no, they don’t really care about those letters.” And I said, “Well they told me that they did not consider me because they said my application wasn’t finished.” And she blew it off like that wasn’t the case and that wasn’t true. She did not have respect for the position that I was in at that time. I would do everything for her. I would do the letter, I’d print it out, I’d do everything around it, stamp the envelopes, everything. Finally, we got it out on the table and I said, “I won’t ask you anymore for these letters and I know that, but could you follow through in your commitment to do this one last one,” and she never did. But at that point too when I said I will not ask you to do anymore, she said, “Oh well you can ask me to do more,” and I’m like “Oh, God, lady you do not get it” (laughing).

She continued:

With the dissertation, she told me how good she thought my writing was and gave me lots of accolades in that area and how much she learned from my writing. And when I was trying to get feedback on my dissertation before I defended, I kept asking her and waiting for this — and she had it for months and months — and finally she said something about I haven’t read it yet because she trusts Tom’s judgment. I said, “When are you planning to read it?” and she said, “Olivia, to be honest with you I’m probably going to read it the night before your defense.” She had had it for months and months at this point and I was sort of waiting for her feedback to schedule and she just kept putting me off and I’m not going to say lying, but doing everything but lying. And also when you receive praise from
somebody for something and then realize that they had no basis on which to judge their praise or base their praise, it's a sick feeling realizing the way you felt about yourself was built up to a certain degree and then knocked down because they were lying. One thing in your research that I will be interested to find out is the degree of emotional hold that people that research assistant advisors or the professors involved in that relationship have over the graduate students. I hope that I will never do anything that will make my research assistant want to go and scream. The only times that I cried in graduate school, I don’t cry a lot, were around relationships with these two people. So for me, there was this weird power stuff that I just get so frustrated with. With Tom it was his comments that he made that he might not have known. With Mary it was her not following through on commitments and her treating me like dirt sometimes, so I would be very interested to see if other people have had that experience. And on the other hand, I say it is an essential experience to get to the professor position, so how do you do that? Because it is dysfunctional probably (laughing).

Many of the informants spoke of how their mostly positive experiences of their research assistantship did influence the structure of the research assistantship that they currently supervise. There were references to how individuals used negative examples of experiences from their research assistantship to craft more meaningful experiences for research assistants that currently work for them. In summary, informants felt that their experiences as a research assistant, whether positive or negative, in some manner shaped or influenced the situations present in the research assistantships that they currently oversee.

Critical Theory Question One

What role does gender play in the research assistantship experience?

For the first critical theory research question, two themes are discussed. First, the role that gender plays in the working and personal relationships between faculty and research assistants is discussed in detail. Second, I then feature discussions with selected
informants on how they perceived gender to influence opportunities that were available to
research assistants while they were in graduate school.

**Gender Influencing Working and Personal Relationships with Supervising Professors**

Part of the discussion in the qualitative interviews centered on whether the
informant felt that being either the same or different sex from their supervising professor
affected their working and/or personal relationship(s). Many interesting discussions
developed as a result of our discussions regarding equal treatment, opportunity, and same
sex working relationships.

In one of the interviews, an informant noted that there were certain expectations
placed on women faculty by their advisees and senior faculty strictly because they were
women. Sue, a Caucasian assistant professor, and I had the following discussion when I
asked her if being the same sex as her supervising professor affected their working
relationship at all:

Sue: That’s an interesting question. I think it affected my working relationship
with the first person who was my chair and stayed my main advisor and chair
throughout my program [she worked with this individual in one of her research
assistantships]. Toward the end I have to say that I had expectations of her and of
our relationship that had to do with the fact that she was a woman. I expected her
to be more friendly, nicer, and more accessible to me. And I came to realize that
that was partly about the fact that she was also a woman. It became clear to me
because in a lot of ways she was not those things and I was pretty upset about that.
I would say things near the end like, “I really need to sit and talk to you about my
dissertation,” and I would get a response like, “Oh, I think you’re doing fine so
let’s not meet for another month.” Then I would say to myself, “OK, that’s not
what I just said... why aren’t you available to me?” I think I understand now
differently all the things that she was trying to manage and how precious time is
as a faculty member, in ways that I did not appreciate at the time. But I still say
that I’m not going to do that.
Stephen: Do you think had you been a man that she would have responded to you differently?
Sue: Oh God, did we have endless conversations about that? Possibly.
Stephen: Did you notice any special treatment that she gave to male students?
Sue: She had advisees who were both men and women, but there was one student who was highly favored for several years during the time that I was there who had an entirely different relationship with her than the rest of us did. I also have come to understand that perhaps a little differently than I did at the time, after I've seen myself turn around and develop special relationships with one or two students. But it felt to us at the time that he was awarded a very privileged status. She introduced him differently to people, they would go to dinner with important people at conferences, the rest of us she barely had time to say hello, that kind of thing. He was a man, but that doesn't mean that there weren't other men who she had that also felt that they were outside. It wasn't quite that simple but there probably was a piece of it in there. I'm telling you we discussed this a lot in a way that graduate students will dissect the activities and behaviors of faculty. It's quite odd being on the other side now knowing that that must be going on.

Brandon, a Caucasian full professor, spoke of how sexual desires and ambitions played a part in the dynamics of working relationships between men and women. When I asked Brandon if he thought that being the same sex as his supervising professors (he worked with two men) affected their working relationship any, the following dialogue ensued:

Brandon: It made it much easier (laughs). When I was a graduate student there were a large number of women students who were in one way or another engaged with -- either out of desire or not out of desire -- with male faculty. That obviously complicated relations, whether it was wanted or unwanted on the part of the female graduate student. Being a graduate student who is the same gender that pretty much simplified, you don't have to deal with those things. It was something that never crossed my mind, but if I was a woman it would have crossed my mind because I had peers who were really getting ripped off by faculty. So yeah, I think it makes a difference.
Stephen: So you feel that you would have been treated differently had you been female?
Brandon: I don't know if I would have been treated differently. I think I would have had myself to think about things that because I was a male working with a male I didn't have to think about. I didn't have to think about what I was going to wear into the office. I didn't have to think about if I was meeting someone at a
certain time, whether or not that was appropriate. I didn’t have to think about, “Well, is he making that comment because he is coming on to me?” I don’t know if there would have been any systematic pattern of difference in the treatment. I suspect that there has to be some pattern of difference in the treatment because women are getting, well at least in the program that I was in, clearly they were getting hit upon, and men were not. So in that respect there is a difference. As far as the nature of the work, that’s not something that I have any sense of. You know if I was a woman, whether they would have been asking me to get coffee and take notes. For me the more salient stuff was not even harassment but the fact that the gender relations were involved. Not just student/faculty but you are male/female, and the male has more power.

Noah, a Caucasian full professor, noted how he considered himself a minority in the environment where worked as a master’s student. He told me the following when I asked him about how being a man affected his working relationships with his supervising professors:

Sally was very much a feminist and she worked with a lot of women as did Thomas. That environment, the minority, social action oriented, I was a rare student. I think that the reason that they worked with me was because of those sensitivities [social justice concerns] that I seemed to exhibit. This was very social action oriented at Eastern University and being white male was rare. It was more likely for women and minorities to be working there. I was aware of that too. They [my supervising professors] were both white and they had high social justice concerns, and I think in that sense it would not have made any difference as a female there.

Emily, a Caucasian full professor, spoke of the close relationship that she and her supervising professor developed. However, she was a bit hesitant to attribute this relationship to gender specifically. As was the case with some informants, the relationship was oftentimes attributed to factors that were “more than just gender.” She spoke of how her supervising professor was cognizant of the importance of mentoring when she said:
I certainly believe that we developed a closer personal relationship than we would have had I been working with a man. Well that’s not necessarily true. I’m working with a dean now who’s a woman but not a very personable person. I think my advisor believed that it was important to promote women doctoral students. She had written about the notion of mentoring and she believed it, and we happened to get along so I think those things made a great deal of difference. I think it’s theoretically possible that just her gender would not have made the difference. It was more than just her gender, it was her view of the assistantship and we happened to sort of hit it off personally. But I do think she was supportive. She had a rough go of things as a junior professor at a previous institution so she was very supportive of women in general and it must have made a difference I think. The male professors at [here she names her institution] were just different and I got along with them fine and they were very supportive but just in a different kind of way.

As noted in the previous chapter, men were more likely to be in same sex working relationships (85.2%), while women equally worked with both men and women. On several instances, informants spoke of situations where men faculty only worked with men graduate students and women faculty only worked with women graduate students. Also, there were discussions where research assistants recounted how men faculty did not work with men graduate students. The following dialogue ensued between Marie, a Caucasian associate professor, and me when I asked her if she thought she would have been treated differently had she been a man working with the professor (who was a man) in one of her assistantships:

Marie: Oh, very differently. He made overtly misogynistic statements, not to me personally but in classes that I was in. And he completely sponsored male graduate students that he worked with so that he would introduce them to people around the country, colleagues, senior people, people who could help them get jobs. He would write with them so they would get publications. He wasn’t in a good place in his life. He did have an issue with women. He had a long history of not working with women, he made repeated misogynistic statements. I had the visible presence of more advanced doctoral students who were male and working with him. It seemed to me that on a scale of things with him I had a positive relationship for a woman, in its non-eventness.
Stephen: What about the second assistantship? Had you been male do you think that she would have treated you differently?

Marie: One piece of folklore at my graduate institution was that my dissertation advisor [also the supervising professor of her assistantship] didn't work with men. Now I know that the very first graduate student that she worked with was a man. But I think that would have made it harder because she definitely worked better with women. There were very few men that she connected with, bonded with, worked with at least in a faculty-student relationship because she certainly had male colleagues. It's not that she worked exclusively with women but those were more productive relationships as I saw them from the outside and they were more plentiful.

Michael, a Caucasian associate professor, described for me how his supervising professor was chauvinistic and worked better with men. He then told me about how a woman took his place as a research assistant and was not given the same opportunities as he was despite the fact of her expertise in statistics. However, Michael did not attribute this difference in opportunities to gender or the fact that his supervising professor was sexist, only that this woman research assistant did not share similar research interests as the supervising professor. Michael told me:

Michael: That's a funny question (laughs). We slept in the same room when we traveled so I don't think I would have been doing that if my professor was a female (laughs). We golfed together, and he was very much a male-oriented person so I think it would have definitely affected the relationship had I been female. I know he had a research assistant after me who was female. Brad is somewhat chauvinistic and old-school. He's not a young man, he's retired and a professor emeritus now. I think it would have changed our relationship significantly.

Stephen: This woman who took your place as a research assistant when you completed your degree, did you know her? Did you know what experiences she was being given? Was she being given the same opportunities as you were?

Michael: No. Although she turned out to be a professor of higher education as well, she was not interested in the same topics as Brad was interested in. She was basically there to help him out with teaching and course materials and odds and ends. She had another contract to do because she had become fairly proficient in statistics so she was doing some statistical work and being paid from that contract.
So I would say that she was more of the typical graduate assistant in that she was doing chores and assisting, more administrative type things.

Olivia, a Caucasian assistant professor, described for me how she believed gender influenced her relations with her supervising professors:

Well, Mary did not hire men, [she] only worked with women. So I wouldn't have been working with Mary. Tom (laughing) hired one man that I know of and they did not have a good time of it. I think because they were competing... because they were competing with each other, and Tom was not treating him with respect. [The research assistant] was a friend of mine and I heard the stories, so actually I may have fared better in that setting because I was a woman. Let me back up on that though. [With] those two people, yes, but within the entire context of the department, men had as many opportunities as women because there were a lot of people who worked primarily with only men, and that's just another way that it happened. But in the context of these two people who I worked with, yeah, as a woman I think I had a better chance.

Interestingly, Olivia felt that with the two people whom she worked for, she fared better as a woman. In the larger context of her department, though, she felt that men and women had the same opportunities at working with faculty.

I had a lengthy, interesting discussion with Cecilia on how she felt that gender influenced the expectations that were placed on her supervising professor who was a woman and herself as a research assistant. When I asked if she felt that being the same sex as her supervising professor affected their working relationship, the following conversation followed:

Cecilia: Yeah, I do. I think that it did because there was probably a feeling of responsibility on the part of my supervisor to sort of bring another woman along. She has a really good reputation, so I think I felt a sense of responsibility there that I would’ve felt had it been a man. I think there was probably a lot of unspoken pressure to make sure that somebody comes out OK. As the student that you are being molded appropriately and that, in reverse, that you make sure you are going to come through in a shining way because this other person’s reputation is on the line and I’m not sure that would have been true in the same
way had she been a man. It wasn’t the same kind of thing when I worked with some of the male faculty in assistantship responsibilities at Northern University at the time.

Stephen: I’m not quite following the pressure on her that you are referring to.

Cecilia: It was her responsibility to make sure that her graduate students particularly the women or people of color that she was advising would be right out there up in the front, you know real solid dissertation topics, making sure that they were being socialized appropriately. I don’t think her behavior was necessarily any different with any of her white male students but I think probably the feelings about it were different. When you work closely with somebody you get a sense of how they’re feeling about things as well as what they think about them.

Stephen: So you’re saying that there were different expectations for her because she was female as opposed to what was expected for male faculty?

Cecilia: Absolutely. No question about that. In return there were different expectations put on her female research assistants. I don’t know that that would be confirmed by her or by any of the men that were there at the time. But there was no question that that was true.

Stephen: So you think she put the expectations that were placed upon her on her research assistants?

Cecilia: I think so.

Stephen: Do you think that this individual would have treated you differently had you been a man?

Cecilia: I think so. Obviously I don’t know that. I don’t think the opportunities would have been any different but I’m not sure that I think that is true. I think the experience would have been very beneficial had I been male. I think it was different because I was female and I was willing and I was interested in some of the same topics so I think the combination of factors set out some different expectations. I don’t think there was a same license to screw up big time as there would have otherwise been, some of that was self-imposed and some of that was tacit expectations, sort of you’re my graduate student and you don’t do that.

The discussions with informants regarding how they felt that being the same or different sex from their supervising professor led to some of the more interesting discussions. The idea of different expectations for women faculty and women research assistants, sexual desires in working relationships, misogynist supervising professors, and different sexual orientations between research assistants and their supervising professors...
were just some of the topics featured in the above outlined discussions that demonstrate the complexity of how gender plays an prominent role in student/faculty relationships.

**Gender and Opportunities as a Research Assistant**

Ben, a minority assistant professor, went into great detail about how he felt that opportunities for both men and women were equal in his department. When I asked him if he felt that he would have been treated differently if he were a woman he responded:

That’s a good question. I guess the only way to answer it is to compare it to the women who were working in the institute at the same time as me. The added layer to this, and it’s important, is that my advisor and another professor both oversaw the whole team, and the other professor is a woman and very in-tuned with feminist issues and issues of equity. I never saw any evidence whatsoever that there was a gender difference in terms of the way that people were treated especially in terms of the ways that opportunities were dished out. They were equal opportunity slave drivers and they had no problem whatsoever of giving everybody a lot of work.

There was only one reference in the interviews where an informant stated that she thought men had more opportunities in research assistantships than did women, yet she did not give specific rationale as to why she felt this way. Cindy, a minority assistant professor told me:

In my department, it was clear that the male students tended to have more advantages with regard to working with faculty members. So I guess I consider myself lucky since I was able to form the relationship that I did though I’m a woman. So I’m not sure what the case would have been, I suspect that I consider myself successful in terms of my graduate experience I don’t think I would have been less successful had I been a man.

As noted earlier, critical theory seeks to unearth discriminatory practices and/or systems and strives to begin the process of change. In that regard, critical theory was useful because in analyzing the data from the interviews as demonstrated in the previous quotes,
there were numerous instances and examples where informants recounted instances from their research assistantship experiences were gender seemed to influence or play a role in that experience. I should also note that I found no consistent patterns that would lead me to believe that men and women had extraordinarily different opportunities in their assistantships that served to their disadvantage at a later time in their career given that this sample, for the most part, felt otherwise.

Also, I was particularly interested in how the effect of the research assistantship on subsequent career opportunities varied by gender. From the qualitative analysis, I can conclude that the effect of the research assistantship on subsequent career opportunities for men and women were quite positive and promising. Individuals who entered academe upon completion of their graduate degree and held a research assistantship felt that they had numerous opportunities that served to train, socialize, and prepare them for a career in a faculty role. Also, I have also found instances where individuals, both men and women, have felt that their assistantship was not as beneficial as the majority of other informants believed, and I provided their reasons for thinking so. My data showed no consistent patterns that document preferential treatment or inequality from opportunities that both men and women in this sample were presented in graduate school through their research assistantships.

**Critical Theory Question Two**

What groups currently benefit most from existing opportunities?

It appears that the group that merits most attention in terms of promoting career opportunities would be minorities. It is evident that the small number of minorities in
this sample is indicative of similar figures in the number of individuals who receive
doctorates and who occupy the ranks of the professoriate (The Chronicle of Higher
Education, 1999). Minorities (American Indians, Asians, Blacks, and Hispanics) make
up 20.4% of all individuals who receive doctorates, and an even lower percentage, 17.7%,
receive their doctorate in education related fields. Minorities also make up 15% of full-
time faculty members (at all ranks) in institutions of higher education (The Chronicle of
Higher Education). In my research, minorities made up 22.2% of the sample, with
Caucasians comprising 75.3% (2.5% did not indicate their race). Interestingly, out of the
61 Caucasians, 37 (60.7%) served as a research assistant, while 24 (39.3%) did not. The
percentages for minorities are not as high given that out of the 18 minorities in the
sample, eight (44.4%) served as research assistants, while 10 (55.6%) did not. In my
research, while quantitatively minorities may be under-represented as research assistants,
minorities who held research assistantships appear to have been given similar
opportunities as were other groups in my sample based on my discussions with minorities
in the qualitative interviews. This leads to an interesting point: once minorities gain
access into research assistantship positions, they may have experiences similar to those of
majorities, yet it may be more difficult for them to gain access into these positions. I call
on the reader to return to the previous pages where minorities like Ben and Cindy spoke
of how their research assistantship was so influential in their becoming members of the
professoriate (see the early sections of Chapter Six), as was the case with majority
informants. Ben spoke of how his research assistantship presented him the opportunity to
attend conferences and present his research which he deemed very important to his career

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and his aspirations of becoming a faculty member. Also, readers should refer to the results of the survey analysis where in numerous cases, minority respondents gave higher ratings to survey items than majority respondents. In particular, minorities had significantly higher mean responses, as compared to Caucasian’s responses, to several of the items in the faculty development section. In summary, I could not discern differences in opportunities that placed certain groups at an advantage over other groups. However, the quantitative data from this study and from other sources show that minorities are at a disadvantage proportionately when juxtaposed with majority individuals.

Chapter Summary

In this chapter I have presented the results of the research questions from the interpretivist and the critical theory paradigms. Two themes related to the first interpretivist question regarding how the research assistantship has influenced the decision of higher education faculty members to enter the professoriate are discussed. In this section, I also discussed how some informants who were trained in Research I institutions felt that their research assistantship had prepared them for roles in faculty positions at only those types of institutions.

In the second interpretivist research question through the use of four themes, I discussed how informants differed in their assessment of the purposes, advantages, and disadvantages of the research assistantship. Informants examined how their experiences, both positive and negative, helped them craft a philosophy of the purpose of the research assistantship. Informants who were full professors discussed how they felt that their research assistantship experience was limiting in some aspects given that they did not
have the opportunities for professional development that research assistants of today have (a finding similar to one discussed in Chapter Five). The roles of student, teacher, and colleague are discussed as well as the effect of the research assistantship on the informant's faculty supervisory role.

The first critical theory research question addressed how informants felt that gender played a role in the research assistantship experience. Also discussed are informants' opinions on whether or not opportunities through the research assistantship were similar for both men and women. I then conclude this particular section with the second critical theory research question which asked which groups currently benefit most from existing opportunities.

The following chapter will summarize the major points of this study and present some conclusions based on the overall findings. Suggestions for future research are also presented.
The purpose of this research was to explore the relationship between the research assistantship and development of higher education professors as researchers. I also examined the ways that these experiences varied based on gender and other factors such as rank, age, and race. The following quote by Worthen and Gardner (1988) served partially as the impetus to this research:

Knowledge of specific assistantship variables and their relationship to subsequent career development in research is needed badly to enable research trainers to determine the extent to which the assistantship provides genuine and useful research apprenticeship experience. (p. 3)

For the conceptual framework of this study, I drew on literature focusing assistantships, gender equity, and higher education programs. Critical inquiry (Sirotnik & Oakes, 1986) is used as the theoretical framework for this study, and it incorporates the use of both quantitative and qualitative means of data collection. Colleen Capper (1993) describes the three areas in critical inquiry as structural functionalism, interpretivism, and critical theory, and it is these three areas that I used to frame the research questions for this study. Critical inquiry was particularly useful for this study given it incorporates multiple methods of data collection and the use of multiple methods of analysis for interpreting these data. I feel that my study would have been “restricted” in a sense had I conducted it from strictly a positivistic or qualitative paradigm given that many of the findings would have gone undetected.

The data for this study were collected in two phases. Phase I was conducted by surveying professors of higher education in Research I institutions. It is these data that
were used to answer the structural functionalist research questions. Phase II consisted of the qualitative interviews conducted with selected informants, and the data from this phase of the study are used to answer the research questions in the interpretivist and critical theory paradigms.

**Phase I**

Professors of higher education in Research I institutions were surveyed to assess their research assistantship experience and its role in their development as a researcher. The data from the surveys were analyzed using SPSS for Windows, and descriptive statistics, Chi Square, MANOVA, ANOVA, t-tests, and tests of proportions were the statistical procedures used. The null hypotheses addressed in this paradigm are as follows:

Null Hypothesis 1: There is no difference in the distribution of men and women who serve the various ranks of the professoriate in higher education programs.

Null Hypothesis 2: There is no difference in the distribution of men and women professors of higher education who either served or did not serve as a research assistant in graduate school.

Null Hypothesis 3: There is no difference in higher education professors’ assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher.
The questions for phase I are as follows:

Structural Functionalism Questions

1. What is the frequency distribution of professors of higher education in Research I institutions based on gender and rank?

In the entire sample, there were 44 full professors (55%), 20 associate professors (25%), and 16 assistant professors (20%). Thirty-three full professors were men (75%), and 11 (25%) were women. This resulted in a total of 44 full professors, comprising 55% of the sample. At the associate professor rank, there were eight (40%) men and 12 (60%) women, where women associate professors were the second largest group in the sample. In aggregate, associate professors were 25% of the sample. Assistant professors made up 20.0% of the sample, with six men (37.5%) and 10 women (62.5%).

As noted in Chapter Five, the results of a Chi Square test of independence reveal that there are significant differences among the distributions of men and women in the various ranks of the professoriate, \( \chi^2 (2, n = 80) = 10.68, p < .10 \). It appears that while women may represent a majority at the assistant and associate professor ranks, accounting for 62.5% and 60% respectively, the same cannot be said at the full professor rank where women account for only 25% of this particular group. Therefore, Null Hypothesis 1 is rejected. This finding is similar to findings of other studies (Blum, 1991; Chliwniak, 1997; Schneider, 1998) mentioned in Chapter Three which note that for all disciplines, women are underrepresented at the ranks of full professor. Future research should explore why this discrepancy exists in higher education programs. Is it that women are denied admission to the top ranks of the professoriate at rates unequal to those of men?
Or is it that the recent influx of women into higher education faculties has not yet been felt at the full professor level? These are questions that future research should strive to answer.

2. What is the frequency distribution of professors of higher education in Research I institutions who served as research assistants during their graduate education?

Fifty-eight percent of the sample served as a research assistant at some point during their graduate education, while 42% did not. Of the research assistants, 27 (57.4%) were men, and 20 (42.6%) were women. Similarly, twenty of the 34 individuals who were not research assistants were men (58.8%), and 14 (41.1%) were women. The results of a Chi Square test indicate that there are no significant differences in the distributions of men and women who either served or did not serve as a research assistant, $\chi^2 (1, n = 81) = .02, p > .10$. Therefore, Null Hypothesis 2 is not rejected.

For me, this was one of the more surprising findings of my research given that the literature had numerous references to the fact that in many disciplines women were not represented equally in the roles of research assistants thus inhibiting their opportunities to serve as faculty. While the results of the statistical test revealed that the difference between the numbers of men and women who served as research assistants is not statistically different, the numbers themselves indicate that women may need more opportunities at becoming research assistants (since 20 women made up 43% of the research assistants, and 27 men were the remaining 57%). I make this suggestion based
on the importance of the research assistantship experience for individuals in the professoriate as illustrated through the quantitative and qualitative findings.

3. How do faculty (who held a research assistantship) of higher education programs in Research I institutions differ in their assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher?

The results of the MANOVA on the faculty development dependent variables did not yield any significant multivariate effects for the independent variables of interest—gender, rank, and the interaction of those two variables. Therefore, Null Hypothesis 3 is not rejected, and it is concluded that there are no differences in the various groups' assessment (based on gender, rank, and the interaction of gender and rank) of the contribution of the research assistantship to their development as a researcher. However, significant differences in responses on the faculty development items in segment two using age and race as the independent variables were found. Therefore, the third null hypothesis would be rejected in both cases, and it would be concluded that there are significant differences among the various age groups, and between Caucasians and minorities in their assessment of the contribution of the research assistantship to the various areas associated with faculty development as a researcher. In other words, minorities, as compared to Caucasians, had significantly higher mean scores on several of the items in this section. The same was also true between the various age groups in the sample.
Are there similar trends in other disciplines regarding how minorities and Caucasians differ in their assessment of the contribution of the research assistantship to the various areas associated with faculty development? The difference between Caucasians' and minorities' assessment of the contribution of the research assistantship to the various areas associated with faculty development certainly merits further exploration in future research not only in higher education programs but in other disciplines as well.

Item 3.3 on the survey which asked respondents to rate the level of contribution that they felt their research assistantship had on their becoming a competent researcher had a significant univariate value indicating a significant difference among the various age groups of the sample on this item. The post hoc tests on item 3.3 revealed that the age group 50-59 differed significantly from the other groups given that this group had a mean score that was considerably lower than the other groups. As noted earlier, this is probably due to the fact that opportunities in research assistantships at the time that this group was in graduate school may have been somewhat limited. Item 3.5 which asked respondents to rate the level of contribution that the research assistantship had on their ability to make formal presentations of research at professional meetings, also had a significant univariate value. Post hoc tests revealed that the 20-29 year old age group had a significantly higher mean score from the other age groups. This finding is indicative of more recent opportunities through research assistantships given the emphasis of the importance of publications and presentations for success in a faculty career.

The results of the univariate analysis for the faculty development items using race as an independent variable yielded significant differences in responses for item 3.3 and
item 3.5. The mean scores of Caucasians and minorities are presented in Table 5.8. Minorities had a significantly higher mean score than did Caucasians on both item 3.3 and 3.5 indicating that minorities more often indicated that their research assistantship experience prepared them to be competent researchers and to be able to make presentations of research at professional meetings.

Table 7.1 — Major Findings from Phase I

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■ = indicates that significant differences exist between/among groups based on the specified segment or item.

Segment II - Faculty Development
Segment I - The Influence of the Research Assistantship on the Academic Career
Segment III - Research Assistantship in General
Segment IV - Supervising Professor

Item 3.15 - Did your research assistantship and/or your interactions with your supervising professor change your research interests?
Item 3.17 - Was your supervising professor your academic advisor/major professor as well?
Item 3.18 - Gender of your supervising professor.
Item 3.19 - Did your research assistantship and/or your interactions with your supervising professor change your career goals?

For segment one, which asked questions regarding the influence of the research assistantship on the academic career, the results of the structural functionalism analysis revealed significant differences between men and women when asked if they believed the...
research assistantship was an influential factor in their decision to enter the professoriate. Specifically, women had a higher mean score to this item indicating that they more frequently agreed with the statement that the research assistantship was a very influential factor in their entering the professoriate. It is difficult to tease apart why women felt so strongly regarding this item given that in the qualitative interviews, men and women both had similar accounts of how important the research assistantship experience was on entering the professoriate.

Segment three, which had questions regarding the research assistantship in general, had significant differences between the responses of assistant professors and full professors when the respondents were asked to rate the financial stipend provided by the research assistantship, and when asked to indicate an overall value to the research assistantship. Assistant professors had significantly higher scores on both of these items than did full professors. This finding may be indicative of an increase in the financial awards associated with research assistantships. Future research could examine how financial stipends have changed over time and how these awards vary by discipline. This would possibly give more explanation to this particular finding of my study.

Stratifying the sample by gender and rank, numerous groups differed significantly in how they rated the financial stipend provided by the research assistantship. Men full professors and men associate professors differed significantly from numerous other groups in that the former groups had a much lower mean score to this item. Men assistant professors had a significantly higher mean score on this measure when comparing the responses with women full professors. Both women associate and women assistant
professors had significantly higher mean scores on item 3.7 (regarding the adequacy of the financial stipend associated with their research assistantship) as compared to women full professors.

The other significant differences were between men and women on item 3.17 which asked respondents if their supervising professor of their research assistantship was also their academic advisor. Men were significantly more likely to work with their academic advisor in the research assistantship. By gender and rank, men full professors were more likely to work with their advisor as compared to almost all of the other groups. Men associate professors were more likely to work with their advisor in the research assistantship as compared to women full professors and women assistant professors. This finding leads me to ponder several questions: What are the implications of these types of relationships for men and women? Are men at an advantage given that they more oftentimes work with their academic advisor in an assistantship capacity? Are these same advisor/supervising professor relationships more beneficial for all students and in what ways?

Respondents were asked to indicate the gender of their supervising professor. Men respondents were significantly more likely to work with men faculty, as were full professors (as compared to assistant professors). Men full professors were also significantly more likely to work with men faculty as compared to women associate and women assistant professors. Men associate professors, as compared to nearly all the other groups, were also more likely to work with men faculty. Given that the majority of the 20-29 year old age group worked with women faculty in their research assistantships,
these individuals differ significantly from the 40-49 and 50-59 year old age groups in that the latter two groups more often worked with men faculty. This finding is certainly indicative of changing demographics in the composition of university faculty in that in recent years more women have entered the ranks of the professoriate thus allowing for more opportunities for students to work with women faculty.

Assistant professors were significantly more likely to indicate that their research assistantship and/or their interactions with their supervising professor changed their career goals, when comparing the responses with associate professors. This finding may be indicative that there is and has been more socialization into the role of the professoriate through research assistantship activities. Women associate professors were significantly more likely to indicate that their career goals were not changed as a result of working in their research assistantship than were women assistant professors. The 30-39 year old age group, as compared to the 40-49 and the 50-59 year old age groups, were also significantly more likely to indicate that their career goals were changed as a result of working in their research assistantship.

As shown in Table 7.1, item 3.9 (which asked respondents in retrospect if they would choose a research assistantship again), segment four (questions regarding the informant’s supervising professor), and item 3.15 (which asked respondents if their research assistantship and/or their interactions with their supervising professor changed their research interests) were the three only items that did not have any significant differences between/among groups in their responses.
Phase II

For Phase II of the study, 21 qualitative interviews with selected professors of higher education were conducted, and for this study 14 of these interviews with informants who served as research assistants were used for the qualitative analysis. Data were analyzed using the grounded theory approach (Glaser & Strauss, 1967; Strauss & Corbin, 1990) and the constant comparative method (Lincoln & Guba, 1985) for qualitative data. The research questions for Phase II are described in the following sections.

Interpretivism Question One

The first interpretivist question is stated as follows:

In what ways does the research assistantship influence the decision of higher education faculty to enter the professoriate?

I used two interrelated themes to address this particular research question. First, I discussed how the research assistantship is used as a means to enter the professoriate based on informants' accounts as to how this occurred for them. For many of the informants, they had no intention of entering the ranks of faculty, yet through the activities of their research assistantship they learned that being a faculty member was certainly an attractive option for a future career path.

Through the second theme, I discussed how the research assistantship was problematic for some informants given that they thought it was misleading as to what the professoriate might be like at other types of institutions other than the one where they were trained. I suggest that faculty at Research I institutions engage research assistants in
an array of activities that will not limit them in considering career options other than those of becoming university faculty. Exposing them to an assortment of administrative, teaching, and research tasks will probably serve them in a more beneficial way.

**Interpretivism Question Two**

How do higher education faculty who served as research assistants vary in their assessment of the purposes, advantages, and disadvantages of the research assistantship?

Four themes are used to discuss the second interpretivist research question. First, informants gave their perceptions as to how their experience as a research assistant helped them develop a philosophy of the purpose of the research assistantship. Many informants spoke of how they felt that the research assistantship should be a means where students learn the act of doing research, while other informants felt that its purpose was one of financial aid, preparation for completing the dissertation, and an avenue where an individual could craft a research agenda. I then focused on discussions with full professors detailing how they believed they had limited opportunities in their research assistantships as compared to what is available today to graduate students (this is a similar finding from the quantitative analysis). Also in the discussions on this question, I discussed how either student/teacher or collegial relationships work to benefit or restrain research assistants. I also featured discussions with informants on how they believed that their research assistantship influenced their current faculty supervisory role. I concluded this section with recommendations for faculty on how a research assistantship may best serve both the student and the supervising professor. I recommend that an assessment be
conducted initially at the appointment of the student to the assistantship. This will illustrate the student’s goals, talents, and areas of expertise, along with detailing what the faculty member is expecting and/or requiring from the student. This will allow the faculty member to determine what types of tasks/activities to engage the student in that will serve of maximum benefit to the student, and to make realistic conclusions about what it is that they expect out of their research assistant.

**Critical Theory Question One**

What role does gender play in the research assistantship experience?

I discussed three themes for this particular research question, one of which centers on how gender is a factor in the working and professional relationship between research assistants and faculty. The quotes suggest that women faculty may have different expectations placed upon them just because of their gender, and that both men and women faculty may demonstrate favoritism to men students. Yet, there were examples of working relationships where men faculty and women graduate students worked very well together. Sexual desires, misogynistic supervising professors, and different sexual orientations between research assistants and their supervising faculty were some of the other areas illustrated in the aforementioned theme, all of which could form the basis of an interesting scholarship agenda in higher education programs and in other disciplines as well. The other theme discussed is informants’ perceptions of how they believed that gender influenced opportunities available to research assistants. There was only one instance that an informant described where she felt that men were given more opportunities through research assistantships than were women. The remaining
informants felt that opportunities in research assistantships at their respective institutions were equal. I then focused the discussions on how informants used their experience as a research assistant to shape their relations with research assistant(s) currently working under their supervision. I concluded that there were no patterns (although there were instances) of inequality in opportunities that individuals in this sample were presented through their research assistantships that were articulated to me. This was another surprising finding of this study for me given that the literature had numerous references to the fact that women were more oftentimes doing clerical tasks in research assistantships and men were allowed opportunities to do activities that more often contributed to their professional development.

Critical Theory Question Two

What groups currently benefit most from existing opportunities?

The second critical theory research question was designed to build upon what was explored in the first critical theory question. Although the first critical theory question deals with gender, the second critical theory question specifically focuses on race given the results of the analysis of this study. I discussed how minorities appear to be at a disadvantage given their representation in this sample, in the number of doctorates awarded, and in the number of faculty positions held. From this sample, it is evident that minorities did not serve as research assistants at proportions equal to those of Caucasians given that for Caucasians, 60.7% were research assistants, while 44.4% of the minorities in this sample served in this role. However, minorities in this sample appear to have been given similar opportunities as were other groups in this sample based on discussions with
these minorities in the qualitative interviews and through their responses in the survey. It may be difficult for minorities to gain access to research assistantship positions; therefore, administrators in higher education programs should examine the number of minorities currently serving as research assistants and make necessary efforts to equal those numbers to those of majority students.

**Conclusion**

My research focusing on the role of the research assistantship in faculty development has led to some interesting findings as well as potential directions for future research. First, I would suggest expanding the current study to include institutional types other than Research I institutions. While I deemed it important to focus on this particular type of institution, the role of a researcher is also important to individuals who serve the faculties of other types of institutions. Second, I suggest that other disciplines or areas assess the importance of the research assistantship in their respective disciplines, possibly using my study as a framework to do so. Third, the construct of faculty development could be broadened to include teaching and service in future studies given that I only focused on research in this study. Researchers could explore the factors that faculty members attribute to their development in the areas of teaching and providing service. Fourth, given that numerous differences were found between/among groups based on age, race, and rank in various segments of the survey, future inquiry could probe deeper at the issues explored in these questions. And finally, I note that given that my research focused only on individuals who are currently in the professoriate, some research may explore the research assistantship experience for individuals who chose not to go into academe.
It was my intent to explore the relationship between the research assistantship and development of a higher education faculty member as a researcher and to explore the ways that gender influences research assistantship experiences. I hope that I have done this accurately and beneficially for all who read this work. I also hope that this research has made substantial contributions to the higher education literature, literature on gender and education, critical theory literature, and scholarship on mixed methods studies.

In conclusion, as indicated earlier Worthen and Gardner (1988) suggested to researchers that “specific assistantship variables and their relationship to subsequent career development in research” needed to be discovered to determine how research assistantships were useful in training individuals for careers in research. It appears that now, perhaps more so than ever before given the survey responses based on the various age groups and ranks in the sample, research assistantships are providing individuals with opportunities for professional development and preparation for a career in academe. The qualitative interviews from this study have given an indication as to how important the research assistantship is to individuals interested in careers in the professoriate, while the survey responses have shown individual variables/items that respondents noted which were of particular importance to them. It is awareness of these particular activities that supervising professors of research assistantships should be cognizant of given that, as shown throughout this document, this preparation is crucial to a career as a researcher.
REFERENCES


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APPENDIX A — RESEARCH I HIGHER EDUCATION PROGRAMS

| Iowa State University      | University of Washington |
| University of Georgia      | University of Southern California |
| University of Minnesota (Twin Cities) | University of Illinois at Chicago |
| Texas A&M University       | Indiana University at Bloomington |
| University of Hawaii       | University of Iowa |
| University of Maryland     |                           |
| Temple University          |                           |
| Oregon State University    |                           |
| University of Texas at Austin |                         |
| Florida State University   |                           |
| University of Kansas       |                           |
| New Mexico State University|                           |
| Michigan State University  |                           |
| University of Missouri at Columbia |                      |
| University of Rochester    |                           |
| University of Nebraska at Lincoln |                   |
| Louisiana State University |                           |
| University of Pittsburgh   |                           |
| Harvard University         |                           |
| University of Illinois     |                           |
| Stanford University        |                           |
| University of Utah         |                           |
| Ohio State University      |                           |
| University of Florida      |                           |
| University of California at Los Angeles |              |
| Arizona State University   |                           |
| University of Arizona      |                           |
| State University of New York at Buffalo |            |
| North Carolina State University |                     |
| Pennsylvania State University|                           |
| University of Kentucky     |                           |
| University of Massachusetts at Amherst |                |
| University of Michigan     |                           |
| Columbia University        |                           |
| University of Pennsylvania |                           |
| Vanderbilt University      |                           |
| University of Virginia     |                           |
| West Virginia University   |                           |
| University of Wisconsin at Madison |             |

18 Not all institutions listed participated in this research.
Dear Dr. <last name>:

My name is Stephen C. Scott, and I am a doctoral candidate in higher education at Louisiana State University. I am writing to you to request your participation in my dissertation research regarding the role of the research assistantship in the development of a higher education faculty member as a researcher. You have been identified (either by the coordinator of the higher education program in your department or from your university’s web page) as a professor of higher education at a Research I institution. I am asking that all participants in my research be exclusively higher education professors, i.e., faculty whose duties are solely allocated to teaching and advising in the higher education program, and that they teach in Research I institutions. If for instance, you also teach in a K-12 program or serve in an administrative capacity and teach on an adjunct basis, or if your university is no longer a Research I institution, I unfortunately cannot include you in my sample. I ask that you notify me of this as soon as possible and I thank you for your time. However, if you fit the aforementioned criteria, then please consider participating in my research. As a former doctoral student yourself, I need not emphasize how important your participation is to me.

In my dissertation entitled *A Critical Analysis of Gender and the Role of the Research Assistantship in Development of Higher Education Faculty*, I am exploring the relationship between the research assistantship and development of a higher education faculty member as a researcher. I am also examining the ways that these experiences may (or may not) vary based on identity characteristics. My primary focus, as reflected in my title, is on gender. Please be aware that not having served as a research assistant during graduate training does not preclude your participation in this study. I am equally interested in examining the factors that non-research assistants attribute to their development as researchers. My study is being conducted in two phases: Phase I entails the attached survey for professors of higher education (at Research I institutions); Phase II (pending your agreement to continue participating) will consist of a qualitative interview either in person or via telephone. Be assured of confidentiality in this research as you will only be referred to by generic terminology. Please take the time to complete the attached survey. In order for you to return the survey to me, I ask that you do either one of the following:

- open the survey using any type of word processing software, type-in your responses and email them to me at sscott2@lsu.edu
- open the survey using any type of word processing software, print a hard copy of it, and return it to me via regular U.S. mail to my attention at the address on the last page of the survey. I can also receive your responses via fax at 225/388-6918 (please be sure to address the fax to my attention).
Please let me know if neither of these options is feasible. I will be willing to place a hard copy of my survey and introductory letter in the mail to you. Whichever way that you choose to return the survey to me, I ask that you do so by Friday, 11 September 1998. The results of my survey will be displayed in a poster session at the Association for the Study of Higher Education (ASHE) conference in Miami, FL this November. I hope we have the opportunity to meet and discuss my results, and possibly meet for an interview for Phase II of my study.

I will be happy to provide you with more information regarding this research; therefore, do not hesitate to contact me at 225/388-6900 or via email (it is easier to contact me by email) if you have any questions. Also, Dr. Becky Ropers-Huilman is my major professor, and she can be contacted at 225/388-2892 or at broperl@lsu.edu. I look forward to receiving your responses to my survey and hope that we have the opportunity to either meet or talk via telephone. Please accept my thanks for your participation.

Stephen C. Scott
APPENDIX C — SURVEY

I. Demographic Information

1. Gender  
   - Male  
   - Female
2. Age  
   - 20-29  
   - 30-39  
   - 40-49  
   - 50-59  
   - 60 +
3. Ethnicity  
   - Asian  
   - African American  
   - Caucasian  
   - Hispanic  
   - American Indian  
   - Other (Please list: __________)
4. Faculty Rank  
   - Full Professor  
   - Assoc. Professor  
   - Asst. Professor  
   - Other: (Please list)
5. Are your duties as a faculty member 100% exclusive to the higher education area?  
   - Yes  
   - No

II. Graduate Education

1. Attendance status during graduate education (if you attended at both levels, please indicate the status that you were enrolled for the majority of your graduate education):  
   - Full-time  
   - Part-time
2. Type of doctorate received:  
   - Ph.D.  
   - Ed.D.  
   - Other:
3. Received doctorate from:  
   - Institution  
   - Year Awarded  
   - Major field of study  
   (e.g., higher education, educational leadership, educational administration, etc.)

4. Please list all of the assistantships that you have held during your graduate education. Space is provided for three (3), however, if you require additional space, please use the back of this survey or other sheets. In part A, please note the type of assistantship (usually either research, teaching, administrative). In part B, please also note when you held this assistantship (either during masters or doctoral training or both), and also indicate in part C the length of time that you held this particular assistantship. In part D, please provide the name of the institution where you held the assistantship. In part E, please list no more than five tasks that you did most often for each assistantship — some common tasks include research designs, literature searches/collection, data entry, answered phones, facilitated class sessions, designed course syllabi, organized class materials, proctored exams, filing, proofread students’ and professor’s work, grant writing, photocopied materials, prepared reports, graded papers, analyzed data, collected data, wrote scholarly articles, assisted supervising professor in personal business, etc. — along with the percentage of time that you spent performing this specific task.
**Example:**
- Literature Searches: 50%
- Photocopied materials: 20%
- Proofread professor's work: 20%
- Prepared Reports: 10%
- 100%

Assistantship #1
A. Type: ________________________  
B. Held during: ________________________  
C. Length of time: ________________________  
D. Institution: ________________________  
E. Tasks Performed: Percent of Time Spent on Each Task  

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Assistantship #2
A. Type: ________________________  
B. Held during: ________________________  
C. Length of time: ________________________  
D. Institution: ________________________  
E. Tasks Performed: Percent of Time Spent on Each Task  

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Assistantship #3
A. Type: ________________________  
B. Held during: ________________________  
C. Length of time: ________________________  
D. Institution: ________________________  
E. Tasks Performed: Percent of Time Spent on Each Task  

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III. Research Assistantships (If you did not hold a research assistantship, please skip this section and go on to the questions in Section IV)

If you held more than one research assistantship, please choose the one that you feel was the most influential in your development as a researcher and answer the following questions based on that specific assistantship.

Of the three assistantships that you listed on the previous page, which one are you referring to in your responses to the following questions:

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<th>Assistantship 1</th>
<th>Assistantship 2</th>
<th>Assistantship 3</th>
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**Academic Career**

1. The research assistantship was a very influential factor in my entering the professorate.

2. The research assistantship prepared me for duties required in the professorate.

**Faculty Development**

Please rate the level of contribution that you feel your research assistantship had on your development in the following areas: (1= poor, 4 = excellent)

1. Being a competent researcher (constructing various quantitative and qualitative research designs, executing statistical analyses, and analyzing qualitative data)  
   1 2 3 4
2. Writing scholarly works  1 2 3 4
3. Making formal presentations of research at professional meetings  1 2 3 4
4. Training and collaborating with graduate students on research projects  1 2 3 4

**Research Assistantship in General**

Please rate the following:

1. Financial stipend provided by the assistantship  1 2 3 4
2. Overall value of the research assistantship  1 2 3 4
3. If you had to do it all over again, would you choose a research assistantship?  ○ Yes  ○ No

**Supervising Professor**

1. Please rate your interactions with your supervising professor  1 2 3 4
2. Please rate the quality of supervision and socialization that your supervising professor provided  1 2 3 4
3. Please rate the level or frequency for opportunities for collaboration with your supervising professor: 1 2 3 4

4. Please rate your supervising professor:
   As a scholar 1 2 3 4
   As a model of professional behavior 1 2 3 4
   As a competent researcher 1 2 3 4
   As someone you would like to emulate 1 2 3 4

5. How do you feel that this person would have rated you:
   As a scholar 1 2 3 4
   As a model of professional behavior 1 2 3 4
   As a competent researcher 1 2 3 4

6. Did your research assistantship and/or interactions with your supervising professor change your research interests? ○ Yes ○ No

7. Was your dissertation a product of or related to your work in the research assistantship? ○ Yes ○ No

8. Was your supervising professor your academic advisor/major professor as well? ○ Yes ○ No

9. Gender of your supervising professor: ○ Male ○ Female

10. Did your research assistantship and/or interactions with your supervising professor change your career goals? ○ Yes ○ No

IV. Other Assistantships
    As noted earlier, if you held an assistantship other than a research assistantship or if you did not hold any type of assistantship, please complete this section. Individuals who served as research assistants are also asked to complete this section to identify factors other than the research assistantship that possibly contributed to their development as faculty.

1. Please list factors that influenced your decision to enter the professorate.

2. Please list assignments, activities, etc. that you feel prepared you for your duties in the professorate.

V. Qualitative Study
    I would be very appreciative if you would participate in Phase II of my study which will entail qualitative interviews with selected individuals. If you are willing to continue to participate in this study, please indicate below and select your preference for the type of
interview. Please note that since I am drawing participants from a national sample, the only in-person interviews will be conducted at the ASHE conference, yet I will also conduct interviews via telephone and mail.

☐ Yes, I am willing to participate in an interview.
☐ No, I cannot commit to participating in an interview at this time.
If you selected YES, please indicate your preference for the type of interview that you prefer:
☐ I will be attending the ASHE conference in Miami, FL this November. I would prefer to be interviewed in person there.
☐ I would prefer a telephone interview.
☐ I will not be able to interview in person or on the telephone, therefore, please mail me the interview questions and I will return them answered.

Please provide the following information:
☐ It is better to communicate with me via email. My email address is:

☐ It is better to communicate with me via regular US mail and telephone. My address and telephone number are:
Address: __________________________________________
Phone: __________________________________________

Please return the survey via regular US mail to:
Stephen C. Scott, Doctoral Candidate
Louisiana State University
Department of Educational Leadership, Research, & Counseling
111 Peabody Hall
Baton Rouge, LA 70803
or via email to:
sscott2@lsu.edu
or via fax to:
Stephen C. Scott
225/388-6918

Thank you for your participation!
APPENDIX D — CONSENT FORM

1. Title of Research Study
   A Critical Analysis of Gender and the Role of the Research Assistantship in Development of Higher Education Faculty

2. Project Director
   Stephen C. Scott, Doctoral Candidate
   Louisiana State University
   Department of Educational Leadership, Research, and Counseling
   111 Peabody Hall, Baton Rouge, LA 70803
   225/388-6900 (phone); 225/388-6918 (fax); sscott2@lsu.edu (email)
   Major Professor:
   Dr. Becky Ropers-Huilman
   225/388-2892 (phone); broperl@lsu.edu (email)

3. Purpose of Research
   The purpose of this study is to explore the relationship between the research assistantship and development of individuals who serve as faculty in higher education programs at Research I institutions. Additionally, this research seeks to examine the ways that these experiences may (or may not) vary based on gender.

4. Procedures for this Research
   This research will be conducted in the form of an interview. A set of questions has been developed to guide a discussion of the topic being investigated. Interviews will range typically from 45 minutes to 1 hour. Your participation is entirely voluntary and you may withdraw consent and terminate participation at anytime without consequence.

5. Protection of Confidentiality
   The identity of all participants will not be revealed. You will be referred to by generic terminology so that your identity cannot be identified.

6. Signature
   I have been fully informed of the above-described procedure, and I have given permission of participation in this study.

______________________________  ________________________________
Signature of Participant        Name of Participant (please print)

______________________________
Date

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APPENDIX E — INTERVIEW PROTOCOL

1. Tell me about your background and experiences prior to graduate school and thereafter up until your current position.
2. Tell me how you acquired your research assistantship(s). Did you specifically seek them or were you recruited to them?
3. What’s your philosophy of the purpose of the research assistantship?
4. If you currently have a research assistant or had one in the past, how did your experience as a research assistant shape or influence your relations with your research assistant(s)?
5. I’d like for us to explore the relationship that you had with your supervising professor(s). Describe your personal relationship, as well as your working relationship with this person. If you could have changed anything about this relationship, what would it have been?
6. How do you feel that being the same or different sex from your supervising professor(s) affected your working relationship? Do you feel that this individual would have treated you differently had you been a member of the opposite sex?
7. How do you feel that your experience as a research assistant played a part in your becoming a higher education faculty member? Do you think if you would not have held such a position during your doctoral training that you would still be in academe? Did this experience help or hinder your ability to feel as though you can contribute something to the field of higher education?
8. Let’s talk about your research interests. Were your research interests clearly defined before working with this person? Did your research interests align with those of your supervising professor? If not, did the professor encourage or assist you in pursuing your own research agenda? (If your research interests were different) how did this affect your working relationship? In retrospect, do you feel that, by the end of your research experience, your interests aligned with those of your professor?
9. I am finished with my questions, is there anything else that you would like to add?
VITA

Stephen Charles Scott is a 1992 graduate of the University of Southwestern Louisiana at Lafayette. He holds a bachelor of arts degree in upper elementary education, and served as a middle school language arts teacher in the Lafayette Parish school system prior to returning to graduate school. In 1994, he enrolled in the master’s program in educational administration (higher education concentration) at the University of New Orleans where he completed his studies in 1995. Scott then entered the doctoral educational leadership and research program (higher education concentration) at Louisiana State University in 1996, where he also served as a research assistant in the Department of Educational Leadership, Research, and Counseling until October 1998. Since that time, he has been employed by the Louisiana Board of Regents as a staff member in the Division of Academic Affairs. He will receive the degree of Doctor of Philosophy in May 1999.
Candidate: Stephen Charles Scott

Major Field: Educational Leadership and Research

Title of Dissertation: A Critical Analysis of Gender and the Role of the Research Assistantship in Development of Higher Education Faculty

EXAMINING COMMITTEE:

Date of Examination: March 4, 1999